

Instructions for use

Castable Gold Abutment with screw

Description: Castable Gold Abutment for Individual abutments under CE-Series, CL-Series, CN-Series, CH-Series, CK-Series, CF-Series, CR-Series, CS-Series, CV-Series. During casting, the non-oxidizable gold-plastic abutment is wetted by the melt of a 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 Gold Abutments of the CE-Series are indicated for Nobel Replace Straight Groovy[®], Replace Select Tapered[®], Replace Select Straight[®], Nobel Replace Tapered Groovy[®], NobelSpeedy Replace[®], NobelReplace platform shift[®], manufactured by Nobel Biocare[®].

Article Number of Castable Gold Abutment and Abutment Screws

Nobel Replace [®]	3.5mm	4.3mm	5.0mm	6.0mm
Castable Gold Abutment CE-Series	CE300-1, CE300-1R	CE310-1, CE310-1R	CE320-1, CE320-1R	CE330-1
Abutment Screw	CE60	CE61	CE61	CE61

The Castable Gold Abutments of the CF-Series are indicated for NobelActive™ implants, manufactured by Nobel Biocare[®].

Article Number of Castable Gold Abutment and Abutment Screws

NobelActive™	3.5mm-NP	4.3mm/5.0mm-RP
Castable Gold Abutment CF-Series	CF300-1, CF300-1R	CF310-1, CF310-1R
Abutment Screw	CF60	CF61

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

Article Number of Castable Gold Abutment and Abutment Screws

Biomet 3i Certain®	3.4mm	4.1mm	5.0mm
Castable Gold Abutment CH-Series	CH300-1, CH300-1R	CH310-1, CH310-1R	CH320-1, CH320-1R
Abutment Screw	CH60	CH60	CH60

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

Article Number of Castable Gold Abutment and Abutment Screws

Biomet 3i Certain®	3.5mm	4.1mm	5.1mm
Castable Gold Abutment CK-Series	CK300-1	CK310-1, CK310-1R	CK320-1
Abutment Screw	CK60	CK61	CK62

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

Article Number of Castable Gold Abutment and Abutment Screws

Bone Level implants	3.3mm-NC	4.1mm/4.8mm-RC
Castable Gold Abutment CL-Series	CL300-1, CL300-1R	CL310-1, CL310-1R
Abutment Screw	CL60	CL60

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

Article Number of Castable Gold Abutment and Abutment Screws

synOcta® implants	3.5mm-NN	4.8mm-RN	6.5mm-WN
Castable Gold Abutment CN-Series	CN300-1, CN300-1R	CN310-1, CN310-1R	CN320-1, CN320-1R
Abutment Screw	CN60	CN62	CN62

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

Article Number of Castable Gold Abutment and Abutment Screws

Tapered Screw-vent®	3.5mm	4.5mm	5.7mm
Castable Gold Abutment CR-Series	CR300-1, CR300-1R	CR310-1, CR310-1R	CR320-1, CR320-1R
Abutment Screw	CR60	CR60	CR60

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

Article Number of Castable Gold Abutment and Abutment Screws

OsseoSpeed®	3.5mm/4/0mm	4.5mm/5.0mm
Castable Gold Abutment CS-Series	CS300-1, CS300-1R	CS320-1, CS320-1R
Abutment Screw	CS60	CS61

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

Tapered Screw-vent®	3.6mm	4.2mm	4.8mm
Castable Gold Abutment CR-Series	CV310-1, CV310-1R	CV320-1, CV320-1R	CV330-1, CV330-1R
Abutment Screw	CV61	CV62	CV63

Multi-Unit Gold Cap, including internal screw part numbers

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

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

The article number is the order number.

Composition:

Gold (Au) 60%
Platinum (Pt) 19%
Palladium (Pd) 20%
Iridium (Ir) 1%

Type: Type (classification) 4 according to DIN EN ISO 22674; extra high stability: for casting objects which are exposed to very high application of load, and with thin cross-sections.

Contraindications:

Castable Gold Abutments are made of gold alloy and may cause allergic reactions due to an existing gold allergy in the patient. All Castable Gold abutments with part numbers ending in R, for example CN300-1R, do not have an anti-rotational hex to engage the dental implants internal hex, so they cannot be used for single tooth restorations.

Colour: White

Technical Data:

Melting range	1400-1490°C
Vickers Hardness HV 5/30	a 145 s225 h240
a)annealed	1000°C/30 min
s)self-hardening	by slow cooling-down of casting
h)hardening/high temperature tempering	700°C/30 min cooling-down by exposure to air

Preparing:

Modelling: The transparent plastic sleeve can be shortened. Modelling is done according to the processing mode customary in dentistry. The interface and platform to the implant have to be absolutely free of plastic, wax and fat residues to avoid possible cast-on in this area.

Investing: You can only use phosphate-bounded(plaster-free) investment materials recommended for precious metal casting. Avoid bubbles during investing.

Pre-heating: Observe the instructions for use provided by the manufacturer of the investment material. Observe the hold time of the pre-heating temperature specified by the alloy manufacturer. With regard to the casting ring of type 3, the hold time is about 30-40 minutes to ensure a complete cast-on.

Melting/Casting: The casting temperature of the veneering alloy used has to be well below 1400°C (solidus of the gold-plastic abutment) to prevent the gold-plastic abutment

from melting. In case of centrifugal casting, the casting objects have to be oriented against the direction of the rotation. Observe the instructions prevailing for each casting tool.

Cooling-down: To avoid mechanical stress on the casting object, you have to cool down the casting cylinder to room temperature, applying a maximum pressure of 2 bar.

Divesting/Pickling: After divesting, the investment material may only be removed by using polishing beads. Apply a maximum pressure of 3 bar to prevent the interface to the implant from being modified in its dimensions. Afterwards, the cooled-down casting object can be put into a warm pickling solution.

Processing: The casting object has to be processed by using ceramic-bounded disks/stones or tungsten carbide burs (x-cut). When grinding dental alloys, it is recommended to always use safety goggles, respiratory protection and/or extraction units. To protect the interface during grinding it is recommended to screw the abutment into a lab analog. Before oxide bake, the areas to be veneered are blasted by pure aluminum oxide (about 110µm), applying a very low pressure (0.5-1.5 bar). Afterwards, the areas are cleaned by distilled water in ultrasonic, or by steam.

Oxidizing: Due to the ceramic materials used, the oxide bake can be performed atmospherically between 900-950°C for 10 minutes, or 800°C in case of universal alloys.

Veneering: For surface finishing and veneering by using ceramic material/plastic refer to the recommendations given by the respective manufacturers. Observe the properties of ceramic materials (CTE coefficient) and of the bonding alloy. The ceramic material must not get in contact with the abutment alloy due to the different CTE coefficient (cracking, chipping).

Polishing: To protect the interface to the implant it is recommended to screw the abutment into a lab analog. Pre-polishing by rubber polishers, high-gloss polishing by polishing paste or brush, felt wheel and/or polishing wheel.

For fixation of the Castable Gold Abutment to the implant, the correct torque force, recommended by the implant manufacturer, has to be considered carefully to avoid the damage of the implant-bone connection.

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

Cleaning

Automatic cleaning procedure based on Vario TD program:

- Cold water rinse 1 min
- Cleaning at 55°C/131°F ($\pm 2^\circ\text{C}/3.6^\circ\text{F}$) for 5 min with cleaning agent neodisher®
MediClean (0.5% v/v)
- Neutralization with cold water for 2 min
- Cold water rinse 1 min

Sterilization

- Seal in a suitable autoclave foil.
- Steam sterilization with 3x fractionated pre-vacuum:
- 132°C (270°F) for 4 minutes, drying time: 20 minutes

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