SOUTHERNIMPLANTS®
Innovative Treatment Solutions

Counterbores and Countersinks Surgical Guidelines

Achieving precise and secure implant placement is paramount for optimal implant insertion. Southern Implants® counterbores and countersinks are intended to be used to prepare the osteotomy site for implant placement.

Countersinks

A countersink is designed to enlarge or bevel the edge of an osteotomy at the coronal aspect. This step is often required in hard bone cases to allow the dental implant's collar to sit flush with the bone level or even to sink the implant subcrestal.

The lines on the countersink indicate the diameter and will determine the drilling depth according to surgical planning.

Using countersinks with Co-Axis® implants
When placing a Co-axis® Implant, utilising a countersink may be appropriate to avoid interference with the bone for implant placement, removal of the fixture mount and placing corresponding components.

Figure 1: Countersink

Using the Countersink Drill

Step 1: Selection of the corresponding Countersink drill
Select the appropriate Countersink drill that matches the diameter of the coronal section (collar) of the Implant. Attach It to the surgical handpiece.

Step 2: Drilling
Gently place the Countersink drill Into the prepared osteotomy. Use a slow, controlled motion to open up the crestal bone for the implant. This step helps to create a contoured seat for the

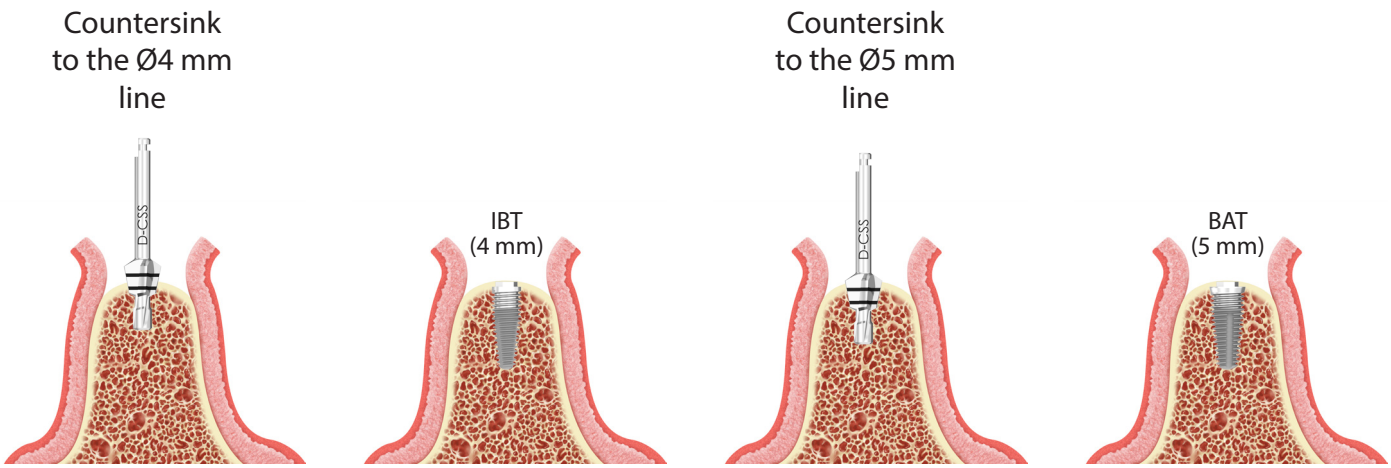


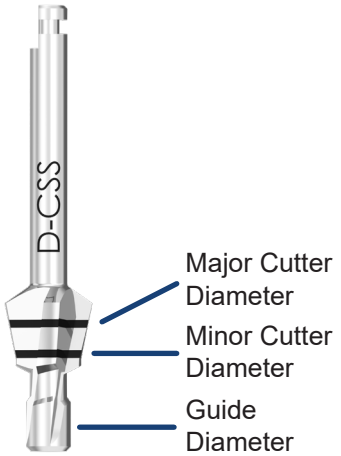
Figure 2: Countersink critical diameter to match implant collar width.

implant's coronal aspect.

NOTE: all drilling is performed at a speed of 800-1500 rpm, with constant irrigation using sterile saline.

Step 3: Verification
Check the countersink depth and ensure it is adequate for the Implant's collar to sit flush with the bone surface. The lines on the countersink indicate the diameter and will determine the drilling depth according to surgical planning.

Countersink range



Drill Code	Major Cutter Diameter (mm)	Minor Cutter Diameter (mm)	Guide Diameter (mm)
D-CS-IBN	Ø3.4	N/A	Ø2.3
D-CSS-F	Ø5.0	Ø4.0	Ø2.8
D-CSS-5	Ø6.0	Ø5.0	Ø3.95
D-CS-SP	Ø5.0	Ø3.5	N/A

Counterbores

Figure 3: Counterbore

Counterbores are used to enlarge an osteotomy based on the counterbore design and the initial osteotomy. A counterbore is non-end cutting with a lead and therefore will only bore to a depth based on the original osteotomy. The lead is used as a guide for the counterbore guiding itself in the existing osteotomy. This is commonly used when utilising cylindrical twist drills for placement of parallel walled Implants (i.e. a Ø4 mm counterbore (D-CB-40M) is used to increase the crestal diameter of a Ø3 mm osteotomy to Ø4 mm).

NOTE: all drilling Is performed at a speed of 8000-1500 rpm, with constant Irrigation using sterile saline.

Make sure to use a drill compatible with the indicated drilling sequence according to the prosthetic Interface and dimensions of the planned Implant.

Using the Counterbores Drill

Step 1: Select the correct counterbore

Choose a counterbore size based on your specific requirements. For example, if you have a Ø3 mm osteotomy, you might use a Ø4 mm counterbore (D-CB-40M) to increase the crestal diameter. Ensure that the counterbore is compatible with the planned implant's dimensions and prosthetic interface.

Step 2: Drilling technique

Set your drilling speed to 800-1500 rpm. Place the counterbore at the coronal aspect of the osteotomy site. Gently engage the bone and create a cylindrical hole. Maintain steady pressure and avoid excessive force. Keep the counterbore perpendicular to the bone surface.

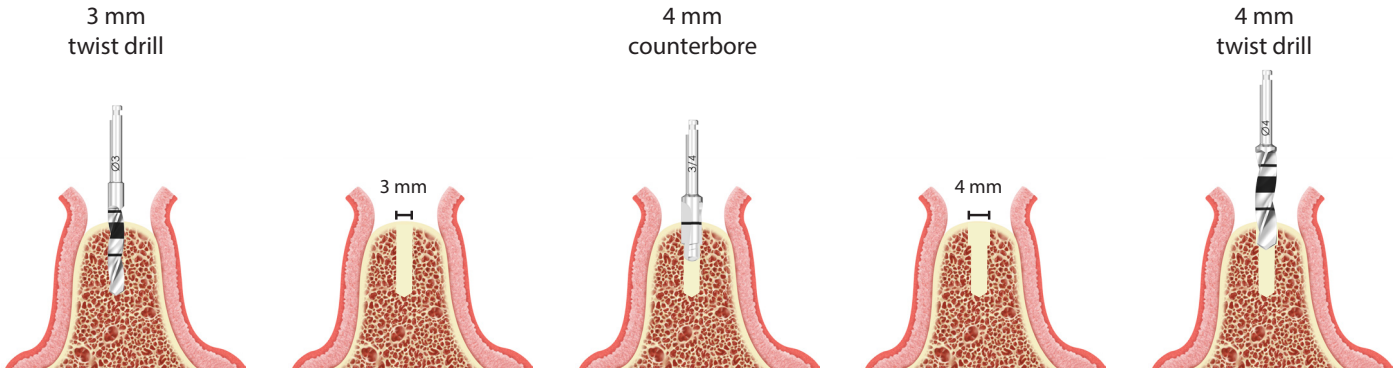
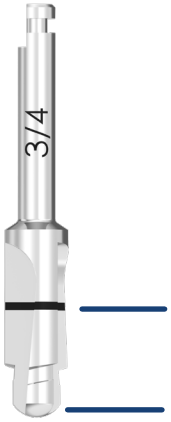


Figure 4: Using the Counterburr to prepare the osteotomy for a wider twist drill.

Step 3: Verify depth and alignment

Check the depth of the counterbore using depth markers or visual cues. Ensure that the counterbore is aligned correctly with the planned implant trajectory. Once the counterbore has prepared the site, proceed with larger twist drills according to the drilling sequence. Follow the recommended drilling guidelines for implant placement.

Counterbore range



Drill Code	Maximum Cutter Diameter (mm)	Guide Diameter (mm)
D-CB-F	Ø3.0	Ø2.0
D-CB-40M	Ø4.0	Ø3.0
D-CB-50M	Ø5.0	Ø4.0
D-ZYG-CS	Ø3.4	Ø2.46
D-ZYG-CS-S	Ø3.4	Ø2.46

Refer to the Instructions for Use (CAT-8036) for further information.