Safety measures

- The instrument is not sterile on delivery! Prior first use and immediately after each application the handpiece and the rotary milling cutters must be cleaned, disinfected and sterilized!
- Don't clean instruments with compressed air!
- Let handpiece only run with a clamped rotary milling cutter!
- Never carry out manipulations on the instrument, when the motor is still running, danger of injury!
- The handpiece may be operated with up to 20,000 rpm!

- Without the rotary milling cutter fixed the collet chuck must not be stored for extended periods in this position!
- Rotary milling cutters must only be used in the endoscope's working channel to ensure adequate guidance and control of the cutting head! Caution, risk of injury!
- The handpiece may be operated by qualified and trained personnel only!
- Improper use of the instrument, as well as non-observance of our instructions release us from all guarantees and any other claims!

Intended use

The spine milling cutters are applied in orthopedics and traumatology, for example, with stenosis, degenerated vertebral discs or intervertebral disc hernias. With the rotary milling cutter Intervertebral disks tissue, bony constrictions or functionally disturbing formations are scraped off.

Contraindications

Special procedures at the spine, in which the use of motorized cutters represent too great of a risk, particularly the treatment of the central nervous system in spinal surgery. Cases in the literature must be considered.

Symbols

<table>
<thead>
<tr>
<th>Description:</th>
<th>Head-Ø</th>
<th>Working length</th>
<th>Working channel-Ø</th>
<th>Pieces/PU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1918 Support sleeve open</td>
<td>185 mm</td>
<td>4.0 mm</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1750 Diamond milling cutter, round</td>
<td>5.0 mm</td>
<td>185 mm</td>
<td>4.0 mm</td>
<td>3</td>
</tr>
<tr>
<td>1751 Carbide milling cutter, round</td>
<td>5.0 mm</td>
<td>185 mm</td>
<td>4.0 mm</td>
<td>3</td>
</tr>
<tr>
<td>1752 Carbide milling cutter, conical</td>
<td>5.0 mm</td>
<td>185 mm</td>
<td>4.0 mm</td>
<td>3</td>
</tr>
<tr>
<td>1753 Support sleeve open</td>
<td>200 mm</td>
<td>3.5 mm</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1762 Carbide milling cutter, round</td>
<td>3.0 mm</td>
<td>200 mm</td>
<td>3.5 mm</td>
<td>3</td>
</tr>
<tr>
<td>1763 Diamond milling cutter, round</td>
<td>3.0 mm</td>
<td>200 mm</td>
<td>3.5 mm</td>
<td>3</td>
</tr>
<tr>
<td>1764 Diamond milling cutter, round</td>
<td>3.7 mm</td>
<td>200 mm</td>
<td>3.5 mm</td>
<td>3</td>
</tr>
<tr>
<td>1765 Carbide milling cutter, round</td>
<td>3.5 mm</td>
<td>200 mm</td>
<td>3.5 mm</td>
<td>3</td>
</tr>
<tr>
<td>1748 Support sleeve, open</td>
<td>200 mm</td>
<td>4.0 mm</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1749 Support sleeve with distal protection</td>
<td>200 mm</td>
<td>4.0 mm</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1745 Carbide milling cutter, round</td>
<td>3.0 mm</td>
<td>200 mm</td>
<td>4.0 mm</td>
<td>3</td>
</tr>
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<td>1746 Diamond milling cutter, round</td>
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<td>200 mm</td>
<td>4.0 mm</td>
<td>3</td>
</tr>
<tr>
<td>1747 Diamond milling cutter, round</td>
<td>3.7 mm</td>
<td>200 mm</td>
<td>4.0 mm</td>
<td>3</td>
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<tr>
<td>1916 Support sleeve open</td>
<td>355 mm</td>
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</tr>
<tr>
<td>1755 Carbide milling cutter, round</td>
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<td>355 mm</td>
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</tr>
<tr>
<td>1756 Diamond milling cutter, round</td>
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<td>3.5 mm</td>
<td>3</td>
</tr>
<tr>
<td>1759 Carbide milling cutter, round</td>
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<td>1757 Diamond milling cutter, round</td>
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<td>355 mm</td>
<td>3.5 mm</td>
<td>3</td>
</tr>
<tr>
<td>1914 Support sleeve open</td>
<td>355 mm</td>
<td>4.0 mm</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1735 Support sleeve with distal protector</td>
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<td>4.0 mm</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1737 Support sleeve with bevelled protector</td>
<td>355 mm</td>
<td>4.0 mm</td>
<td>1</td>
<td></td>
</tr>
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<td>1711 Carbide milling cutter, round</td>
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<td>355 mm</td>
<td>4.0 mm</td>
<td>3</td>
</tr>
<tr>
<td>1712 Diamond milling cutter, round</td>
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<td>355 mm</td>
<td>4.0 mm</td>
<td>3</td>
</tr>
<tr>
<td>1738 Carbide milling cutter, round</td>
<td>3.5 mm</td>
<td>355 mm</td>
<td>4.0 mm</td>
<td>3</td>
</tr>
<tr>
<td>1913 Diamond milling cutter, round</td>
<td>4.0 mm</td>
<td>355 mm</td>
<td>4.0 mm</td>
<td>3</td>
</tr>
</tbody>
</table>

Technical data

- Weight of handpiece: 110 g
- Max speed: 20,000 rpm
- Transmission: 1:1
- Coupling: after INTRA EN23964
Attaching the rotary milling cutters:

1. Insert milling cutters (A, B or C) in the support sleeves (D or E).
   - With an open support sleeve (E) insert milling cutter from the front.
   - With a support sleeve with distal protection (D), insert milling cutter from behind.
   - Exception: Because of a large milling head the ball milling cutters (C) cannot be used on support sleeves with distal protection (D).
2. Introduce the milling cutter shank in the open collet chuck of the handpiece as far as it goes and close the collet chuck by twisting the clamping sleeve of the handpiece (H).
3. The support sleeve (D or E) is fixed to the handpiece (H) by tightening the clamping nut (G).
   △ If you use a support sleeve with distal protection (D), twist it into the right position, before you tighten the clamping nut.
   △ Tighten the clamping nut sufficiently! Check the milling cutter head for it’s not rubbing at the distal protection nozzle (D)!

Reprocessing instructions

<table>
<thead>
<tr>
<th>Reprocessing restrictions</th>
<th>Frequent but careful reprocessing will have little effect on the life span of the handpiece and rotary milling cutters. The end of the products’ service life will normally be determined by wear and damage while being used.</th>
</tr>
</thead>
</table>

INSTRUCTIONS

At location of use
Remove surface soilings with a cloth or paper towel.

Storage and transport
No particular requirements. Due to the risk of drying and corrosion, reprocessing must be performed without undue delay; the period of time between use and reprocessing should not exceed 8 hours.

Cleaning preparations
Unscrew support sleeve and unclamp milling cutters. Remove any surface soilings on the handpiece, support sleeve and milling cutters with a disposable/paper towel. Further dismantling of the handpiece is not necessary. Place all parts for max. 15 min. into a certified disinfectant. Do not put parts in ultrasonic bath.

Automatic cleaning and disinfection
Equipment: Cleaning/disinfection equipment with a special load carrier, which allows the connection of handpieces for irrigation of channels. Start rinsing the handpiece from the rear side. Use an RKI*-certified, neutral or alkaline cleaning agent in the recommended concentration.
1. Load handpiece, support sleeves and milling cutters in the load carrier (irrigation of channels must be ensured).
2. Set automatic cleaning cycle. Carry out last rinsing cycle with deionized water.
3. Carry out a 10-minute rinse cycle (disinfection) at 95°C to ensure thermal disinfection.
4. When taking the pieces out, check to see whether there is still any dirt in the grooves and interstices. If necessary, repeat the cycle or clean manually.

Manual cleaning
Equipment: RKI*-certified neutral cleaning agent, soft brush, flowing demineralized water (max. 20°C).
Procedure:
1. Rinse and brush surface soilings from the handpiece, support sleeves and milling cutters.

Drying
If there is no drying programme available in the cleaning/disinfecting device, the handpiece, the support sleeves and the milling cutters must be dried manually or in a hot-air cabinet at 60°C.

Inspection and maintenance
Ref. 1958
Carry out a visual inspection for damage, corrosion and wear. After cleaning and disinfecting the handpiece spray it thoroughly with Nou-Clean Spray and wipe it with a damp cloth (see instructions on spray can). Then reclamp the milling cutter and attach the support sleeve. Check rotating members on good mobility.

Packaging
Individually: pack the handpiece in individual packaging for sterile items. The package must be large enough to ensure that the seal is not subject to strain. Nouvag AG recommends to add a sterility indicator.
Sets: Sort the handpieces into suitable trays or pack them in soft packaging.

Sterilization
Carry out a steam sterilization at max. 155°C during 5 minutes with a fractionated pre-vacuum procedure. For autoclaves without a post-vacuum process, a drying phase must be carried out. If a sterilization packaging (paper/film) is used, it must dry at room temperature with the paper side to strain. Nouvag AG recommends to add a sterility indicator.

Storage
No particular requirements. If the sterilized handpiece is not used immediately after sterilization, the material packaging must be labeled with the sterilization date. Including a sterility indicator is recommended.

The instructions given above have been deemed suitable for the preparation of a medical product for its re-use. It is the responsibility of the person carrying out the preparation that the preparation actually carried out with the equipment, materials and personnel in the preparation installation achieves the desired results. This normally requires validation and routine monitoring of the procedures. In the same way, if there is any deviation from the instructions provided then the person responsible for the preparation must carefully assess its effectiveness and any possible detrimental consequences.

Service centers

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Please contact your country’s dealer or representative if you require service, repair and spare parts.

Notice on disposal:
When disposing of the device, device parts and accessories, the stipulated statutory regulations must be followed.

△ Only Nouvag rotational milling cutters mentioned above (Accessories and spare parts) may be used!
△ The rotational milling cutters must be replaced after being used 5 times (wear)!
△ Rotary milling cutters must never be removed with the motor running.
△ Service centers

Set automatic cleaning cycle. Carry out last rinsing cycle with deionized water.
Load handpiece, support sleeves and milling cutters in the load carrier (irrigation of channels must be ensured).
When taking the pieces out, check to see whether there is still any dirt in the grooves and interstices. If necessary, repeat the cycle or clean manually.

Carry out a steam sterilization at max. 135°C during 5 minutes with a fractionated pre-vacuum procedure. For autoclaves without a post-vacuum process, a drying phase must be carried out. If a sterilization packaging (paper/film) is used, it must dry at room temperature with the paper side to strain. Nouvag AG recommends to add a sterility indicator.
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