MedentiGuide drill sleeves support the surgeon in preparing the implant bed for MEDENTiKA® implants. Their use must be planned with a specially designed 3D planning system and surgical drilling template. You can plan the surgery with standard planning programs.

Treatment planning based on three dimensional imaging procedures (CT, DVT) enables high precision treatment planning and means that the treatment outcome can be accurately predicted.

The advantages over conventional planning include:

- Precision three-dimensional planning and implantation, taking into account the desired restoration
- Automatic collision control that displays if the distances to the implants or nerves are too short
- Information on peri-implant bone quality so that conclusions can be drawn on the expected primary stability

An individual drilling template can be produced on the basis of the digital planning data. This ensures the exact and precise transfer of the planning outcome to the patient’s mouth.
These software manufacturers* currently support the MedentiGuide System

Note:
MEDENTiKA® GmbH accepts no liability for the correct planning, implementation and production of the drilling template. Sufficient knowledge of the 3D planning system being used and the MEDENTiKA® implant system is essential. It is imperative that the user is very confident in the use of 3D planning systems before using the MedentiGuide drill sleeves. Furthermore, sufficient expertise in preoperative implant planning and dental implantology is required.

* to some extent this depends on the availability of the updates of the specific manufacturer.
system description

Drilling template

An individual drilling template can be produced on the basis of the digital planning data. This ensures the exact and precise application of the planning outcome to the patient’s mouth.

MedentiGuide drill sleeves can be used in drill sleeves of various designs. The templates may be produced using suitable milling or printing systems with CADCAM technology or using alternative procedures.

NB:
The drilling template must be firmly and securely seated on the jaw with no gaps.
The appropriate insertion tool is used to ensure that the outer sleeve is inserted securely into the template.
Surgical Tray

Easy to use: No additional surgical tray is required with the MedentiGuide drill sleeve system. The drill sleeves are adapted to the Quattrocone standard drill. This significantly simplifies the preparation of the implantation and considerably reduces the material and storage costs.

The MedentiGuide insertion tools are optionally available to guide the implants through the drill sleeves.
The MedentiGuide System supports two drill lengths: 20 mm and 25 mm. In the planning phase it is important to ensure that the correct drill length is selected.

PLEASE NOTE:
The MedentiGuide drill sleeves are only designed for standard drills. The defined drilling depths do not include the drill tip of 0.2 mm. Please note their lengths if only minimum space is available to anatomical structures.

Example for D 3.5 mm Implant:

TWO DRILL LENGTHS:

Short drill
1 slim silver ring

Total length 35.3 mm
20 mm
0.2 mm drill tip

Long drill
2 slim silver rings

Total length 40.3 mm
25 mm
0.2 mm drill tip
MedentiGuide Drill Sleeves are a “sleeve in sleeve” system made up of various outer sleeves and matching inner sleeves. MedentiGuide drill sleeves can be used in drill sleeves of various designs.

The templates may be produced using suitable milling or printing systems with CADCAM technology or using alternative procedures. The MedentiGuide Sleeve System works with bayonet lock. The lock engages clockwise and thus in the rotational direction of the drill.

Please note:
The inner sleeve cortical drill has two flat sides.

Please note:
The inner sleeve standard drill has no flat side.
The inner sleeves are colour-matched to the corresponding colour-coded implants for easy recognition.

<table>
<thead>
<tr>
<th>Sleeve</th>
<th>Art. No.</th>
<th>Description</th>
<th>Outer diameter</th>
<th>Inner diameter</th>
<th>Implant diameter</th>
<th>Drill</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-32-06</td>
<td>Standard outer sleeve</td>
<td>D 6.3</td>
<td>d 5.03</td>
<td>D 3.5 - 4.3 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-32-07</td>
<td>Large outer sleeve</td>
<td>D 8.3</td>
<td>d 7.03</td>
<td>D 5.0 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-32-08</td>
<td>Adapter sleeve</td>
<td>D 7.0</td>
<td>d 5.03</td>
<td>D 5.0 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-32-15</td>
<td>Pilot drill</td>
<td>D 5.0</td>
<td>d 2.03</td>
<td>Pilot</td>
<td>4-14-01, 4-14-06</td>
</tr>
<tr>
<td></td>
<td>0-32-16</td>
<td>Standard drill</td>
<td>D 5.0</td>
<td>d 3.23, d 3.33</td>
<td>D 3.5 mm</td>
<td>4-14-02, 4-14-07</td>
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<td></td>
<td>0-32-27</td>
<td>Cortical drill</td>
<td>D 5.0</td>
<td>d 3.53, d 3.63</td>
<td>D 3.8 mm</td>
<td>4-14-53, 4-14-55</td>
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<td>0-32-21</td>
<td>Standard drill</td>
<td>D 5.0</td>
<td>d 3.53, d 3.83</td>
<td>D 4.3 mm</td>
<td>4-14-04, 4-14-09</td>
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<td>0-32-28</td>
<td>Cortical drill</td>
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<td>d 3.53, d 3.83</td>
<td>D 4.3 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-32-17</td>
<td>Standard drill</td>
<td>D 5.0</td>
<td>d 4.03, d 4.33</td>
<td>D 5.0 mm</td>
<td>4-14-53, 4-14-55</td>
</tr>
<tr>
<td></td>
<td>0-32-29</td>
<td>Cortical drill</td>
<td>D 5.0</td>
<td>d 4.03, d 4.33</td>
<td>D 5.0 mm</td>
<td></td>
</tr>
</tbody>
</table>
**SYSTEM DESCRIPTION**

**QUATTROCON** implants D 3.5 – 4.3 mm

**QUATTROCON 30** implants 4.3 mm

The standard outer sleeve is used in conjunction with the QUATTROCON implants D 3.5 - D 4.3.

**Standard outer sleeve**

For implants measuring D 3.5-4.3

**QUATTROCON IMPLANTS D 3.5 - D 4.3 MM**

- **Pilot**
  - D 3,5
  - D 3,8
  - D 4,3

- **Standard outer sleeve**
  - 0-32-06
The large outer sleeve must be used for the Quattrocone implants D 5.0.

**Quattrocone Implants D 5.0 mm**

**Quattrocone30 Implants D 5.0 mm**

**Inner sleeve**
- H 5.0 mm
- D 5.0 mm
- d 2.02
- e.g. pilot drills

**Adapter sleeve**
- H 4.0 mm
- D 7.0 mm
- d 5.03
- To hold the standard inner sleeve

**Large outer sleeve**
- H 3.0 mm
- D 8.3 mm
- d 7.03 mm
- For implants measuring D 5.0

**Quattrocone Implants D 5.0 mm**

- **Pilot**
  - D 3.5
  - D 3.8
  - D 4.3
  - D 5.0

- **Adapter sleeve**
  - D 32-08

- **Large outer sleeve**
  - D 32-07

- **Large outer sleeve**
  - D 32-07
SYSTEM DESCRIPTION

Selection of drill length

The MedentiGuide System software supports the standard drill with two drill lengths: 20 mm and 25 mm. The distance from the top edge of the inner sleeve to the bottom edge of the implant is thus defined by the selected drill length.
The distance between the lower edge of the outer sleeve and the top edge of the implant is always defined by the selected implant and drill lengths. The distance between the lower edge of the sleeve and the upper edge of the implant can be defined, depending on the desired implant length, by the choice of the drill length. NB: The desired drill length must therefore be taken into account during planning.

Long drill
The implants can optionally be guided through the template for positioning. This involves the use of the corresponding MedentiGuide placement instruments, either for manual and ratchet or the contra-angled handpiece. The drill length determines whether the short or long MedentiGuide placement instrument is used.

**MedentiGuide Placement instrument**

**SYSTEM DESCRIPTION**

**Short drill**

Short drill & MedentiGuide placement instrument, short

>> 1 marking ring
Long drill

Long drill & MedentiGuide placement instrument, long
>> 2 markings rings
**SYSTEM DESCRIPTION**

» MedentiGuide Placement instrument «

**MedentiGuide placement instrument, short**

![Diagram of MedentiGuide Placement Instrument, short]

- Depth marker for implant length 11 mm
- Implant length 11 mm
- 20 mm

**MedentiGuide Placement Instrument, long**

![Diagram of MedentiGuide Placement Instrument, long]

- Depth marker for implant length 15 mm
- Implant length 15 mm
- 25 mm
To ensure that the implant is inserted at the correct height, it is rotated through the outer sleeve until the corresponding depth marker is flush with the top edge of the outer sleeve.

If required, the implants can be aligned to the indexing of the implant connection. The MedentiGuide placement instrument is used in this case. The vertical marking on the placement instrument is aligned in the direction of the area of the square in the implant. The marking/notch on the outer sleeve is used as a guide to correctly position the implant.
**Initial situation**

Cut a flap in the soft tissue to expose the bone around the implantation point or optionally expose the implantation point with the mucosal punch.

NB: Check the drilling template at every step to ensure that it is correctly seated. It is important to observe the surgical manual for each implant system.

---

**Pilot hole with the Ø 2.0 mm pilot drill**

The pilot hole is made with the Ø 2.0 mm pilot drill. Guided by the drill sleeve (inner sleeve), this defines the sagittal direction of the implant axis and the drilling depth. The recommended speed is 300-600 rpm and the maximum speed is 800 rpm.

---

**Deep drilling with the final standard drill Ø 2.0 / 3.2 / 4.0 mm**

Incremental drilling is performed with the corresponding drill sleeve (inner sleeve), in this case with the D 2.0/3.2/4.0 mm standard drill. The recommended speed is 300-600 rpm and the maximum speed is 800 rpm.
Insert the implant either by hand/ratchet or with the contra-angled handpiece.

Submerged or transgingival healing can be achieved.

NB: Before inserting the implant, the inner sleeve must be removed. The implant is then screwed in position through the outer sleeve until the depth marking of the placement instrument is flush with the upper edge of the outer sleeve. Check the vertical marking on the placement instrument to ensure the desired alignment of the implant connection.

The implant can heal either with submerged or transgingival methods.
Initial situation

Cut a flap in the soft tissue to expose the bone around the implantation point or optionally expose the implantation point with the mucosal punch.
NB: Check the drilling template at every step to ensure that it is correctly seated. It is important to observe the surgical manual for each implant system.

Pilot hole with the Ø 2.0 mm pilot drill

The pilot hole is made with the Ø 2.0 mm pilot drill. Guided by the drill sleeve (adapter sleeve and the corresponding internal sleeve), this defines the sagittal direction of the implant axis and the drilling depth. The recommended speed is 300-600 rpm and the maximum speed is 800 rpm.

Optional interval drilling with the standard drill Ø 2.0 / 3.2 / 4.0 mm

Incremental drilling is performed with the appropriate drill sleeve (adapter sleeve and internal sleeve), in this case with the D 2.0/3.2/4.0 mm standard drill. The recommended speed is 300-600 rpm and the maximum speed is 800 rpm.
Deep drilling with the final Ø 3.2 / 4.0 / 4.7 mm standard drill

Insert the implant either by hand/ratchet or with the contra-angled hand-piece.

Submerged or transgingival healing can be achieved

The adapter sleeve is now removed with the inner sleeve from the previous drilling. The inner sleeve (0-32-18) for the final drilling is then inserted into the external sleeve. To achieve the final depth, drilling is performed with the final drill, which in this case is the standard drill D 3.2/4.0/4.7 mm. The recommended speed is 300-600 rpm and the maximum speed is 800 rpm.

NB: Before screwing the D 5.0 implant into position, the inner sleeve has to be replaced with the adapter sleeve. Now the implant is screwed through the outer sleeve until the depth marking of the placement instrument is flush with the upper edge of the adapter sleeve. Check the vertical marking on the placement instrument to ensure the desired alignment of the implant connection.

The implant can heal either with submerged or transgingival methods.
The MedentiGuide System software supports the standard drill with two drill lengths: 20 mm and 25 mm. The distance from the top edge of the inner sleeve to the bottom edge of the implant is thus defined by the selected drill length.
The distance between the lower edge of the outer sleeve and the top edge of the implant is always defined by the selected implant and drill lengths. The distance between the lower edge of the sleeve and the upper edge of the implant can be defined, depending on the desired implant length, by the choice of the drill length.

NB: The desired drill length must therefore be taken into account during planning.

Long drill

25 mm

1 mm

4 mm

7 mm

13 mm
The implants can optionally be guided through the template for positioning. This involves the use of the corresponding MedentiGuide placement instruments, either for manual and ratchet or the contra-angled handpiece. The drill length determines whether the short or long MedentiGuide placement instrument is used.

**SYSTEM DESCRIPTION**

**MedentiGuide Placement instrument**

The implants can optionally be guided through the template for positioning. This involves the use of the corresponding MedentiGuide placement instruments, either for manual and ratchet or the contra-angled handpiece. The drill length determines whether the short or long MedentiGuide placement instrument is used.

**Short drill**

Short drill & MedentiGuide placement instrument, short
>> 1 marking ring
Long drill

Long drill & MedentiGuide placement instrument, long
>> 2 marking rings
**SYSTEM DESCRIPTION**

» MedentiGuide Placement instrument «

MedentiGuide placement instrument, short

![Image of MedentiGuide placement instrument, short]

- Depth marker for implant length 9 mm
- 20 mm
- 4 mm
- 6 mm
- 9 mm

MedentiGuide Placement Instrument, long

![Image of MedentiGuide Placement instrument, long]

- Depth marker for implant length 13 mm
- 25 mm
- 7 mm
- 13 mm
To ensure that the implant is inserted at the correct height, it is rotated through the outer sleeve until the corresponding depth marker is flush with the top edge of the outer sleeve.

The Quattrocone30 implants must be aligned to match the indexing of the implant connection (label AI). This is because there is only one possible position for the Quattrocone30 implants, due to their 30° angled implant shoulder. This is achieved with the corresponding MedentiGuide Placement Instrument labeled "AI Q". The vertical marking on the placement instrument is aligned in the direction of the short side of the implant. The marking/notch on the outer sleeve is used as a guide to correctly position the implant.
Initial situation

Cut a flap in the soft tissue to expose the bone around the implantation point or optionally expose the implantation point with the mucosal punch. NB: Check the drilling template at every step to ensure that it is correctly seated. It is important to observe the surgical manual for each implant system.

Pilot hole with the Ø 2.0 mm pilot drill

The pilot hole is drilled with the Ø 2.0 mm pilot drill. Guided by the drill sleeve (inner sleeve), this defines the sagittal direction of the implant axis and the drilling depth. The recommended speed is 300-600 rpm and the maximum speed is 800 rpm.

Deep drilling with the final Ø 2.0 / 3.2 / 4.0 mm standard drill

Incremental drilling is performed with the corresponding drill sleeve (inner sleeve), in this case with the D 2.0/3.2/4.0 mm standard drill. The recommended speed is 300–600 rpm and the maximum speed is 800 rpm.
*QuattroFix - fixed restoration for atrophic ridges allows for a comprehensive treatment plan for edentulous patients, of full-arch immediate restoration, using just two straight and two 30° angulated Quattrocone Implants.

**Insert the implant either by hand/ratchet or with the contra-angled handpiece.**

**Submerged or transgingival healing can be achieved**

**NB:** Before inserting the implant, the inner sleeve must be removed. The implant is then screwed in position through the outer sleeve until the depth marking of the placement instrument is flush with the upper edge of the outer sleeve. The vertical marking of the placement instrument must be observed to ensure the necessary alignment of the implant connection.

The implant can heal either with submerged or transgingival methods.
MedentiGuide products
### Needle drill

- Stainless steel

<table>
<thead>
<tr>
<th>Type</th>
<th>Needle drill</th>
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</thead>
<tbody>
<tr>
<td>Article No.</td>
<td>0-14-77</td>
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### MedentiGuide

#### Outer sleeve standard

- Titanium Grade 5 CF

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>D 6,3 / d 5,01</th>
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<tbody>
<tr>
<td>Article No.</td>
<td>0-32-06</td>
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<tr>
<td>Please note:</td>
<td>This sleeve is used for implants D 3.0 - D 4.5.</td>
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</table>

### MedentiGuide

#### Outer sleeve large

- Titanium Grade 5 CF

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>D 8,3 / d 7,01</th>
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<tbody>
<tr>
<td>Article No.</td>
<td>0-32-07</td>
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<tr>
<td>Please note:</td>
<td>This sleeve is used for implants D 5.0.</td>
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</tbody>
</table>

### MedentiGuide

#### Adapter sleeve

- Titanium Grade 5 CF

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>D 7,0 / d 5,01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article No.</td>
<td>0-32-08</td>
</tr>
<tr>
<td>Please note:</td>
<td>This sleeve is used as a connecting piece between the Outer sleeve large and the Inner sleeves for the drill diameter D 2.0 - D 4.0.</td>
</tr>
</tbody>
</table>

### MedentiGuide

#### Inner sleeve

- Quattrocone implant
- Titanium Grade 5 CF
- Pilot drill

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>D 5,0 / d 2,03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour code</td>
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<tr>
<td>Drill diameter</td>
<td>D 2.0 mm</td>
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<tr>
<td>Article No.</td>
<td>0-32-15</td>
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</table>
### MedentiGuide Inner sleeve Quattrocone implant

- Titanium Grade 5 CF
- Standard drill

<table>
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<tr>
<th>Diameter (mm)</th>
<th>D 5,0</th>
<th>D 5,0</th>
<th>D 5,0</th>
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</table>

<table>
<thead>
<tr>
<th>Drill diameter</th>
<th>D 3,2 mm</th>
<th>D 3,5 mm</th>
<th>D 4,0 mm</th>
<th>D 4,7 mm</th>
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</table>

<table>
<thead>
<tr>
<th>Article No.</th>
<th>0-32-16</th>
<th>0-32-21</th>
<th>0-32-17</th>
<th>0-32-18</th>
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</thead>
</table>

### MedentiGuide Inner sleeve Quattrocone implant

- Titanium Grade 5 CF
- Cortical drill

<table>
<thead>
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<th>Diameter (mm)</th>
<th>D 5,0</th>
<th>D 5,0</th>
<th>D 5,0</th>
<th>D 7,0</th>
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<tr>
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<td>/ d 3,33</td>
<td>/ d 3,63</td>
<td>/ d 4,13</td>
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<th>brown</th>
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</table>

<table>
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<tr>
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<th>D 3,3 mm</th>
<th>D 3,6 mm</th>
<th>D 4,1 mm</th>
<th>D 4,8 mm</th>
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<table>
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<tr>
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<th>0-32-27</th>
<th>0-32-28</th>
<th>0-32-29</th>
<th>0-32-30</th>
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</thead>
</table>

### Placement instrument MedentiGuide

- Stainless steel

<table>
<thead>
<tr>
<th>Type</th>
<th>Outer sleeve standard</th>
<th>Outer sleeve large</th>
</tr>
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<tbody>
<tr>
<td>Article No.</td>
<td>0-32-19</td>
<td>0-32-20</td>
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</table>

### MedentiGuide Placement instrument Implant

- Manual and ratchet
- Stainless steel

<table>
<thead>
<tr>
<th>Implant connection</th>
<th>AI</th>
<th>AI</th>
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</thead>
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<tr>
<td>Type</td>
<td>Quattrocone30</td>
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<tr>
<td>Version</td>
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<tr>
<td>Article No.</td>
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<td>4-32-04</td>
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</table>

Please note: These insertion tools are used to insert implants when using MedentiGuide sleeves.

### MedentiGuide Placement instrument Implant

- Manual and ratchet
- Stainless steel

<table>
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<tr>
<th>Implant connection</th>
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<tr>
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</table>

Please note: These insertion tools are used to insert implants when using MedentiGuide sleeves.
### MedentiGuide Placement instrument Implant

- Contra-angle
- Stainless steel

<table>
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<tr>
<th>Implant connection</th>
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<tbody>
<tr>
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Please note: These insertion tools are used to insert implants when using MedentiGuide sleeves.

### MedentiGuide Placement instrument Implant

- Contra-angle
- Stainless steel

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<th>RI</th>
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</table>

Please note: These insertion tools are used to insert implants when using MedentiGuide sleeves.

### Tweezers

- diamond coated
- Stainless steel

| Article No.         | 22.014.03 |
We are certified according to:
DIN EN ISO 13485
Medical Devices Directive 93/42/EEC,
Annex II

Date: December 2019

We are certified according to:
DIN EN ISO 13485
Medical Devices Directive 93/42/EEC,
Annex II

CE0483

Technical changes and errors reserved.

You can find the Instructions for use and warranty conditions on the website www.medentika.com. More information on the warranty can also be requested directly from the manufacturer.