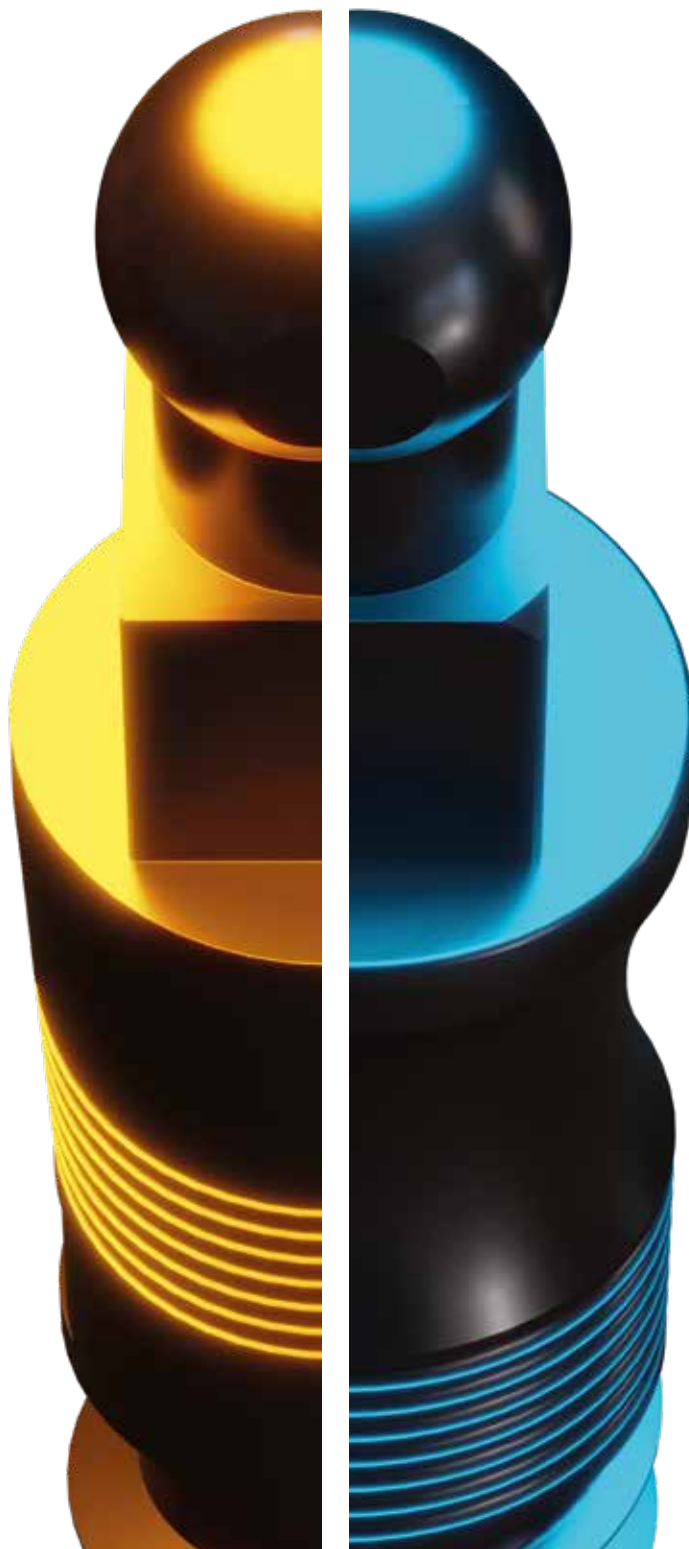


SD

SMALL DIAMETER
Implant

MB

MONOBLOCK
Implant



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SMALL DIAMETER Implant

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Site preparation page 30



All of the materials produced by C-TECH follow a validated procedure, which includes surface treatment and packing as well, in conformity with European and international directives EN ISO 13485, 93/42/EEC and MDR 2017/745 relative to medical devices.



OUR HISTORY

Emilia-Romagna, 1964.

The history of C-Tech begins in this Italian region that, over the years, has become globally known thanks to the work and creativity of its industries and its people.

Our origins started exactly there, with a precision machining workshop. At the beginning, we produced high precision parts for the automotive, aeronautical and the medical device industries. Then, due to our experience in producing orthopedic implants, in 1966 we received our very first order for a dental implant.

Following the increasing success of our products, we specialized in the production, treatment, packaging and certification of dental implants for other companies. Our vast expertise in the design, production and certification of implants finally resulted in the creation of our own brand in 2010.

Since then, we quickly expanded and our production facilities are now completely dedicated to satisfying our growing market demands.

Currently C-Tech offers 4 different implant lines, its own CAD/CAM milling center, as well as guided surgery planning services.



WHO IS C-TEC TODAY

We are an Italian company based in San Pietro in Casale, a town in the metropolitan area of Bologna. This area, as well as the entire Emilia-Romagna region, represents a territory long known in Europe for its tradition and know-how in the production of high precision mechanical components.



Our production facilities are among the finest in Europe and we use our expertise in implant design to make the best and most up to date implant systems and implant-based services. In addition to in house production, our facilities include a guided surgery planning, a milling centre and a training centre.



To back up our designs, we carry our research and long-term studies in the leading universities in Europe, while regularly publishing articles and studies on our products.

With our main markets consisting of Italy, Germany and China, we are certified and export our products to over 36 countries.



We also provide educational and training opportunities on a regular basis, both in our headquarters and abroad. This important service aims to address a critical aspect of dental and medical products: the required education to correctly use them.

For this reason, our training activities aim to help professionals in reaching their full potential, while providing the patient the highest level of care.



OUR MISSION

To provide the highest quality product, service, education and dental implantology solutions to the world's dental practitioners.

SMALL DIAMETER Implant

Prosthetic choice

Choice between square or o-ball head depending on fixed or removable applications.

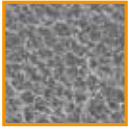
Micro grooving

The lower aspect of the implant collar is endowed with micro grooves to help maintain cortical bone.

Fine threading

The fine thread SD implants are designed to facilitate the placement in hard bone.

SEM 1000x



Passivated surface

The implant surface is sandblasted. This surface treatment accelerates the osteointegration process by providing a greater and more uniform area of contact between bone and implant while favoring an immediate implant load.

Implant body

The anatomically shaped implants are produced from medical grade 5 titanium.

Smooth collar

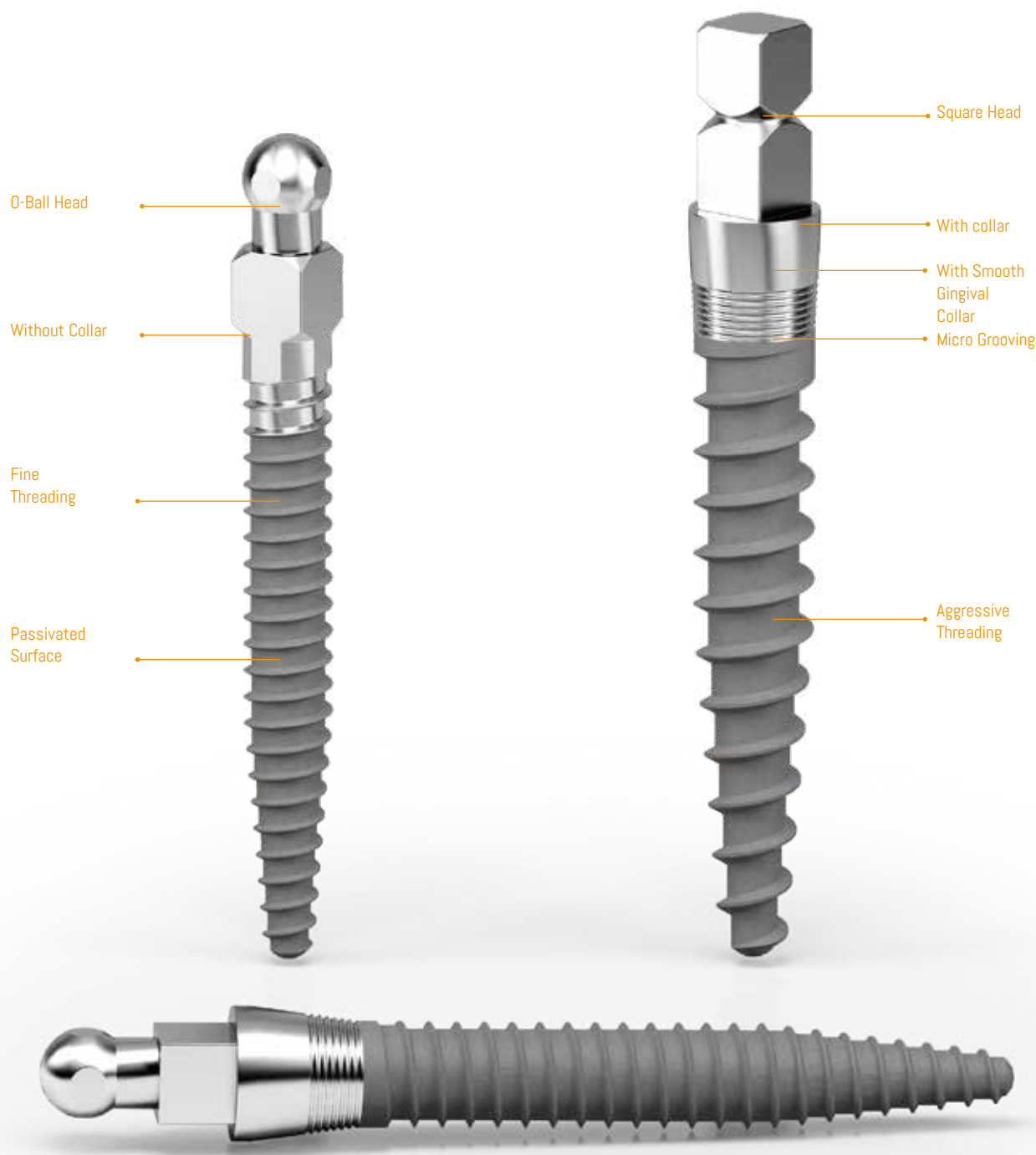
The top aspect of every collared implant is smooth so as to better accommodate soft tissue.

Aggressive threading

The aggressive thread for SD Implants are designed for the added compression and surface area required in soft bone placement.

Collared and non-collared models

C-tech provides SD models with and without gingival collars, allowing the practitioner to better address cases with differing gingival thicknesses.

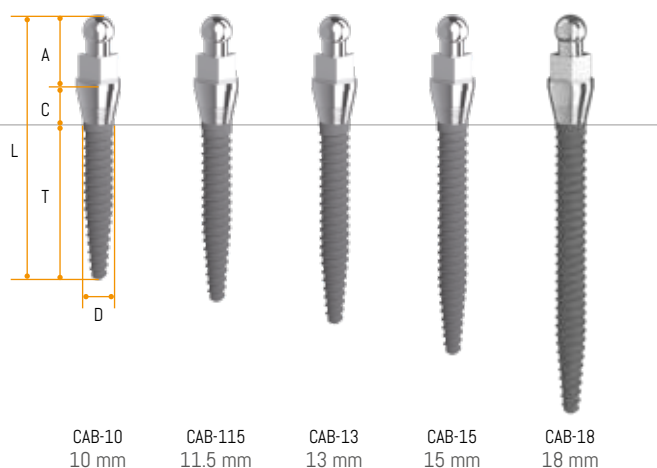


Dental Implants

SD fine threaded implants are ideal for the hard bone that can usually be found in the mandible.

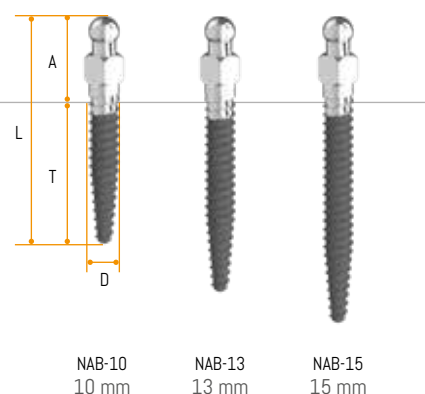
SD Implant $\varnothing 1.8$ fine thread implants

| D | L | T | C | A | # |
|-----|------|------|-----|-----|---------|
| 1.8 | 16.3 | 10 | 2.5 | 3.8 | CAB-10 |
| | 17.8 | 11.5 | | | CAB-115 |
| | 19.3 | 13 | | | CAB-13 |
| | 21.3 | 15 | | | CAB-15 |
| | 24.3 | 18 | | | CAB-18 |



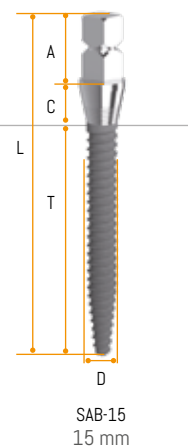
SD Implant $\varnothing 1.8$ fine thread implants

| D | L | T | A | # |
|-----|------|----|-----|--------|
| 1.8 | 13.9 | 10 | 3.9 | NAB-10 |
| | 16.9 | 13 | | NAB-13 |
| | 18.9 | 15 | | NAB-15 |



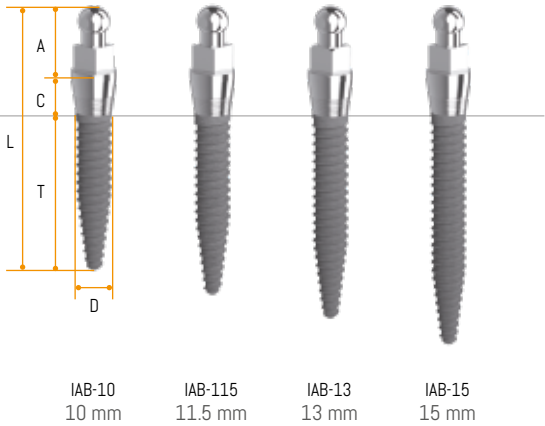
SD Implant $\varnothing 1.8$ fine thread implants

| D | L | T | C | A | # |
|-----|------|----|-----|-----|--------|
| 1.8 | 21.3 | 15 | 2.5 | 3.8 | SAB-15 |



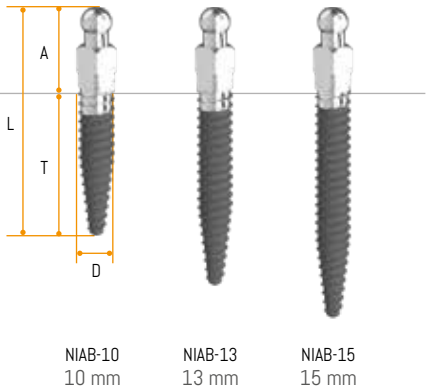
SD Implant $\varnothing 2.1$ fine thread implants

| D | L | T | C | A | # |
|-----|------|------|-----|-----|---------|
| 2.1 | 16.3 | 10 | 2.5 | 3.8 | IAB-10 |
| | 17.8 | 11.5 | | | IAB-115 |
| | 19.3 | 13 | | | IAB-13 |
| | 21.3 | 15 | | | IAB-15 |



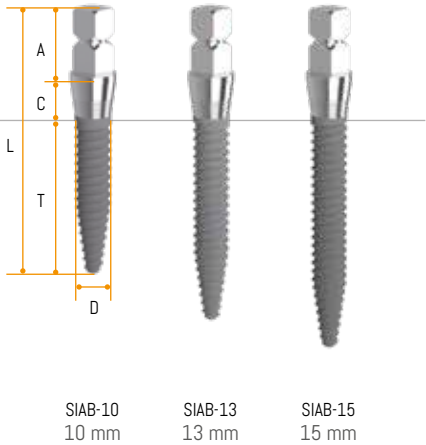
SD Implant $\varnothing 2.1$ fine thread implants

| D | L | T | A | # |
|-----|------|----|-----|---------|
| 2.1 | 13.9 | 10 | 3.9 | NIAB-10 |
| | 16.9 | 13 | | NIAB-13 |
| | 18.9 | 15 | | NIAB-15 |



SD Implant $\varnothing 2.1$ fine thread implants

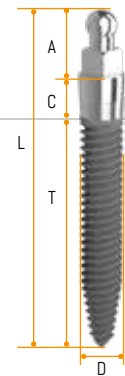
| D | L | T | C | A | # |
|-----|------|----|-----|-----|---------|
| 2.1 | 16.3 | 10 | 2.5 | 3.8 | SIAB-10 |
| | 19.3 | 13 | | | SIAB-13 |
| | 21.3 | 15 | | | SIAB-15 |



Dental Implants

SD Implant $\varnothing 2.5$ fine thread implants

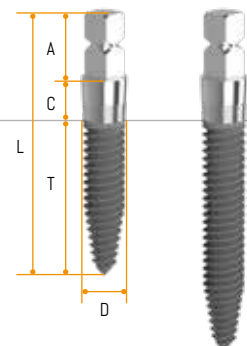
| D | L | T | C | A | # |
|-----|------|----|-----|-----|----------|
| 2.5 | 21.3 | 15 | 2.5 | 3.8 | MC/25/15 |



MC/25/15
15 mm

SD Implant $\varnothing 2.5$ fine thread implants

| D | L | T | C | A | # |
|-----|------|----|-----|-----|-----------|
| 2.5 | 16.3 | 10 | 2.5 | 3.8 | MCA/25/10 |
| | 21.3 | 15 | | | MCA/25/15 |



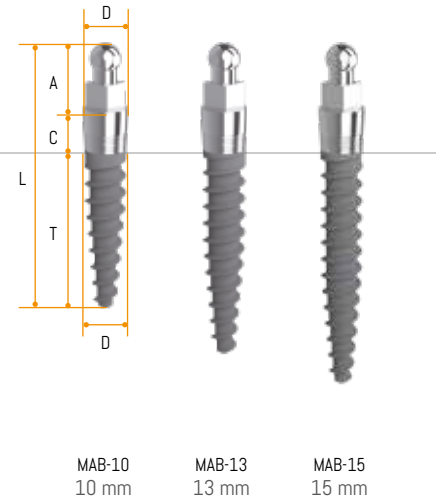
MCA/25/10
10 mm

MCA/25/15
15 mm

SD aggressive threaded implants are ideal for soft bone in the maxilla and the mandible.

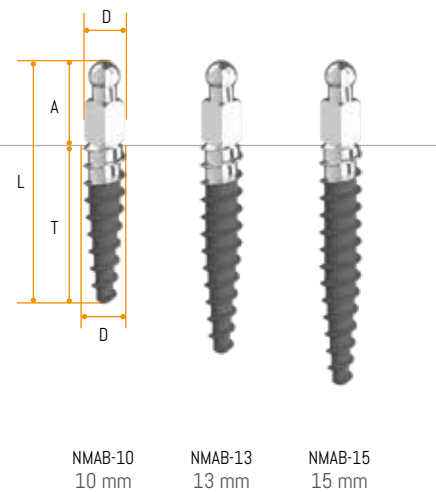
SD Implant $\varnothing 2.4$ aggressive thread implants

| D | L | T | C | A | # |
|-----|------|----|-----|-----|--------|
| 2.4 | 16.3 | 10 | 2.5 | 3.8 | MAB-10 |
| | 19.3 | 13 | | | MAB-13 |
| | 21.3 | 15 | | | MAB-15 |



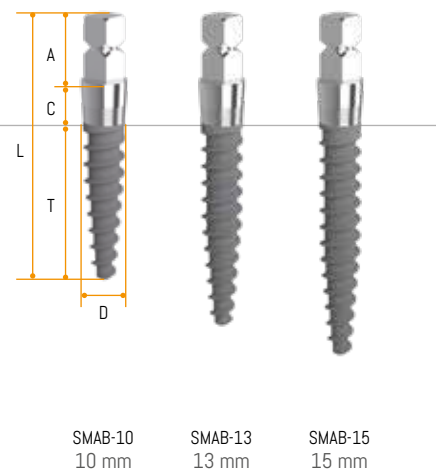
SD Implant $\varnothing 2.4$ aggressive thread implants

| D | L | T | A | # |
|-----|------|----|-----|---------|
| 2.4 | 13.9 | 10 | 3.9 | NMAB-10 |
| | 16.9 | 13 | | NMAB-13 |
| | 18.9 | 15 | | NMAB-15 |



SD Implant $\varnothing 2.4$ aggressive thread implants

| D | L | T | C | A | # |
|-----|------|----|-----|-----|---------|
| 2.4 | 16.3 | 10 | 2.5 | 3.8 | SMAB-10 |
| | 19.3 | 13 | | | SMAB-13 |
| | 21.3 | 15 | | | SMAB-15 |



Prosthetic components

Soft retention caps

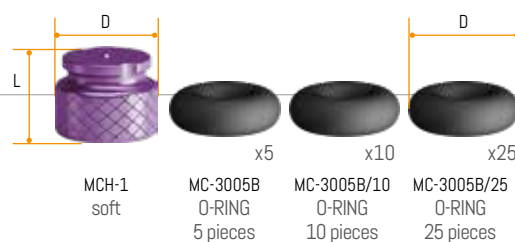
| D | L |
|-----|-----|
| 4.7 | 3.5 |

Material: Titanium grade 5

| O-Ring | D |
|--------|-----|
| | 4.4 |

Material: FDA Buna

Available in single packages: MCH-1
Available in packages of 4 caps: MCH-1/4



Medium retention caps

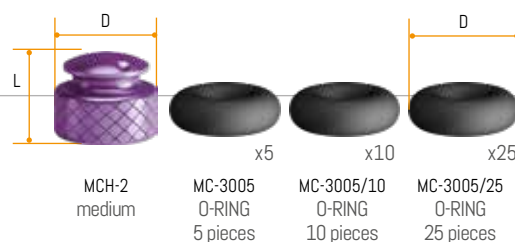
| D | L |
|-----|-----|
| 4.3 | 3.1 |

Material: Titanium grade 5

| O-Ring | D |
|--------|-----|
| | 3.8 |

Material: FDA Buna

Available in single packages: MCH-2
Available in packages of 4 caps: MCH-2/4



Hard retention caps

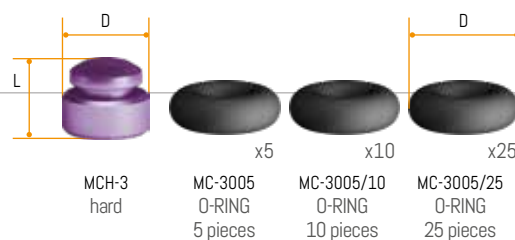
| D | L |
|---|-----|
| 4 | 3.1 |

Material: Titanium grade 5

| O-Ring | D |
|--------|-----|
| | 3.8 |

Material: FDA Buna

Available in single packages: MCH-3
Available in packages of 4 caps: MCH-3/4



Straight abutment

For O-ball and square head implants

| D | L |
|-----|-----|
| 4.3 | 9.4 |

Material: Titanium grade 5



SD 15° angled abutment

For O-ball head implants

| D | L |
|-----|-----|
| 4.6 | 9.3 |

Material: Titanium grade 5

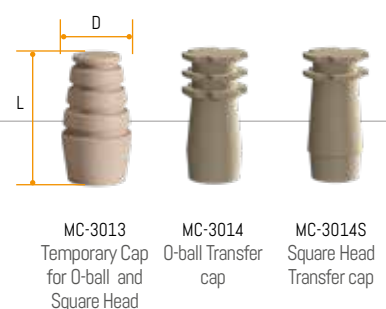


O-ball temporary and transfer caps

For O-ball and square head implants

| D | L | # |
|-----|-----|----------|
| 4.0 | 7 | MC-3013 |
| 4.5 | 6.4 | MC-3014 |
| 4.5 | 6.4 | MC-3014S |

Material: PEEK



Castable cap for square head and O-ball

| D | L |
|---|---|
| 4 | 6 |

Material: Plexiglass

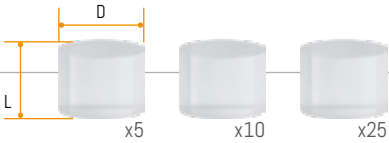


MC-3006

PVC protection

| D | L |
|-----|---|
| 3.5 | 4 |

Material: PVC



MC-3008
5 pieces

MC-3008/10
10 pieces

MC-3008/25
25 pieces

Collared analog

| D | L |
|-----|------|
| 2.6 | 15.8 |

Material: Titanium grade 5

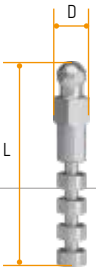


MC-3007

Non collared analog

| D | L |
|-----|------|
| 2.0 | 15.8 |

Material: Titanium grade 5



MC-3012

Collared square head analog

| D | L |
|-----|------|
| 2.6 | 15.8 |

Material: Titanium grade 5



MCA-1007

MONOBLOCK Implant

The C-Tech MB, Mono Block Implant, provides 2 different prosthetic options as well as 2 different main body designs to meet the differing requirements of bone and soft tissue encountered in the maxilla and the mandible.

Prosthetic Options

Choice between square or O-ball head depending on fixed or removable applications.

Support for Fixed Reconstructions

A tapered head with a 4,8mm height above the 3,1mm platform offers and optimal base and structure for the fixed reconstruction.

Gingival Collar

MAN-OB/MAN-TAP smooth collar provides the platform switching height to accommodate the average mandibular gingival tissue.

Mandibular Cortical Maintenance

Augmented MAN-OB/MAN-TAP micro grooving for the increased cortical height of the mandibular bone.

Low Profile Threading

Low profile threading offers surface area yet with the reduced resistance necessary for placement in the D1/D2 bone that can be encountered in the mandible.

Surface Topography

Blasted main body surface.

Mandibular Apex

Sharp apex to facilitate advancement in D1/D2 bone.

System Compatibility

Choice of tapered and O-ball head prosthetics. O-ball head is compatible with SD and EL O-ball attachments

Augmented Gingival Collar

MAX-OB/MAX-TAP smooth collar platform switching fits the thicker maxillary gingival tissue

Maxilla Type Bone Micro Grooving

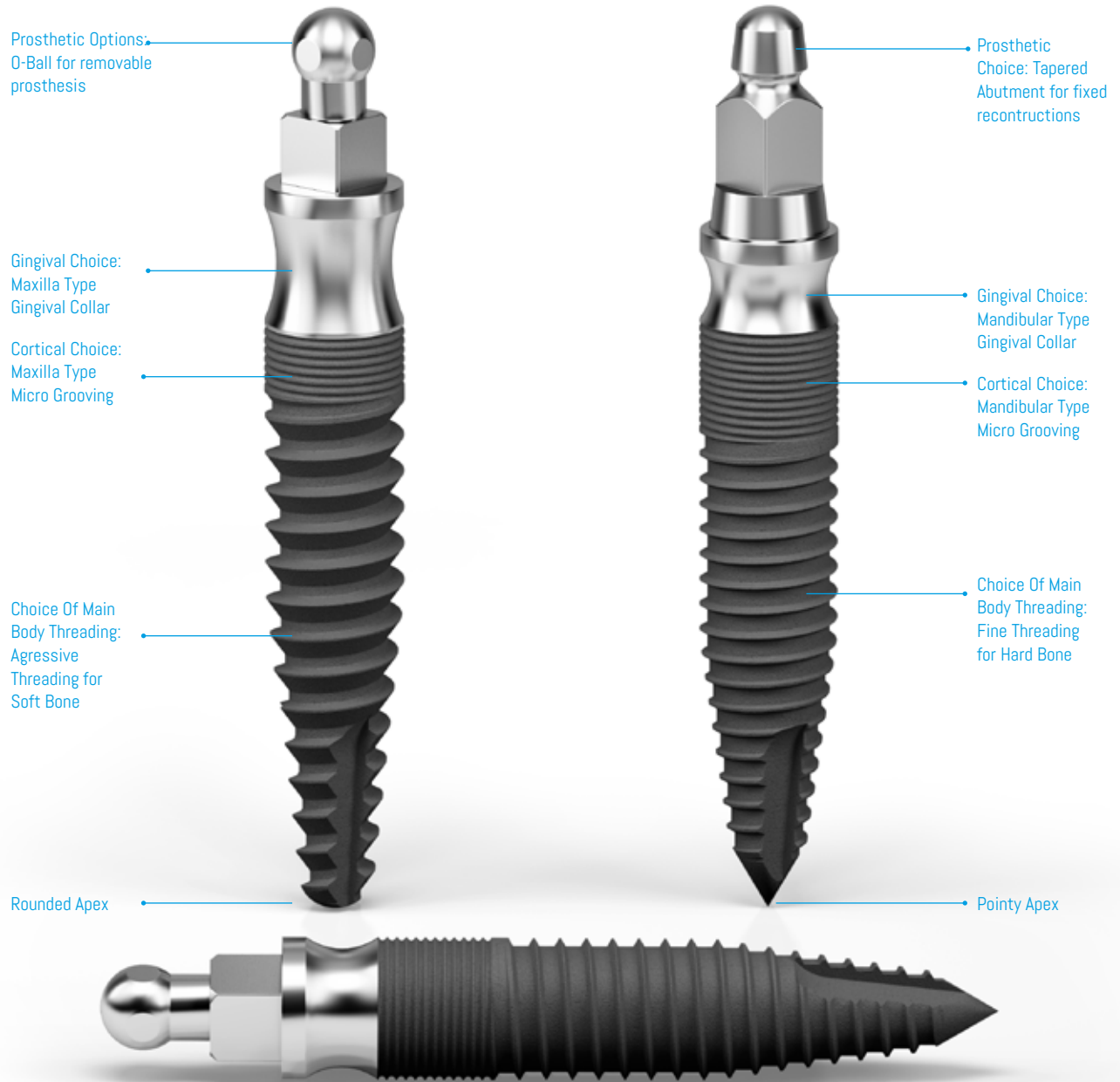
MAX-OB/MAX-TAP micro grooving accommodates the thinner cortical bone that is encountered in the maxilla.

Aggressive Main Body Threading

MAX-OB/MAX-TAP main body threading, aggressive reverse buttress threads deliver the surface area and stability required by softer maxillary bone

Maxilla Type Apex

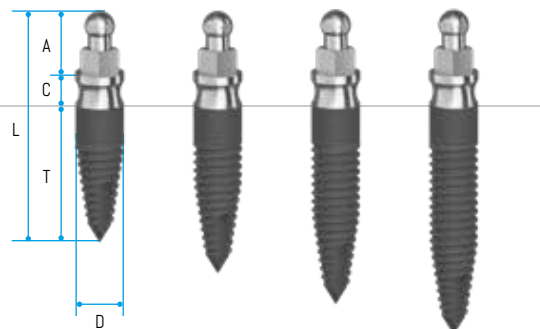
Rounded tip is ideal for the maxilla so as to prevent the possible perforation of the sinus.



Dental Implants

MANOB

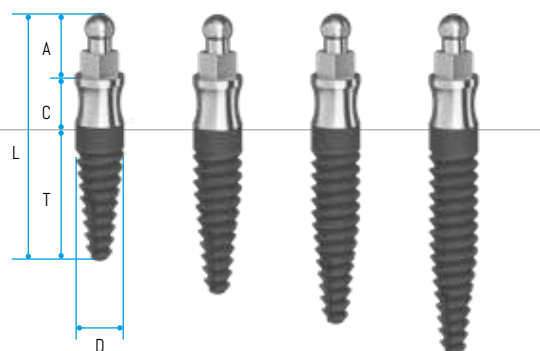
| D | L | T | C | A | # |
|---|------|----|-----|-----|----------|
| 3 | 14.3 | 9 | 1.5 | 3.8 | MANOB-09 |
| | 16.3 | 11 | | | MANOB-11 |
| | 18.3 | 13 | | | MANOB-13 |
| | 20.3 | 15 | | | MANOB-15 |



MANOB-09 9 mm MANOB-11 11 mm MANOB-13 13 mm MANOB-15 15 mm

MAXOB

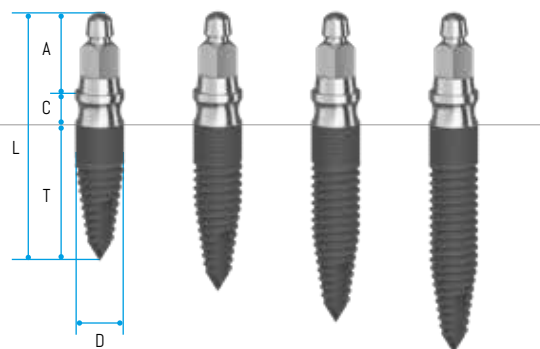
| D | L | T | C | A | # |
|---|------|----|-----|-----|----------|
| 3 | 15.3 | 9 | 2.5 | 3.8 | MAXOB-09 |
| | 17.3 | 11 | | | MAXOB-11 |
| | 19.3 | 13 | | | MAXOB-13 |
| | 21.3 | 15 | | | MAXOB-15 |



MAXOB-09 9 mm MAXOB-11 11 mm MAXOB-13 13 mm MAXOB-15 15 mm

MANTAP

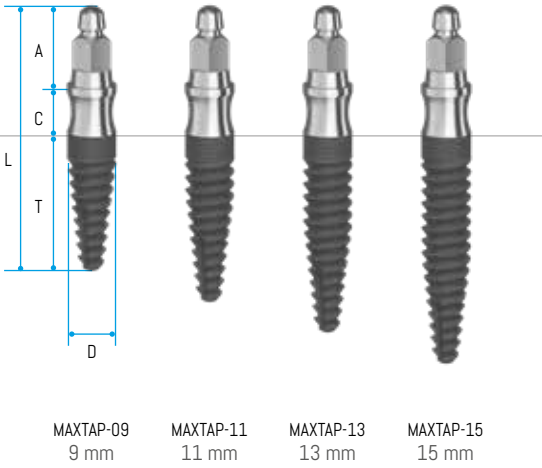
| D | L | T | C | A | # |
|---|------|----|-----|-----|-----------|
| 3 | 15.3 | 9 | 1.5 | 4.8 | MANTAP-09 |
| | 17.3 | 11 | | | MANTAP-11 |
| | 19.3 | 13 | | | MANTAP-13 |
| | 21.3 | 15 | | | MANTAP-15 |



MANTAP-09 9 mm MANTAP-11 11 mm MANTAP-13 13 mm MANTAP-15 15 mm

MAXTAP

| D | L | T | C | A | # |
|---|------|----|-----|-----|-----------|
| 3 | 16.3 | 9 | 2.5 | 4.8 | MAXTAP-09 |
| | 18.3 | 11 | | | MAXTAP-11 |
| | 20.3 | 13 | | | MAXTAP-13 |
| | 22.3 | 15 | | | MAXTAP-15 |



Prosthetic components

Soft retention caps

| D | L |
|-----|-----|
| 4.7 | 3.5 |

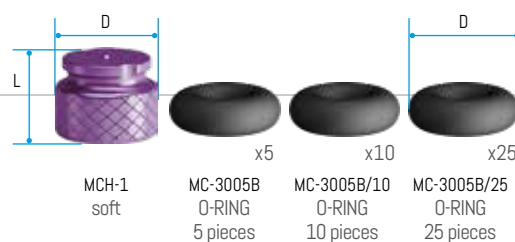
Material: Titanium grade 5

| O-Ring | D |
|--------|-----|
| | 4.4 |

Material: FDA Buna

Available in single packages: MCH-1

Available in packages of 4 caps: MCH-1/4



Medium retention caps

| D | L |
|-----|-----|
| 4.3 | 3.1 |

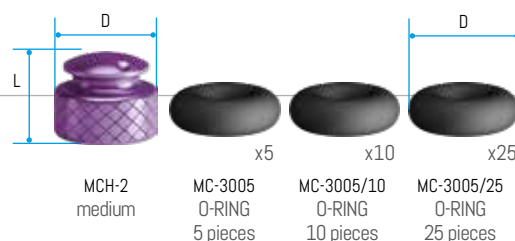
Material: Titanium grade 5

| O-Ring | D |
|--------|-----|
| | 3.8 |

Material: FDA Buna

Available in single packages: MCH-2

Available in packages of 4 caps: MCH-2/4



Hard retention caps

| D | L |
|---|-----|
| 4 | 3.1 |

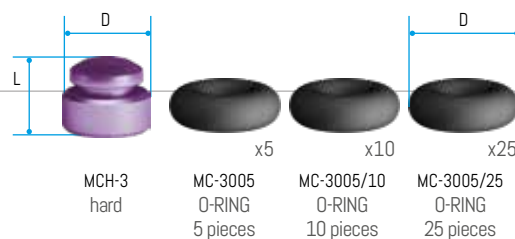
Material: Titanium grade 5

| O-Ring | D |
|--------|-----|
| | 3.8 |

Material: FDA Buna

Available in single packages: MCH-3

Available in packages of 4 caps: MCH-3/4



Straight abutment

For O-ball and square head implants

| D | L |
|-----|-----|
| 4.3 | 9.4 |

Material: Titanium grade 5



SD 15° angled abutment

For O-ball head implants

| D | L |
|-----|-----|
| 4.6 | 9.3 |

Material: Titanium grade 5

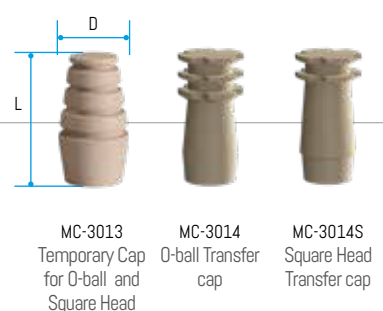


O-ball temporary and transfer caps

For O-ball and square head implants

| D | L | # |
|-----|-----|----------|
| 4.0 | 7 | MC-3013 |
| 4.5 | 6.4 | MC-3014 |
| 4.5 | 6.4 | MC-3014S |

Material: PEEK



Castable cap for square head and O-ball

| D | L |
|---|---|
| 4 | 6 |

Material: Plexiglass

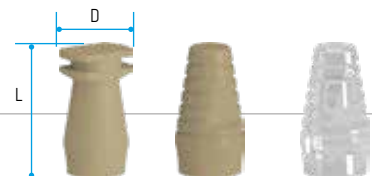


MC-3006

Tapered head caps Only for tapered head implants

| D | L | # |
|-----|-----|---------|
| 4 | 6.9 | MB-3013 |
| 2.1 | 6.5 | MB-3014 |
| | | MB-3006 |

Material: MB-3013 - PEEK
MB-3014 - PEEK
MB-3006 - CPMMA



MB-3013
Tapered
impression cap

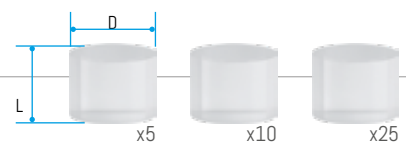
MB-3014
Tapered
temp cap

MB-3006
Castable
cap

PVC protection

| D | L |
|-----|---|
| 3.5 | 4 |

Material: PVC



MC-3008
5 pieces

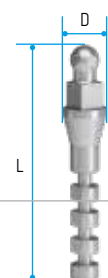
MC-3008/10
10 pieces

MC-3008/25
25 pieces

Collared O-ball analog

| D | L |
|-----|------|
| 2.6 | 15.8 |

Material: Titanium grade 5



MC-3007

Tapered analog

| D | L |
|-----|-------|
| 3.1 | 17.85 |

Material: Titanium grade 5



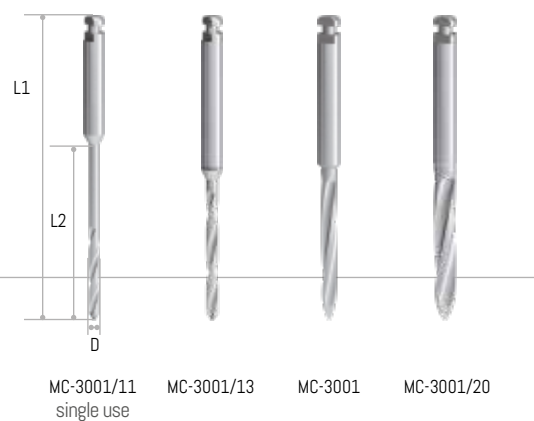
MB-ANALOG

Instruments

SD Drills

| D | L1 | L2 | # |
|-----|------|------|------------|
| 1.1 | 33.3 | 14.3 | MC-3001/11 |
| 1.3 | | | MC-3001/13 |
| 1.5 | | 17.5 | MC-3001 |
| 2.0 | | | MC-3001/20 |

Material: Stainless steel



SB/MB Butterfly driver

| D | L |
|-----|---|
| 8.5 | 7 |

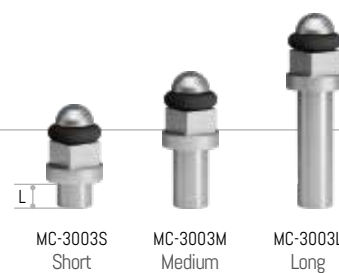
Material: Stainless steel



SD/MB Adapters

| L | # |
|----|----------|
| 4 | MC-3003S |
| 8 | MC-3003M |
| 12 | MC-3003L |

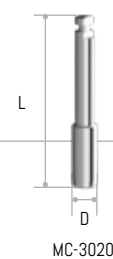
Material: Stainless steel



SD/MB Latch implant driver

| D | L |
|-----|----|
| 3.2 | 22 |

Material: Stainless steel



SD/MB Finger adapter

| D | L |
|----|-----|
| 12 | 8.6 |

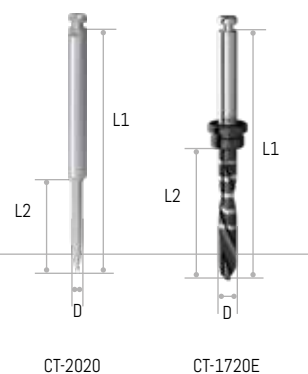
Material: Stainless steel



SD/MB Marking and pilot drills

| L1 | L2 | D | # |
|------|------|-----|----------|
| 29 | 15 | 2.1 | CT-2020 |
| 35.2 | 17.2 | 2.1 | CT-1720E |

Material: Stainless steel



MB Counterbore

| L1 | L2 | D2 | L3 | D3 |
|------|-----|-----|-----|-----|
| 23.9 | 4.8 | 3.1 | 4.5 | 3.5 |

Material: Stainless steel



MB Main drill

| L1 | L2 | D |
|------|------|-----|
| 36.7 | 17.2 | 2.6 |

Material: Stainless steel



MB Drill Extender

| L |
|----|
| 25 |

Material: Stainless steel



MB Tissue punch

| D | L |
|---|-----|
| 3 | 2.8 |

Material: Stainless steel

Instrumentation

SD/MB Torque wrench up to 50Ncm

Material: Stainless steel



CT-8010

SD/MB O-ring tool

Material: Stainless steel



MC-3018

SD/MB Kit

SURKIT05



SD Kit

MC-00075SC



Torque wrench
CT-8010



Butterfly driver
MC-3002



Drills*
MC-3001/11 - MC-3001/13
MC-3001 - MC-3001/20

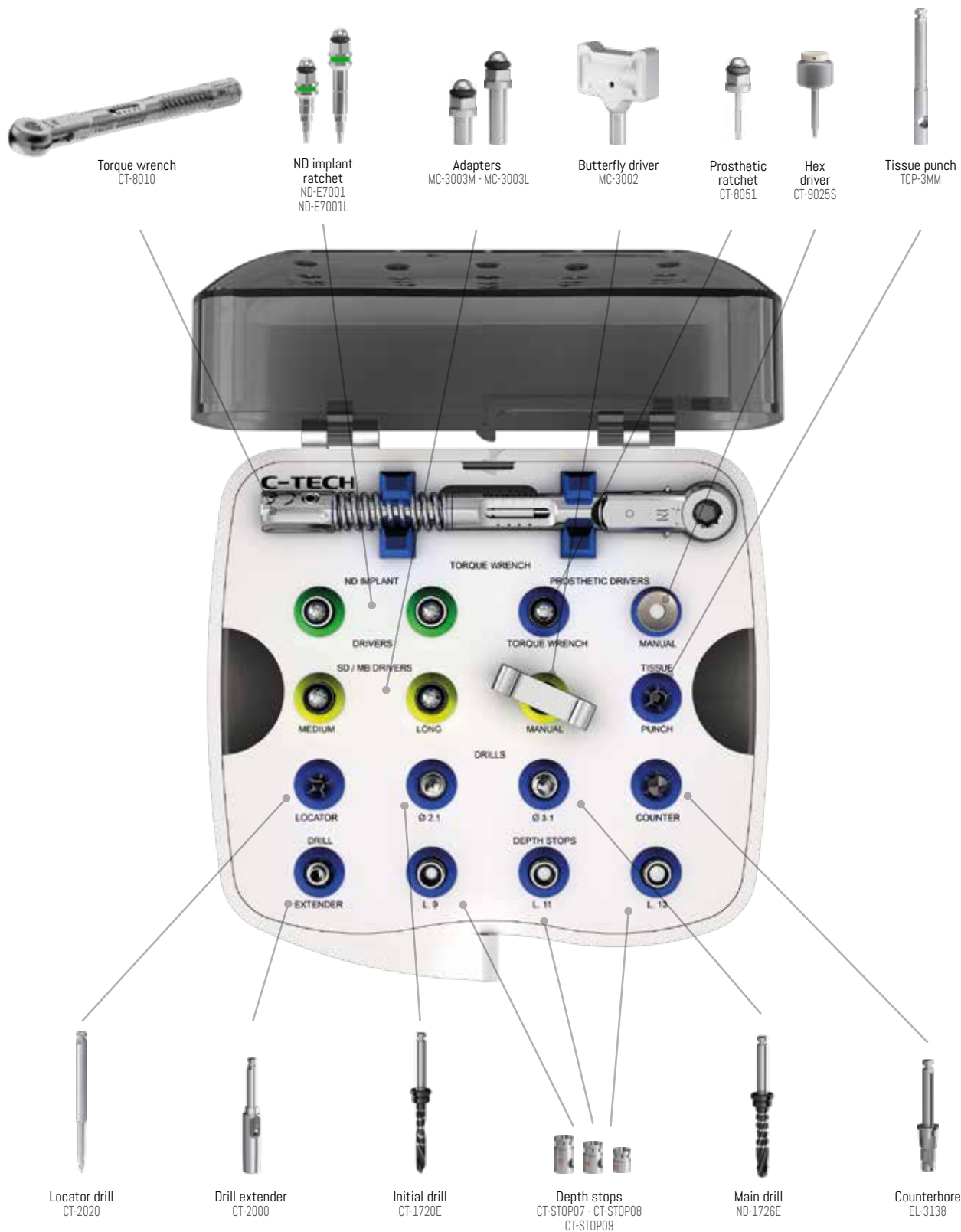


Adapters
MC-3003S
MC-3003L

* Each surgical kit is equipped with 2 drills; customers can chose drills between \varnothing 1.1 , 1.3, 1.5, 2.0. Customers should communicate the choice of the drills at the moment of the order.

ND/MB Kit

SURKIT06



Surgical Protocol

Case planning

Following evaluation of the patient and the corresponding panoramic radiographs, the type and number of implants and planned placement sites are established. There should be a minimum of 4 implants for mandibular cases and a minimum of 6 for maxilla cases. The implant planning transparency is used to establish the implant length. A minimum of 5mm between each implant needs to be maintained to allow space for the housings. In mandibular cases the implants should be placed starting with a minimum of 5mm anterior of the mental foramen. Following implant site planning the sites are transferred to the gingiva and marked with sterile marker or bleeding points.

Pilot site drilling and initial insertion

The drill is placed over the sites and lightly pumped up and down till the cortical plate is perforated. Unless the crestal bone is sharp or defective there will be no need to raise flap or incision. In the case of average hardness of the bone, then the drill depth should be approximately 1/3 the length of the implant. In the case of hard bone then the depth should be extended to 2/3 of the length of the implant.

The implant is removed from the sterile vial and the tip of the implant is placed into the drilled site, using the implant mount cap as initial driver. The implant is driven into the bone exerting downward pressure and clockwise motions. Once the bone has been engaged the resistance will become too great to proceed further, it is now time to disengage the cap from the implant and proceed to the next instrument.

Continuing the insertion with the butterfly driver

Following the initial insertion one will use the butterfly driver, which allows for applying more torque. It should be possible to seat the implant completely with this instrument but should the implant not be completely seated and further advancement is not possible due to resistance, one will then require the ratchet or torque ratchet for final seating.

Final implant seating

Final seating is accomplished through use of the torque ratchet. The torque ratchet should be set to 35 Ncm. The ratchet adapter is inserted into the opening at the end of the ratchet with the female aspect of the adapter protruding. The adapter is then fitted over the top of the implant, engaging the square part beneath the O-ball.

A finger should be placed over the end of the ratchet in order to stabilize the insertion and prevent lever action on the end of the implant. The ratchet is moved in quarter turn increments, pausing in between each turn, thus allowing the bone to expand.

The implant is considered primarily stable once 35 Ncm has been achieved. The implant is completely seated once the O-ball and the square part beneath are the only parts protruding from the gingiva. If primary stability has been achieved prior to achieving final seating, then the torque setting should be raised to 50 Ncm, the point at which a fracture can occur. Should the resistance be too much to achieve final seating, then the implant should be slowly backed out and the pilot drill should be used to deepen the osteotome site.



Prosthetic Protocol

Following proper prosthetic protocol is essential to case success

The base of the denture is relieved in order to freely accommodate the heads of the implants and the housings seated on the o-balls. The denture should be relieved until the housings no longer come into contact with the ceiling of the denture base. The denture should be cleaned thoroughly of all acrylic powder residue.

Take the PVC tubing and, using a scalpel or scissors, cut off 1.5mm lengths corresponding to the quantity of set implants.

Slip the cut lengths of tubing around the necks of the implant heads and into the gingiva but below the implant O-ball.

Fit the housings over all O-ball heads, the tubing should not obstruct the full seating of the housings over the O-balls.

Using cold curing acrylic, apply small amounts to the tops of the housings and fill the hollowed trough of the denture base with the acrylic.

Set the denture over the housings in the patient's mouth.

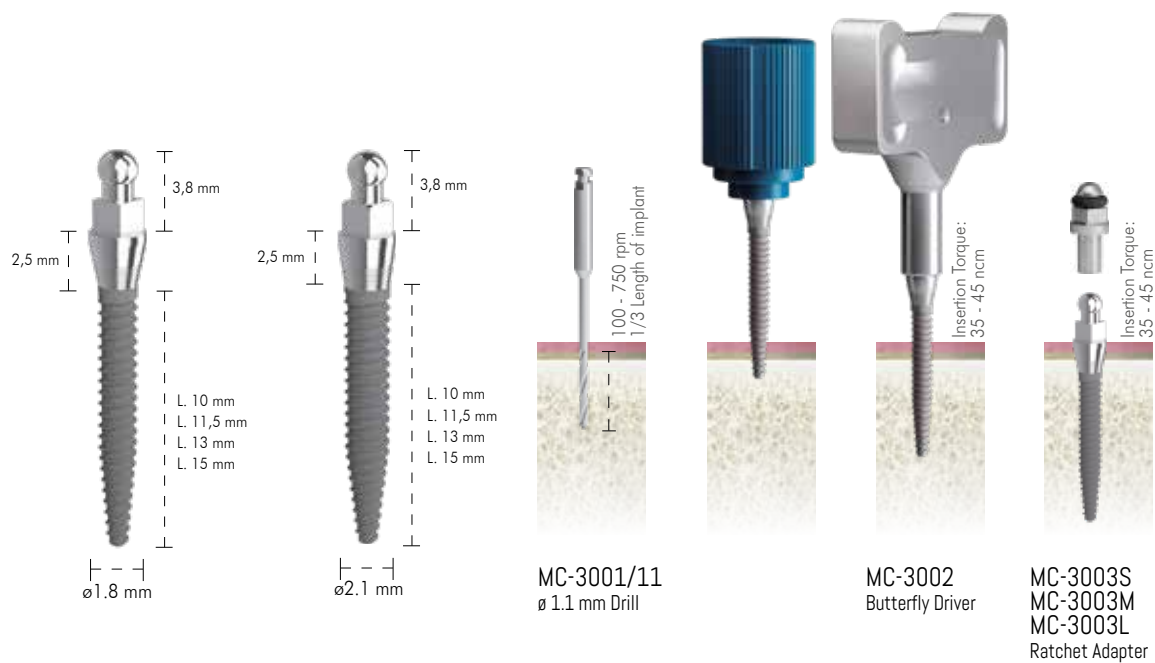
Have the patient bite down on the denture in a normal occlusion with normal pressure.

The acrylic will require approx 8 minutes to set, after which the denture is removed and excess acrylic is trimmed and polished away.

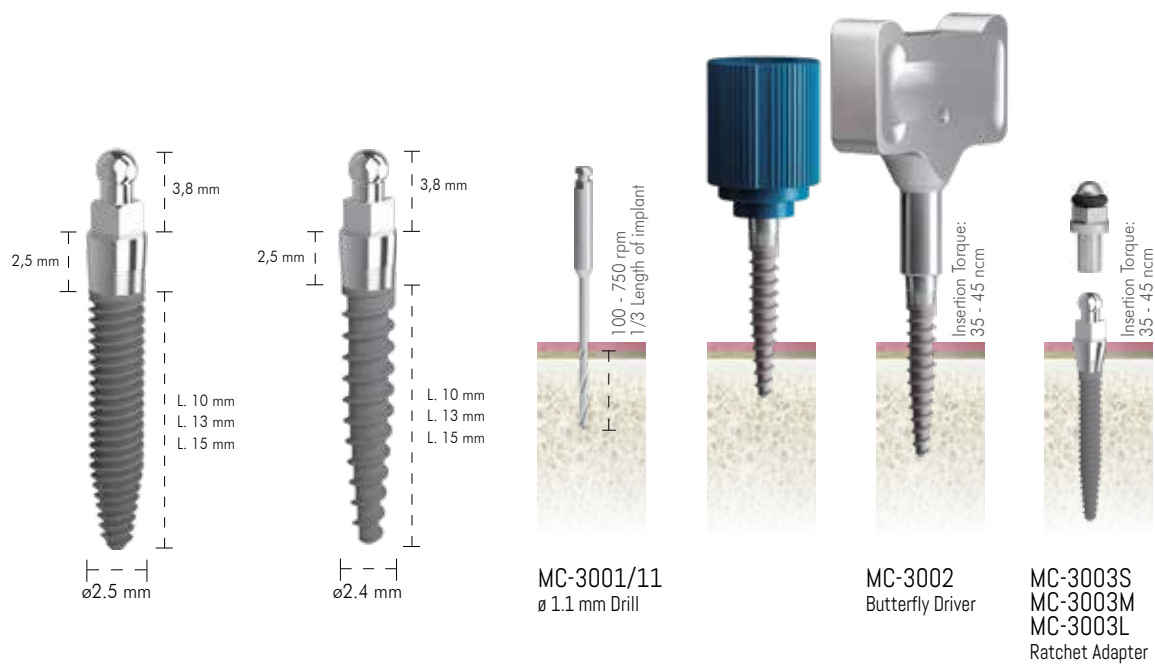


Site preparation

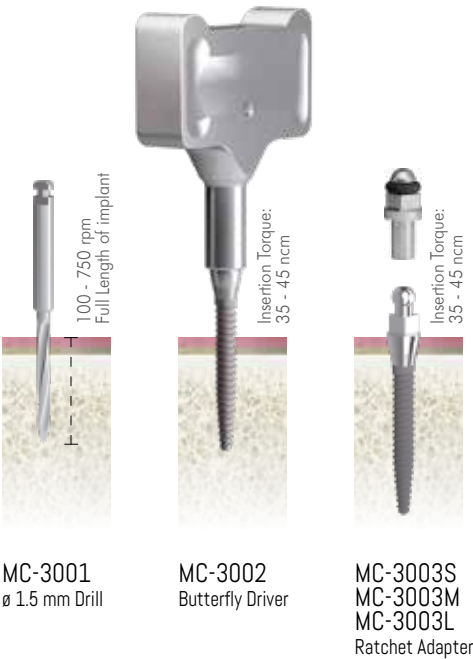
Ø1.8 - Ø 2.1 CAB/NAB/IAB/NIAB/SIAB



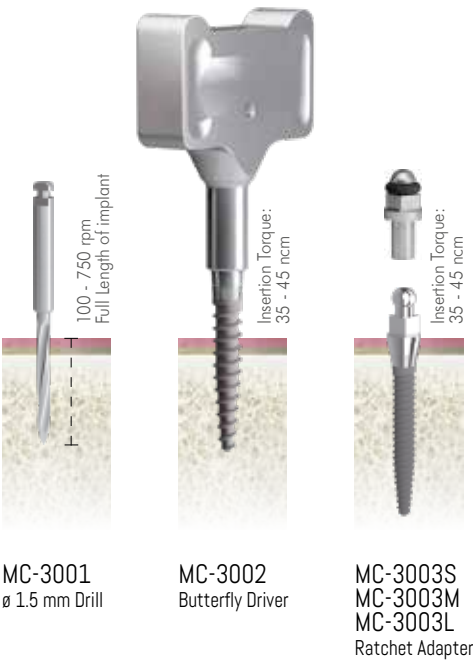
Ø2.5 - Ø 2.4 MAB/NMAB/SMAB



D1 ADDITIONAL STEPS

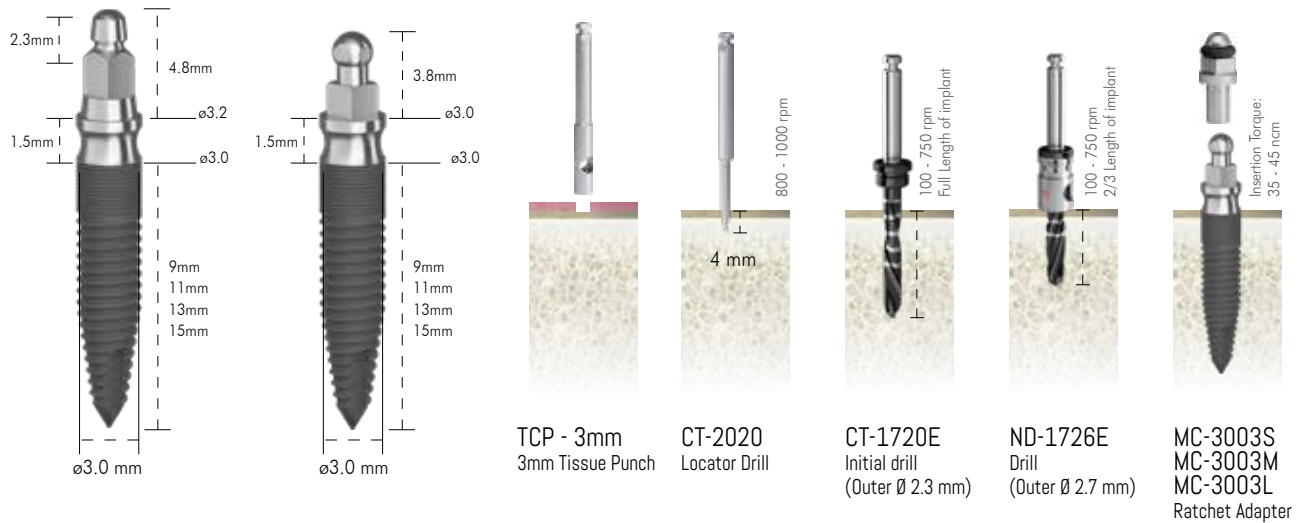


D1/D2 ADDITIONAL STEPS

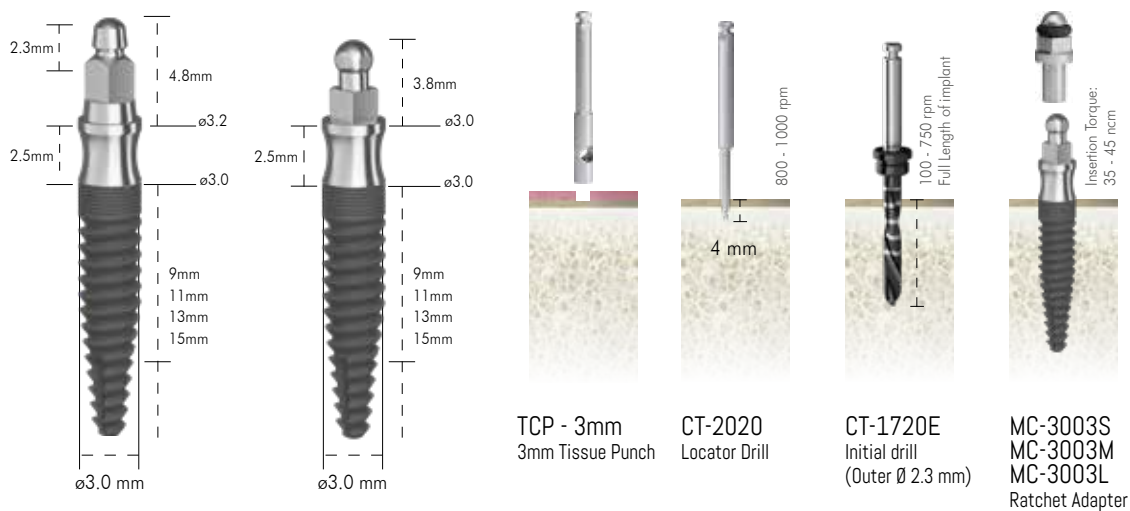


Site preparation

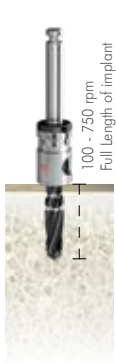
MAN - TAPER / MAN - O-BALL FOR DENSITY D1/D2



MAX - TAPER / MAX - O-BALL FOR DENSITY D2/D3



D1/D2 Additional steps



ND-1726E
Drill
(Outer Ø 2.7 mm)



EL-3138
Ø 3 mm
Counterbore



MC-3003S
MC-3003M
MC-3003L
Ratchet Adapter

D1/D2 Additional steps



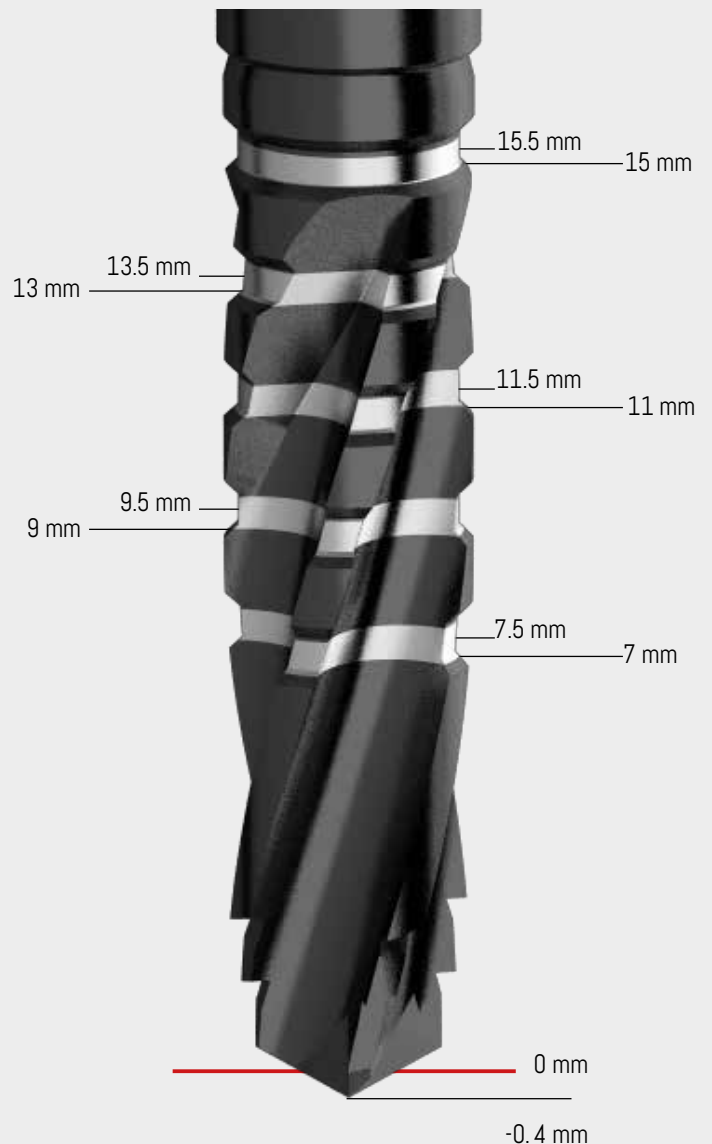
ND-1726E
Drill
(Outer Ø 2.7 mm)



MC-3003S
MC-3003M
MC-3003L
Ratchet Adapter

Explanation of Drill Marking

- The drill markings do not include the point of the drill.
- The point of the drill is 0.4 mm long, thus the drill marking of 7 mm is actually 7.4 mm from the very tip to the bottom of the black line.
- The implant should be set approximately 1 mm subcrestally, thus for a 13 mm implant, one should drill to the 14 mm. The use of metal stop is recommended.
- The height of the grey drill marking is 1 mm



English version



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