Precise on bone, gentle on critical structures:
Bone instrument - making the difference
While surgical procedures on the spine are routine operations, they are always very challenging. The ultrasonic bone instrument by Söring was developed specifically for the resection of bone. The ultrasonic technology offers the significant advantage that different effects are displayed distinctly and to varying degrees on various types of tissue. On bone, this consists primarily of mechanical removal, while mostly no effect is visible on tissue containing collagen with a high elastin content (e.g. blood vessels, nerve fibres, dura mater).

Compared to conventional techniques, the use of the bone instrument enables precise preparation of the bone with less heat development.* At the same time, surgery can be performed in direct proximity to extremely delicate structures on the spine. These crucial features can make all the difference by offering numerous advantages in spinal surgery, e.g. for modelling or decompression procedures.

High surgical precision:
- non-rotary technology
- knife geometry designed for precise cuts with a straight cut surface
- bone at the cut surface remains viable*
- rasp geometry designed for precise bone ablation

In close proximity to critical structures:
- less heat generation*
- optimised for work on bone
- pressure-free working in tight spaces
- no grabbing

Ultrasonic vibrations and manual movement facilitate precise, controlled cutting through bone and targeted bone removal. Elastic structures are significantly more resistant to ultrasonic oscillations, enabling them to adapt to the oscillations in the event of contact and remain intact.

For the toughest challenges

‘The precision, minimal heat generation and safety of the bone instrument significantly reduce stress for spine surgeons during complicated operations, particularly during procedures on the cervical spine.’

M.Ch. Dr Shrinivas Rohidas, Director and Chairman Dr Rohidas’ Centre for Minimally Invasive Spine & Neurosurgery, Kolhapur (India)

*data on file
The essentials at a glance:

precision and targeted bone preparation

The bone instrument with its slim knife sonotrode ensures minimal bone loss and straight cutting edges on vital bone. Thanks to the ultrasonic oscillations, the sonotrode tip vibrates longitudinally 35,000 times per second. Cutting is so precise and fine that bone can be removed even in proximity to extremely delicate structures.

The bone is no longer ground before removal, but can be removed in pieces. Osteophytes causing problems can be resected and the bone material can be used for other purposes.

Examples of indications

- (anterior) cervical decompression
- anterior cervical foraminotomy
- foraminotomy
- laminotomy
- laminectomy
- laminoplasty
- lumbar decompression
- accesses for fusions

New method with huge potential

‘The use of an ultrasonic-assisted bone instrument changes the surgical procedure. Excessive bone matter is no longer milled, but removed entirely by the instrument.’

Senior Physician Dr. Jan-Uwe Müller, Deputy Director of the Clinic and Polyclinic for Neurosurgery, Greifswald University Hospital, Germany
Product expertise: proven quality, modular and ergonomic

Flexibility and support:
- simple, intuitive assembly of the instrument and sonotrode
- single-use sonotrode with knife and rasp geometries in various working lengths
- instrument bodies can be completely autoclaved
- low instrument weight
- clear view of the surgical field thanks to ergonomic design
- clear surgical field thanks to integrated irrigation

Sonotrode set (disposable accessory)
- sonotrode
- flue
- torque wrench
Overview of the product range:

**Bone instrument**

<table>
<thead>
<tr>
<th>Bone instrument</th>
<th>Knife sonotrodes*</th>
<th>Rasp sonotrodes*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Article no.</strong> 92-050</td>
<td><strong>Art. no.</strong> 612K0057-SET-10 612K0058-SET-10</td>
<td><strong>Art. no.</strong> 612K0060-SET-10 612K0061-SET-10</td>
</tr>
<tr>
<td><strong>Length</strong> 180 mm</td>
<td><strong>Working length</strong> 36 mm 101 mm</td>
<td><strong>Working length</strong> 38 mm 100 mm</td>
</tr>
<tr>
<td><strong>Weight with sonotrode</strong> 75 g - 78 g</td>
<td><strong>Knife width</strong> 0.8 mm 0.8 mm</td>
<td><strong>Rasp area</strong> 4 mm² 4 mm²</td>
</tr>
<tr>
<td><strong>Angle</strong> 15°</td>
<td><strong>Knife length</strong> 10 mm 10 mm</td>
<td></td>
</tr>
<tr>
<td><strong>Handle material</strong> titanium</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Irrigation</strong> yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aspiration</strong> without</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Sonotrodes are supplied as sonotrode sets consisting of the sonotrode, flue and torque wrench (sales unit: 10 sets).

**The ultrasonic generators by Söring**

The Söring generators offer a range of uses depending on the series. The SONOCA 185 is compact in design and provides a specific range of performance, while the SONOCA 300 can be used for all applications of Söring products. Thanks to the plug-and-play function, all generators can be quickly and easily synchronised with the bone instrument.

**SONOCA 185**
- supports the bone instrument with a working frequency of 35 kHz
- supports UAW (Ultrasonic-Assisted Wound debridement) with a working frequency of 25 kHz
- integrated irrigation pump

**SONOCA 300**
- working frequencies of 25 kHz, 35 kHz and 55 kHz
- compatible with all Söring instruments for spine surgery, neurosurgery, liver surgery and UAW
- integrated irrigation pump
- integrated aspiration
Branches
Colombia
Russia
USA

Trading partners
Söring and its trading partners operate in over 90 countries across the world.

Söring GmbH
Justus-von-Liebig-Ring 2
25451 Quickborn | Germany
Phone: +49 4106-6100-0
Fax: +49 4106-6100-10
E-mail: info@soering.com

Further information can be found at:
www.soering.com

Your contact:

Specifications, design and accessories of the shown products might have changed in the meantime.
The products shown might not be available in your country. Please contact the local Söring partner for further information.