

## Instructions for use

### Castable CoCr Abutment with Screw

**Description:** Castable CoCr Abutment for Individual abutments under CE-Series, CC-Series, CK-Series, CV-Series, CL-Series, CN-Series, CH-Series, CF-Series, CR-Series, CS-Series. During casting, the non-oxidizable CoCr-plastic abutment is wetted by the melt of a non-precious casting, universal or bonding alloy. The metallic compound is produced by diffusion of alloy components of both materials.

### Indications:

Abutment Direct Inc. manufactures dental abutments and restorative components designed for the restoration of dental implant treatment including single tooth and multi-tooth restorations. The individual abutments can be combined with copings, crowns or suprastructures made of dental ceramics.

The Castable CoCr Abutments of the CE-Series are indicated for Nobel Replace Straight Groovy<sup>®</sup>, Replace Select Tapered<sup>®</sup>, Replace Select Straight<sup>®</sup>, Nobel Replace Tapered Groovy<sup>®</sup>, NobelSpeedy Replace<sup>®</sup>, NobelReplace platform shift<sup>®</sup>, manufactured by Nobel Biocare<sup>®</sup>.

### Article Number of Castable CoCr Abutment and Abutment Screws

Nobel Replace <sup>®</sup>	3.5mm	4.3mm	5.0mm
Castable CoCr Abutment CE-Series	CE700-1, CE700-1R	CE710-1, CE710-1R	CE720-1, CE720-1R
Abutment Screw	CE60	CE61	CE61

The Castable CoCr Abutments of the CF-Series are indicated for NobelActive™ implants, manufactured by Nobel Biocare<sup>®</sup>.

### Article Number of Castable CoCr Abutment and Abutment Screws

NobelActive™	3.5mm-NP	4.3mm/5.0mm-RP
Castable CoCr Abutment CF-Series	CF700-1, CF700-1R	CF710-1, CF710-1R
Abutment Screw	CF60	CF61

The Castable CoCr Abutments of the CH-Series are indicated for Biomet 3i Certain® implants, manufactured by Biomet 3i®.

Article Number of Castable CoCr Abutment and Abutment Screws

Biomet 3i Certain®	3.4mm	4.1mm	5.0mm
Castable CoCr Abutment CH-Series	CH700-1, CH700-1R	CH710-1, CH710-1R	CH720-1, CH720-1R
Abutment Screw	CH60	CH60	CH60

The Castable CoCr Abutments of the CL-Series are indicated for Bone Level implants, manufactured by Straumann®.

Article Number of Castable CoCr Abutment and Abutment Screws

Bone Level implants	3.3mm-NC	4.1mm/4.8mm-RC
Castable CoCr Abutment CL-Series	CL700-1, CL700-1R	CL710-1, CL710-1R
Abutment Screw	CL60	CL60

The Castable CoCr Abutment of the CN-Series are indicated for synOcta® implants, manufactured by Straumann®.

Article Number of Castable CoCr Abutment and Abutment Screws

synOcta® implants	4.8mm-RN	6.5mm-WN
Castable CoCr Abutment CN-Series	CN710-1, CN710-1R	CN720-1, CN720-1R
Abutment Screw	CN62	CN62

The Castable CoCr Abutments of the CR-Series are indicated for Tapered Screw-vent® implants, manufactured by Zimmer®.

Article Number of Castable CoCr Abutment and Abutment Screws

Tapered Screw-vent®	3.5mm	4.5mm	5.7mm
Castable CoCr Abutment CR-Series	CR700-1, CR700-1R	CR710-1, CR710-1R	CR720-1, CR720-1R
Abutment Screw	CR60	CR60	CR60

The Castable CoCr Abutments of the CS-Series are indicated for OsseoSpeed® implants, manufactured by Astra Tech®.

Article Number of Castable CoCr Abutment and Abutment Screws

OsseoSpeed®	3.5mm/4/0mm	4.5mm/5.0mm
Castable CoCr Abutment CV-Series	CS700-1, CS700-1R	CS720-1, CS720-1R
Abutment Screw	CS60	CS61

The Castable CoCr Abutments of the CC-Series are indicated for Camlog® implants, manufactured by Camlog®.

Article Number of Castable CoCr Abutment and Abutment Screws

OsseoSpeed®	3.3mm	3.8mm	4.3mm	5.0mm	6.0mm
Castable CoCr Abutment CC-Series	CC700-1, CC700-1R	CC710-1, CC710-1R	CC720-1, CC720-1R	CC730-1, CC730-1R	CC740-1, CC740-1R
Abutment Screw	CC60	CC60	CC60	CC60	CC60

The Castable CoCr Abutments of the CK-Series are indicated for Branemark® External implants, manufactured by Nobel Biocare®.

Article Number of Castable CoCr Abutment and Abutment Screws

OsseoSpeed®	3.5mm	4.1mm	5.1mm
Castable CoCr Abutment CK-Series	CK700-1	CK710-1, CK710-1R	CK720-1
Abutment Screw	CK60	CK61	CK62

The Castable CoCr Abutments of the CV-Series are indicated for Astra Tech EV® implants, manufactured by Dentsply®.

Article Number of Castable CoCr Abutment and Abutment Screws

OsseoSpeed®	3.0mm	3.6mm	4.2mm	4.8mm	5.4mm
Castable CoCr Abutment CS-Series	CV700-1, CV700-1R	CV710-1, CV710-1R	CV720-1, CV720-1R	CV730-1, CV730-1R	CV740-1, CV740-1R
Abutment Screw	CV60	CV60	CV60	CV60	CV60

Multi-Unit CoCr Cap, including internal screw

Series	Abutment	Sizes
CC-Series	CC 8507	All platforms
CV-Series	CV 8507	All platforms
CF-Series	CF 8507	All platforms
CH-Series	CH 8507	All platforms
CL-Series	CL 8507	All platforms
CN-Series	CN 8506	All platforms
CR-Series	CR 8506	All platforms

Each Castable CoCr Abutment is delivered with an abutment screw for fixation on the implant.

The article number is the order number.

**Composition:**

Castable base:

Cobalt (Co) 67 %

Chrome (Cr) 28 %

Molybdenum (Mo) 5 %

Carbon (C), Silicon (Si), Manganese (Mn), Iron (Fe) Nitrogen (N) < 1 %

CTE: 14.1 10<sup>-6</sup>K<sup>-1</sup> (25-500°C)

Bake-on plastic sleeve: Polycarbonate (PC)

Abutment screw: Ti6Al4V, medical grade 5, ASTM F136

**Contraindications:**

The castable CoCr abutments and castable CoCr caps of each series can only be combined with the corresponding compatible implant system-abutment, e.g. the CE-Series only in combination with Nobel Biocare® / NobelReplace® Tapered®. Any postprocessing at the connection geometry to the implant system may result in fitting inaccuracies prohibiting further use. All castable CoCr abutments and castable CoCr caps are intended for single use. Only the manufacturer's recommended torque should be used.

- The 3.0mm platform Titanium Bases with screw for the CV-Series are only indicated for Mandibular incisors and Maxillary lateral incisors. Other uses are strictly prohibited and void all warranties.

Ncm	Abutment				
20	CH-Series	CC-Series			
25	CS-Series	CV-Series			
30	CR-Series				
35	CN-Series	CE-Series	CL-Series	CF-Series	CK-Series

**Handling:**

The castable CoCr abutment and castable CoCr cap is made of a base of castable alloy and a plastic sleeve that burns out without leaving a residue. The transparent plastic sleeve can be shortened. Modelling is with standard techniques. The minimum wall thickness of 0.4 mm must be observed. The connection geometry and platform to the implant must be completely free from plastic, wax and grease to ensure that there is no casting in this area.

**Embedding:**

Only phosphate-bonded (gypsum free) investment compounds recommended for basic metal casting may be used. It is especially important to ensure that there are no air bubbles in the investment.

**Preheating:**

Follow the processing instructions issued by the manufacturer of the investment compound. Observe the pre-heating temperature specified by the manufacturer of the alloy. This preheating temperature should be held for 45 minutes in a 3x casting cylinder to ensure complete casting.

**Melting/casting:**

The liquid temperature of the bake-on alloy must not exceed 1450 °C to prevent the CoCr base from melting. Observe the instructions for the casting equipment.

**Cooling:**

To prevent the cast object from being subject to stress, cool the casting cylinder down to room temperature.

**Divesting:**

The investment compound may only be removed with max. 2 bar pressure with glass polishing beads to ensure that the dimensions of the connection geometry to the implant-abutment remain unchanged.

**Finishing:**

The cast object can be finished with ceramic bonded discs / stones or with cross cut tungsten carbide burs. We recommend screwing the castable CoCr abutment / castable CoCr cap into a laboratory implant to protect the geometry of the connection during finishing.

**Veneering:**

If the cast castable CoCr abutment / castable CoCr cap is to be veneered, please observe the features of the ceramic compound (CTE value) of the bonding alloy.

**Safety notice:**

Metal dust is harmful to health. When machining and sandblasting use a suction with a fine dust filter that is usual in practice and wear protective goggles as well as a face mask.

**Side effects:**

Allergies or sensitivity in connection with the alloy cannot be ruled out in very rare instances.

**Interactions:**

Various alloy types in the same mouth cavity can lead to galvanic reactions in the event of occlusal or proximal contact.

**Notice:**

The information conveyed orally, in writing or in practical seminars is based on tests and experience and can therefore only be considered to be standard values. Our products are subject to constant further development. In this connection we reserve the right to make product changes in relation to the design and composition.

**Cleaning, Disinfection and Sterilization:** The Castable CoCr abutment with screw of the series CE, CC, CK, CV, CF, CH, CL, CN, CR, and CS are supplied in non-sterile condition. The products have to be cleaned and sterilized according to the following details:

**Cleaning:**

Automatic cleaning procedure based on Vario TD program:

- Cold water rinse 1 minute
- Cleaning at 55°C/131°F ( $\pm 2^\circ\text{C}/35.6^\circ\text{F}$ ) for 5 minutes with cleaning agent neodisher® Mediclean (0.5% v/v)
- Neutralization with cold water for 2 minutes
- Cold water rinse for 1 minute

**Sterilization:**

Steam sterilize the Castable CoCr abutment with screw using a cycle similar to instrumentation sterilization such as 4 minutes at 132°C/270°F.

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