Nobel Biocare offers a comprehensive prosthetic portfolio for the On1 concept. The standard assortment includes components for supporting temporary and final crowns, as well as healing abutments and cover screws.

The On1 concept features the On1 Base that once placed on the dental implant is not intended to be removed, and is thus an ideal solution for one-stage surgeries. Whether for immediate temporization or delayed-loading procedures, Nobel Biocare offers a prosthetic solution that satisfies the clinical situation and meets the needs of the patient.

The On1 Base is compatible to the Nobel Biocare implants with the internal conical connection (CC) NP/RP/WP for the following implant systems: NobelActive® CC, NobelReplace® CC and NobelParallel™ CC.
**On1™ concept**

**Surgical procedure**

1. Select an appropriate On1 Base and place it on a Nobel Biocare implant with conical connection and NP/RP/WP platform. Use the handle to facilitate the insertion and slightly tighten the On1 Base Clinical Screw using the On1 handle.

2. It is recommended to verify the final On1 Base seating and components attached thereto using radiographic imaging.

3. Remove the handle and tighten the On1 Clinical Screw to 35 Ncm using the On1 Screwdriver and Manual Torque Wrench Prosthetic. Caution: Never exceed 35 Ncm prosthetic tightening torque. Overtightening of the On1 Clinical Screw may lead to a screw fracture.

4. Select appropriate On1 Healing Cap and check the occlusal clearance.

5. Connect the On1 Healing Cap to the On1 Base and hand-tighten it using the Unigrip Screwdriver.

**Note:**
- Each time a component is removed from the On1 Base, make sure the On1 Base Clinical Screw has not loosened, and retighten it to 35 Ncm if necessary.
- The On1 Clinical Screw can only be used with the dedicated On1 Base Screwdriver, which is laser marked with a ring.

---

**On1 concept – componentry**

<table>
<thead>
<tr>
<th>Surgical components</th>
<th>Torque</th>
<th>Driver</th>
</tr>
</thead>
<tbody>
<tr>
<td>On1 Base incl. handle*</td>
<td>35 Ncm</td>
<td>On1 Base Screwdriver</td>
</tr>
<tr>
<td>Height</td>
<td>1.75 mm</td>
<td>2.5 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>38689</th>
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<tbody>
<tr>
<td></td>
<td>1.75 mm</td>
<td>2.5 mm</td>
<td>1.75 mm</td>
<td>2.5 mm</td>
<td>1.75 mm</td>
<td>2.5 mm</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>On1 Clinical Screw</th>
<th>38744</th>
<th>38745</th>
<th>38746</th>
<th>38747</th>
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<tbody>
<tr>
<td>Height</td>
<td>1.75 mm</td>
<td>2.5 mm</td>
<td>1.75 mm</td>
<td>2.5 mm</td>
<td>1.75 mm</td>
<td>2.5 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>On1 Healing Cap</th>
<th>38695</th>
<th>38696</th>
<th>38697</th>
<th>38698</th>
<th>38699</th>
<th>38700</th>
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</thead>
<tbody>
<tr>
<td>Height</td>
<td>1.5 mm</td>
<td>2.5 mm</td>
<td>1.5 mm</td>
<td>2.5 mm</td>
<td>1.5 mm</td>
<td>2.5 mm</td>
</tr>
</tbody>
</table>

* Corresponding On1 Clinical Screw and handle included.
On1™ concept

Temporary restoration

Planning the temporary restoration
Treatment planning should consider the entire treatment sequence, including the final prosthetic solution. Several different methods and products can be used to create temporary restorations depending on the planned final solution.

Temporary components
Temporary crowns and bridges can be placed on temporary and final abutments for use as temporary restorations.

Temporary restorations
Temporary restorations range from standard acrylic crowns created chairside to laboratory produced temporary crowns/bridges. Regardless of the solution selected, it is important to create a smooth contour of the temporary crown in order to avoid irritation of the soft tissue. During provisionalization procedure, make sure to remove all the excess cement and/or impression material in order to avoid contamination of the surgical site.

Connecting a temporary restoration

For cement-retained temporary restorations:
The temporary restoration must be cemented with retrievable temporary cement. All excess cement must be carefully removed.

For screw-retained temporary restorations:
The temporary restoration is fastened with the corresponding prosthetic screw. Block out the screw head (e.g. with Teflon, gutta-percha, cotton, any permanent soft resin, etc.) This ensures that no composite blocks access to the screw head, allowing easy removal of the restoration at any time.

Occlusion should be adjusted for both types of restorations.

Temporization with On1 Temporary Abutment
Temporary Abutments, used for supporting the temporary screw-retained restorations, are made of titanium. The retentive grooves on the abutment help to retain the acrylic material when constructing the temporary restoration. These restorations can be made either chairside or at the dental laboratory. For the direct chairside method, an acrylic mold can be used to facilitate the preparation of the temporary prosthesis.
On1™ concept
Temporary restoration

Chairside workflow

1. Remove the healing cap (if applicable) and retighten the On1 Base to 35 Ncm if necessary, using the On1 Screwdriver and Manual Torque Wrench Prosthetic.

2. Connect and hand-tighten the On1 Temporary Abutment onto the On1 Base using Unigrip screwdriver. Verify the occlusal height and modify the abutment height if necessary outside of the patient’s mouth.

3. Fabricate the temporary crown using the conventional technique and create the screw access hole.

   Note: Protect the interface/connection using On1 Base Replica.

   Block the screw access using Teflon or wax to make sure the crown can be removed from the replica.

4. Connect and tighten the temporary crown to the On1 Base to 35 Ncm using Unigrip screwdriver.

5. Block out the screw head (e.g. with Teflon, gutta-percha, cotton, any permanent soft resin, etc.) This ensures that no composite blocks access to the screw head, allowing easy removal of the restoration at any time.

6. Close the screw access hole using dental composite, adhering to the manufacturer’s bonding and curing guidelines.

Caution: The use of Temporary Abutment is limited to 180 days.

---

Torque
35 Ncm
Driver
On1 Base Screwdriver

Torque
Hand-tightening
Driver
Unigrip

Torque
35 Ncm
Driver
Unigrip

On1 concept – componentry

On1 Temporary Abutment
Engaging
38701 38703 38705

Non-engaging
38702 38704 38706

On1 Base Replica
38731 38732 38733

On1 Prosthetic Screw
38750 38750 38750

On1 Base Screwdriver
Machine 21 mm 38752
Manual 25 mm 38753

Unigrip Screwdriver
Machine 20 mm 25 mm 30 mm 35 mm
29151 29152 29153 29154

Manual 20 mm 28 mm 36 mm
29148 29149 29150
On1™ concept

Final restoration – Universal Abutment

Digital workflow intraoral scanning (IOS)

The digital workflow requires the use of following equipment

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scanner</td>
<td>TRIOS by 3Shape</td>
</tr>
<tr>
<td>Design Software</td>
<td>DTX Studio Lab (the implant libraries are automatically included in the DTX Studio Lab software installer) or 3Shape Dental Designer (The Implant libraries are obtained via the 3Shape server in the software)</td>
</tr>
<tr>
<td>Restorative Material</td>
<td>Enamic by Vita Zahnfabrik</td>
</tr>
<tr>
<td>Milling Unit</td>
<td>CORITEC by imes-icore®</td>
</tr>
</tbody>
</table>

Restorative design specifications for Universal Base

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angle from axis of the implant</td>
<td>20° Max</td>
</tr>
<tr>
<td>Wall Thickness Circular</td>
<td>0.8 mm min.</td>
</tr>
<tr>
<td>Wall Thickness Margin</td>
<td>0.275 mm min.</td>
</tr>
<tr>
<td>Post Height</td>
<td>5.2 mm min.</td>
</tr>
<tr>
<td>Maximum Length, width and Height</td>
<td>EM-14 blank 12 x 14 x 18 mm</td>
</tr>
<tr>
<td></td>
<td>EM-10 blank 8 x 10 x 15 mm</td>
</tr>
</tbody>
</table>

Cementation requires the use of following materials

<table>
<thead>
<tr>
<th>Material</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primer</td>
<td>Monobond Plus by Ivoclar Vivadent</td>
</tr>
<tr>
<td>Primer</td>
<td>Monobond Etch &amp; Prime by Ivoclar Vivadent</td>
</tr>
<tr>
<td>Adhesive</td>
<td>Multilink Hybrid by Ivoclar Vivadent</td>
</tr>
</tbody>
</table>

⚠️ Warning: Do not use any dental cements, restorative material, scanners, milling units and CAM software, other than those specifically identified for the On1 Universal Abutment.
**On1™ concept**

**Final restoration – Universal Abutment**

**Digital workflow intraoral scanning (IOS)**

---

**Clinical procedure**

1. After placement of the On1 Base, connect the On1 IOS Healing Cap to it using the provided handle and carefully tighten the clinical screw to 15Ncm using the Unigrip screwdriver and Manual Torque Wrench Prosthetic.

   The height of the On1 IOS Healing Cap should be chosen according to the clinical situation.

2. Take a digital impression of the On1 IOS Healing Cap and the surrounding teeth, following the intraoral scanner manufacturer’s guidelines.

   Use a Nobel Biocare approved intraoral scanner.

   A list of Nobel Biocare approved systems can be found on nobelbiocare.com

3. Send the digital impression to the dental laboratory. Make sure to add the information about the On1 Base, IOS Healing Cap used as well as desired restorative material.

4. If required, the On1 IOS Healing Cap can be modified after the scanning procedure to shape the soft tissue as desired for the final restoration.

---

**On1 concept – componentry**

| On1 IOS Healing Cap incl. handle |  
|---------------------------------|---|---|---|---|
| 4 mm                            | 38739 |
| 4.5 mm                          | 38735 38737 |
| 5 mm                            | 38738  |
| 6 mm                            | 38734 38736 |

| On1 Universal Abutment |  
|------------------------|---|---|---|---|
| Engaging               |  
| 0.3 mm                 | 301121 301123 301125 |
| 1.25 mm                | 301122 301124 301126 |

---

**On1 IOS Replica**

- 38740 38741 38742

**On1 IOS Insertion Tool**

- 38201 38201 38201

**On1 Prosthetic Lab Screw**

- 38751 38751 38751
Laboratory procedure

5. Import the clinical situation into a Nobel Biocare approved CAD software. Ensure that the software library is updated with the latest 3D models by Nobel Biocare. The latest installers for DTX Studio Lab can be found on DTX Studio Go. The DME files for 3Shape Dental Designer can be obtained via 3Shape server in the software.

6. Once imported, open the relevant CAD module and select the On1 Base, IOS Healing Cap used and choose the restorative material in the software as provided by the clinician. With the information provided, the software will select the correct 3D models.

7. Align the scan with the 3D model. For optimal results in 3Shape Dental Designer use the 3-point alignment option.

8. Design the restoration, following the guidelines in the software tutorial. Make sure to respect the minimum dimensions of the restorative material.

9. Send designed data file to the in-lab milling machine by clicking on the order button in the software, following the instructions in the software tutorial. Ensure a validated milling machine is used, which is properly set up and is maintained in good condition as instructed by the manufacturer.

10. Insert the block or disc of the selected material type and mill the final restoration.

11. Optional: Print a 3D working model with soft tissue mask.

12. Insert the On1 IOS Replica using the respective IOS Model Insertion Tool CC.

13. Hand-tighten the On1 Universal Abutment onto the On1 IOS Replica. Make sure to use the On1 Prosthetic Lab Screw.

14. Once the final restoration has been milled, finalize it according to standard laboratory procedures and material manufacturer’s instructions.
**On1™ concept**

**Final restoration – Universal Abutment**

**Digital workflow finalizing restoration**

---

**Preparation of the Universal Abutment**

15. Connect the Universal Abutment to the On1 Replica and hand tighten with On1 Prosthetic Lab Screw.

16. Seal the screw channel with wax.

17. Sandblast the contact surface of the Universal Abutment with aluminium oxide 50 µm at a maximum of 2 bar.

**Caution:** Do not sandblast the seating area. Use a On1 Replica to prevent any modifications of the abutment/base interface.

18. Carefully remove the wax with an instrument and clean the bonding surface using steam jet or an ultrasonic bath. The cleaned bonding surface must not be contaminated, as this would impair the bond.

19. Condition the bonding surface of the Universal Abutment applying a primer to achieve a strong and durable bond. Let the primer react by following the manufacturer’s instructions.

---

**Preparation of the crown**

20. Clean the crown with steam jet or in an ultrasonic bath. The cleaned surface must not be contaminated, as this would impair the bond.

a) For hybrid ceramic: Etch and condition the bonding surface of the crown applying hydrofluoric acid and a primer. Follow the manufacturer’s instructions, and allow for sufficient reaction time.

b) For zirconia: Blast and condition the bonding surface. Use aluminium oxide 100 µm at a maximum of 1 bar and follow the manufacturer’s instructions, allowing sufficient reaction time of the primer.

---

**Bonding**

21. Seal the screw access hole of the Universal Abutment with a thin layer of wax, making sure not to contaminate the bonding surface.

22. Apply a thin layer of the adhesive onto the bonding surfaces of the crown and the Universal Abutment.

23. Connect the parts and press them lightly together making sure they are fully seated and in correct orientation to the abutment. Follow the cement manufacturer’s instructions on curing/polymerization.

24. Remove the excess cement after curing/polymerization has started.

**Note:** In order to prevent the formation of an inhibition layer, use a glycerine gel (e.g. Liquid Strip).

25. Remove any excess material from the screw channel carefully using a microbrush.

26. Polish the cementation joint carefully with rubber polisher, and finalize the restoration.
Clinical procedure

27. Upon receiving the restoration, clean and sterilize it following the guidelines in the section "Cleaning and Sterilization".

28. After removing the temporary abutment or healing cap, retighten the On1 Clinical Screw to 35 Ncm if necessary, using the On1 Base Screwdriver and Manual Torque Wrench Prosthetic.

29. Connect and tighten the Universal Abutment restoration to 35 Ncm using the Unigrip Screwdriver and Manual Torque Wrench Prosthetic.

Caution: Never exceed 35 Ncm prosthetic tightening torque for the abutment screw. Overtightening of the abutment may lead to screw fracture.

30. Block out the screw head (e.g. with Teflon, gutta-percha, cotton, any permanent soft resin, etc.) before closing the screw access hole with composite. This ensures that no composite blocks access to the screw head, allowing easy removal of the restoration at any time.

31. Close the screw access hole using dental composite, adhering to the manufacturer’s banding and curing guidelines.
On1™ concept
Final restoration – Esthetic Abutment

Clinical procedure
1. Remove the temporary restoration from the On1 Base, using the On1 Screwdriver, and retighten the On1 Clinical Screw to 35 Ncm if necessary, using the On1 Screwdriver and Manual Torque Wrench Prosthetic.
2. Take an impression of the On1 Base using the On1 Impression Coping Closed Tray or Open Tray, send the impression to the dental lab.

Laboratory procedure
3. Produce a working model with removable gingival material and using the On1 Base Replica.
4. Hand-tighten the On1 Esthetic Abutment onto the On1 Base Replica, using the Unigrip Screwdriver. Make sure to use the On1 Prosthetic Lab Screw.
5. Modify the abutment if necessary. For the On1 Esthetic Abutment Titanium abutment use a carborundum disk and carbide bur. Make sure that the thickness of the material is at least 0.9 mm and up to a height of 3 mm from the On1 Base platform. Never modify the abutment-to-base interface.
6. Fabricate a crown according to the selected technique.
7. Veneer and finalize the restoration.
On1™ concept

Final restoration – Esthetic Abutment

8. Clean and sterilize the restoration following the guidelines in the section “Cleaning and Sterilization”.

9. Remove the temporary restoration from the On1 Base and retighten the On1 Clinical Screw to 35 Ncm if necessary.

10. Connect and tighten the On1 Esthetic Abutment to 35 Ncm using the Unigrip Screwdriver and Manual Torque Wrench Prosthetic.

11. Block out the screw head (e.g. with Teflon, gutta-percha, cotton, any permanent soft resin, etc.) This ensures that no composite blocks access to the screw head, allowing easy removal of the abutment at any time.

12. Cement the final crown using conventional procedures and check the occlusion and the interproximal contacts. Follow the instructions of the bonding material manufacturer.

   The restoration should be in light occlusion. Excursive contact should be minimal. Remove the excess cement.

Clinical procedure

On1 concept – componentry

<table>
<thead>
<tr>
<th>On1 Prosthetic Screw</th>
</tr>
</thead>
<tbody>
<tr>
<td>38750</td>
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</table>

<table>
<thead>
<tr>
<th>On1 Base Screwdriver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine 21 mm 38752</td>
</tr>
<tr>
<td>Manual 25 mm 38753</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unigrip Screwdriver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual 20 mm 29148</td>
</tr>
<tr>
<td>28 mm 29149</td>
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<tr>
<td>36 mm 29150</td>
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</table>

<table>
<thead>
<tr>
<th>Machine</th>
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</thead>
<tbody>
<tr>
<td>20 mm 29151</td>
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<tr>
<td>25 mm 29152</td>
</tr>
<tr>
<td>30 mm 29153</td>
</tr>
<tr>
<td>35 mm 29154</td>
</tr>
</tbody>
</table>
# Cleaning and sterilization guidelines

## Manual cleaning procedure

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Remove debris in lukewarm water and immerse devices in cleaning solution</strong>&lt;br&gt;Remove debris by immersing the device in lukewarm water not exceeding 40° C / 107° F. The devices should be kept in a wet environment until the next step is initiated.&lt;br&gt;Immerse devices in an enzymatic cleaning solution (for validation: &quot;neodisher® MediZym&quot;, 35° C / 95° F, 0.5 % solution) prepared with lukewarm tap water. Immersion time according to manufacturer’s instructions.</td>
</tr>
<tr>
<td>2.</td>
<td><strong>Scrub devices with soft bristled nylon brush</strong>&lt;br&gt;Scrub the outer side of the devices with a soft bristled nylon brush under cold tap water until all visible soil and debris is removed.</td>
</tr>
<tr>
<td>3.</td>
<td><strong>Flush lumens</strong>&lt;br&gt;Flush the screw hole of the device and the hex of the screw with cold tap water using a 20 ml syringe. Repeat this step until the lumens are free of any visually detectable remaining contamination. Catch dripping fluid from flushing on a white single-use wipe. If discoloration of the wipe is indicating soil, then repeat steps 1 to 3.</td>
</tr>
<tr>
<td>4.</td>
<td><strong>Immerse in ultrasonic bath</strong>&lt;br&gt;Prepare an ultrasonic bath using an enzymatic cleaning solution at the concentration and temperature specified in the detergent manufacturer’s instructions. Degassing the solution is necessary for efficient ultrasonic cleaning: Run the ultrasonic bath for at least 30 minutes. Make sure the temperature of the bath does not exceed 45° C / 113° F during the degassing step.&lt;br&gt;After these preparations treat the devices in the ultrasonic bath for at least 5 minutes.</td>
</tr>
<tr>
<td>5.</td>
<td><strong>Rinse with purified or sterile water</strong>&lt;br&gt;Rinse each device for at least 1 minute with freshly prepared purified water / highly purified water or sterile water until all traces of cleaning solution are removed.</td>
</tr>
<tr>
<td>6.</td>
<td><strong>Dry with compressed air or wipes</strong>&lt;br&gt;Dry the devices using compressed air and/or lint free single-use wipes.</td>
</tr>
<tr>
<td>7.</td>
<td><strong>Package devices for sterilization</strong>&lt;br&gt;Package the clean devices in a pouch. Sterilize according to the parameters in table A1.</td>
</tr>
</tbody>
</table>
## Cleaning and sterilization guidelines

### Automated cleaning procedure (incl. pre-cleaning)

1. **Remove debris in lukewarm water and immerse devices in cleaning solution**
   - Remove debris by immersing the device in lukewarm water not exceeding 40° C / 107° F. The devices should be kept in a wet environment until the next step is initiated.
   - Immerse devices in an enzymatic cleaning solution prepared with lukewarm tap water. Immersion time according to manufacturer’s instructions.

2. **Scrub devices with soft bristled nylon brush**
   - Scrub the outer side of the devices with a soft bristled nylon brush under cold tap water until all visible soil and debris is removed.

3. **Flush lumens**
   - Flush the screw hole of the device and the hex of the screw with cold tap water using a 20 ml syringe. Repeat this step until the lumens are free of any visually detectable remaining contamination. Catch dripping fluid from flushing on a white single-use wipe. If discoloration of the wipe is indicating soil, then repeat steps 1 to 3.

4. **Load devices into washer**
   - Put the devices into a sieve basket with respective mesh size (diameter of screw head Ø 2.2 mm / Ø .087 Inches), put a lid on the basket and put the basket into the washer.

5. **Run cleaning cycle**
   - Follow the instructions provided by the manufacturers of the washing machines. Run the program called TD.

6. **Dry with compressed air or wipes**
   - Dry the devices using compressed air and/or lint free single-use wipes.

7. **Package devices for sterilization**
   - Package the clean devices in a pouch. Sterilize according to the parameters in table A1.
# Cleaning and sterilization guidelines

<table>
<thead>
<tr>
<th>Method</th>
<th>Steam Sterilization (Moist Heat Sterilization)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cycle</strong></td>
<td>Dynamic-Air-Removal (fractionated vacuum)</td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>132° C (270° F)</td>
</tr>
<tr>
<td><strong>Exposure time for a single-use pouched device</strong></td>
<td>4 minutes (full-cycle)</td>
</tr>
<tr>
<td></td>
<td>15 minutes (full-cycle)</td>
</tr>
<tr>
<td><strong>Minimum drying times</strong></td>
<td>20 – 30 minutes</td>
</tr>
<tr>
<td></td>
<td>15 – 30 minutes</td>
</tr>
<tr>
<td><strong>Minimum cooling time</strong></td>
<td>10 minutes in open sterilization chamber</td>
</tr>
</tbody>
</table>

Table A1: Parameters for Dynamic-Air-Removal and Gravity-Displacement steam sterilization of single-use pouched devices