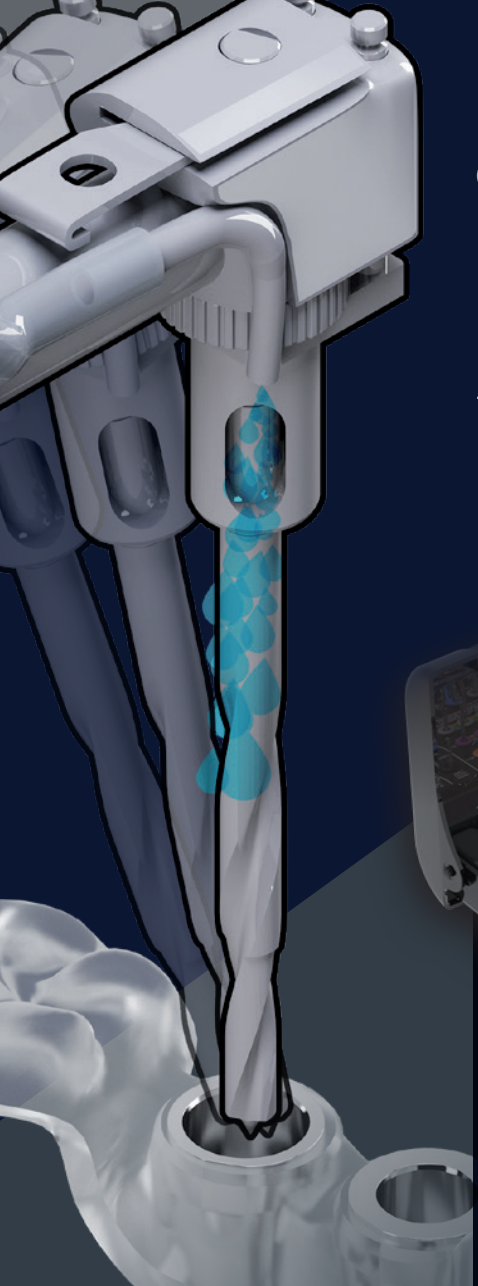
PALTOP Digital

FULLY GUIDED SURGICAL SYSTEM



QUICK START

COMPLETE SURGICAL PROCEDURES WITH VIRTUAL PLANNING CONSIDERING THE IDEAL ESTHETIC RESULT

- ✓ **Continuous direct irrigation on the drill**
- ✓ **Significantly less inter-arch space needed**
- ✓ Use 2 hands, not 4.
- ✓ No implant drill guide keys/spoons required
- ✓ No direct contact of drilling flutes to sleeves- no metal shavings- drills last longer.
- ✓ Guide sleeves in two diameters for ideal implant spacing
- ✓ Three drill lengths with fewer drills in the surgical kit
- ✓ One kit manages all PALTOP implant lines
- ✓ Covers implant lengths 6mm – 16mm
- ✓ Covers implant diameters 3.25mm – 5mm

PALTOP Digital

THE PALTOP INNOVATIVE CONCEPT:
CONTRA ANGLE BASED GUIDANCE

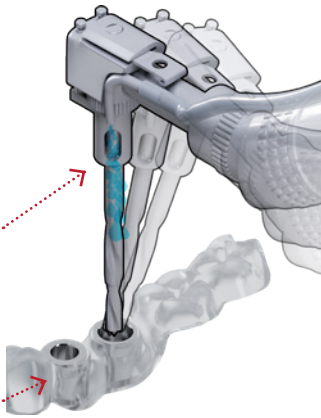
The PALTOP unique Digital Guidance Sleeve (DGS) guides the contra angle through the surgical guide to accurately position the implant drills.

Specially designed fully guided surgical drills are sequentially inserted in and out of the contra angle creating an accurate osteotomy based on the virtual planning.

There is a window in the side of the DGS to allow direct irrigation on the drill.

The PALTOP DGS system can be used even when there is minimal inter-arch distance, such as in the posterior maxilla and mandible.

The DGS design allows the drill to enter the surgical guide sleeve at an angle and is only uprighted when the drill enters the bone.



Wide Sleeve and Narrow Sleeve

THE PALTOP DIGITAL GUIDED SYSTEM USES 2 SLEEVE DIAMETERS, NARROW AND WIDE

The narrow sleeve can be placed in closer approximation to adjacent teeth or sleeves.

During the planning phase of the treatment the appropriate sleeve should be selected by the digital designer.

All drills- twist, spade and countersink may be used with the wide DGS and wide sleeve. Only drills up to the diameters for the 3.75mm implant may be used with the narrow DGS/ narrow sleeve.

NARROW

Used for 3.25 and 3.75mm diameter implants

Ø3.25mm Ø3.75mm

WIDE

Can be used for all implants. Must be used for 4.2 and 5.0mm diameter implants

Ø3.25mm Ø3.75mm Ø4.20mm Ø5.0mm

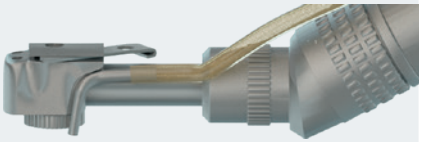
THE FULLY GUIDED SYSTEM CONTAINS:

1

Contra Angle

The contra angle included in the PALTOP Fully Guided Kit is designed to connect to the PALTOP narrow and wide DGS. It must be used to properly utilize the PALTOP Fully Guided Kit.

This contra angle may be used with most implant electric motors in use today.



2 DGS (Digital Guidance Sleeve) Narrow/Wide

The DGS fits into the specially designed contra angle and fits into the sleeve positioned in the surgical guide. Insert the appropriate DGS (narrow/wide) according to the guide sleeve diameter. The Narrow DGS fits the Narrow sleeve and the Wide DGS fits the Wide sleeve. The DGS is used with the short pilot drill and the L=20/25/30mm drills.

The DGS slides into the indicated holes in the head of the contra angle.

The DGS should first be inserted into the contra angle and then all drills are placed through the DGS into the contra angle chuck.

After inserting both the DGS and the indicated drill the latch is securely closed.

3 Short Pilot Drill

The short pilot drill is used to mark and initiate the pilot osteotomy. The DGS must engage the sleeve in the guide before the drill touches bone.

optional

4 Tissue Punch Narrow/Wide

The Tissue Punch includes a pilot 2mm drill and may be used instead of the short pilot drill. The narrow Tissue Punch will engage the narrow sleeve and the wide Tissue Punch will engage the wide sleeve in the surgical guide and requires no DGS.

5 Drills

L=20 (Brown) **L=25** (Purple) **L=30** (Silver)

The line of drills labeled L=(20/25/30) represents 20/25/30mm vertical depth as measured from the top of the sleeve in the surgical guide to the bottom of the osteotomy when used with the narrow or wide DGS.

This number is indicated on the drilling report.

The drills are used in graduating diameter sequence until the desired osteotomy width is obtained as indicated by the left side labeling 2.0/2.4, 3.25, 3.75, 4.2, 5.0.

6

optional

Countersink

A countersink is used only if there is dense cortical bone.

The countersinks are labeled blue (3.25), green (3.75) red (4.2), yellow (5.0) to correspond to the final implant diameter.

The countersinks should be used without the DGS.

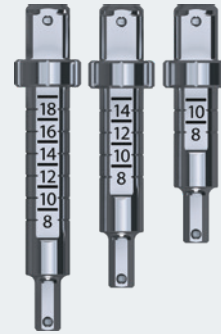
The blue (3.25) and green (3.75) countersinks are guided directly by the narrow sleeve in the surgical guide.

The red (4.2) and yellow (5.0) countersinks are guided by the wide sleeve in the surgical guide .

The countersink has numbers from 4-16 which refer to the offset number, although the numbers are not visible while the countersink is spinning, the depth can be controlled by counting the appropriate number of broad black bands to the offset number.

7

Implant Keys



Narrow/Wide Sleeve – select the narrow implant key section when the narrow DGS / sleeve is used, and the wide implant key section when the wide DGS / sleeve is used.

Short, Medium, Long - the short, medium, long designation refers to the total length of the implant key. The short has markers from 8 - 10mm height (from the top of the sleeve in the surgical guide to the top of the implant), the medium has 8 - 14mm, the long has 8 - 18mm. This number is indicated on the drilling report as the offset number.

NP/PCA & SP – the NP/PCA (narrow platform, 3.25 implant and Conical implant) and SP (standard platform 3.75, 4.2, 5.0 implant) refer to the connection of the implant.

The implant key is used to drive the implant to the planned position. One end connects to the contra angle key adaptor, and the other end connects to the implant. The implant key fits into and is guided by the sleeve in the surgical guide.

8 Contra Angle Key Adapter

The contra angle key adapter fits into the contra angle and connects to and drives the implant key.

9 Torque Ratchet

The square-headed stainless steel adjustable Torque Ratchet provides the precision required for torquing PALTOP implants and components.

- Recommended torquing of the implant is 35-50ncm.
- The torque ratchet connects directly to the implant key and may be used in place of the contra angle with the key adapter.

10 Screwdriver 1.25

The included screwdriver can be used with all PALTOP screws.

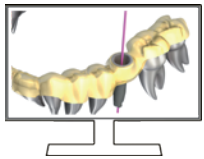
11 Lateral Fixation Pins

Lateral fixation pins are used to provide guide stability when required. Special planning is used when indicated.

STEP BY STEP:
HOW TO USE THE KIT

STEP 1

Planning the surgical guide

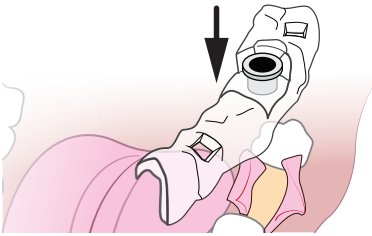


During the design phase of the treatment the appropriate sleeve (Wide\Narrow) should be selected by the dental technician from the sleeve library. The following planning software may be used:

- 3shape implant studio
- blue sky plan

STEP 2

Seating the surgical guide



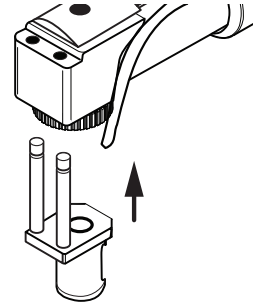
Seat the guide in the patient's mouth.

Do so relatively passively without exerting too much force. Make sure the guide seats securely in the patient's mouth.

To ensure secure seating of the guide, look through the windows on the guide to make sure there is contact between the windows and the teeth and/or soft tissue, without any spaces in between.

STEP 3

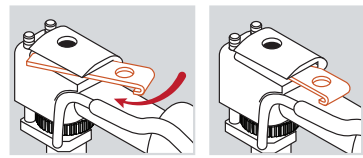
Attaching the DGS to the contra angle



Insert the appropriate DGS (narrow/wide) according to the guide sleeve diameter.

The short pilot drill is chosen so that the DGS engages the sleeve in the surgical guide before the drill touches bone.

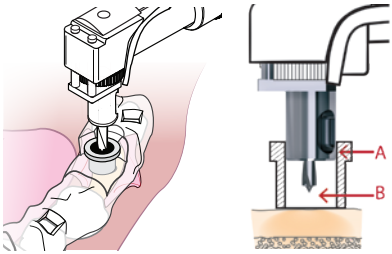
If the short pilot drill does not reach the bone after complete seating of the DGS (such as in an extraction site) then choose the L20 2.0/2.4mm drill to begin the osteotomy.



Closing the latch locks the DGS into the contra angle.

STEP 4

Creating the initial osteotomy



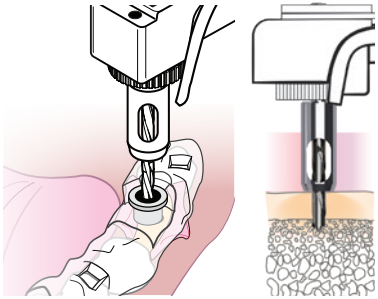
Drill the pilot hole through the sleeve using the short pilot drill. The DGS will direct the pilot drill for accurate centering of the initial osteotomy.
The DGS must engage the guide sleeve(A) before touching bone(B) (see illustration above).

The short pilot drill will only create a pilot hole 2mm - 3mm deep to create a purchase for the next drill.

The recommended drill speed is 850 rpm for all drills in this kit

*Optional (Can replace stages 3-4)

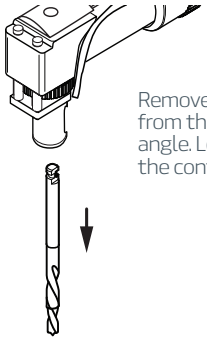
Using the tissue punch to create the initial osteotomy



In cases where opening a flap is not required the wide and narrow tissue punches can be used in the wide and narrow surgical guide sleeves instead of the DGS and short pilot drill.

STEP 5

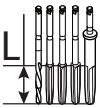
Removing the short drill from the contra angle



Remove the short drill from the DGS and Contra angle. Leaving the DGS in the contra angle.

STEP 6

Choosing the drill length according to the Drilling Report



Length, mm	13
Diameter (Ø), mm	4.2
Color	Red
Sleeve Information	
Name	Paltop 5mm Ex
Type	Universal
Order number	30.70.H08
Offset, mm	1.4
Color	Silver
Drill Information	
Minimum drill length	25

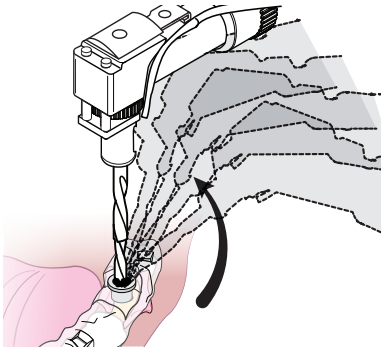
After the short pilot osteotomy is completed, refer to the drilling report indicating the line of drills (20mm/25mm/30mm) to use for the correct planned osteotomy depth. There is a 20mm, 25mm and 30mm line of drills. The drilling report indicates which line to use for each implant position.

Drill diameters are used sequentially until the appropriate implant diameter is achieved (the numbers on the drills indicate implant diameter and not osteotomy diameter).

Each line is used until the appropriate osteotomy diameter is achieved.

STEP 7

Creating the final depth osteotomy using The 2.0/2.4mm drill

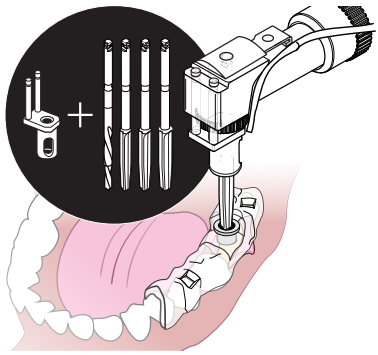


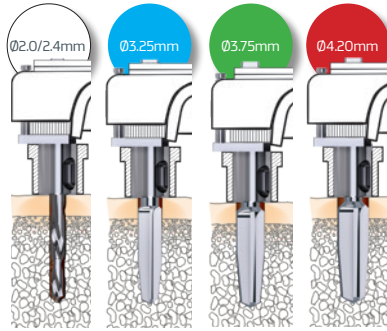
Drill through the sleeve in the guide into the previous osteotomy. The initial guidance is from the previous osteotomy. As drilling begins the DGS will engage the sleeve. Drilling is continued until the DGS bottoms out on the sleeve.

The drill can be introduced into the guide sleeves at an angle where inter-arch space is limited.

STEP 8

Expanding the osteotomy to the implant diameter using shaped drills



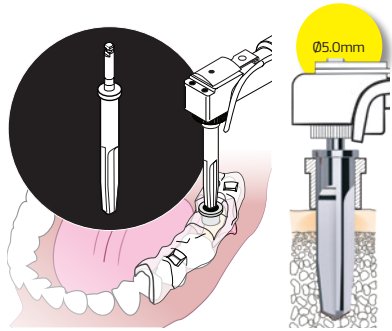


Remove the drill from the contra angle and insert the next diameter drill through the DGS into the contra angle. Drilling to depth is completed when the DGS bottoms out on the sleeve. All subsequent drills are used through the DGS until reaching the desired implant diameter.

Each of these drills are inserted into the contra angle through the DGS.

If the drill is not advancing smoothly then check to make sure that bone is not clogging the drill flutes.

A shorter drill may be chosen to make a smaller jump in osteotomy size and then advance to the final indicated drill length.

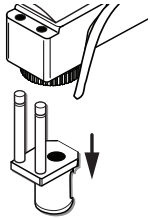


The 5mm diameter drill is used directly in the sleeve in the guide without the DGS (the DGS is removed from the contra angle).

STEP 9

Removing the DGS

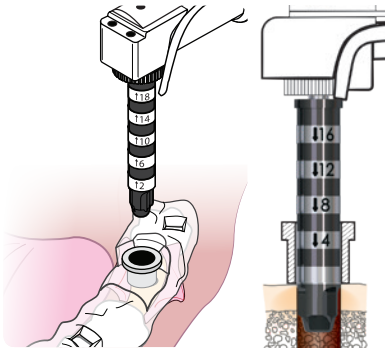
Remove the DGS from the contra angle.



STEP 10 optional

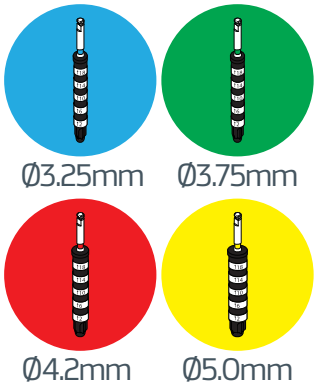
(only in very dense cortical bone)

Countersinking



Choose the appropriate diameter countersink: 3.25 (blue), 3.75 (green), 4.2 (red), 5.0 (yellow) and place it into the contra angle (no DGS is used). The guidance for the countersink comes from the sleeve in the guide.
The 3.25 and 3.75 countersinks are used directly in a narrow guide sleeve, and the 4.2 and 5.0 countersinks are used directly in a wide guide sleeve.

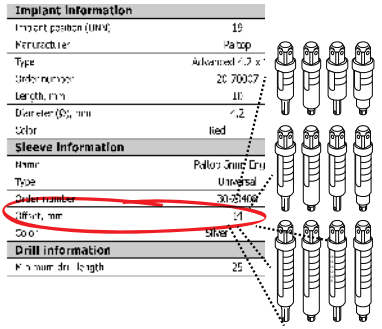
The decision to use the countersink should be made by the doctor after completing the osteotomy. The drilling report has an offset number. Drilling to this number will make a full countersink.



STEP 11

Choosing the implant key

The Drilling Report shows you the offset number.

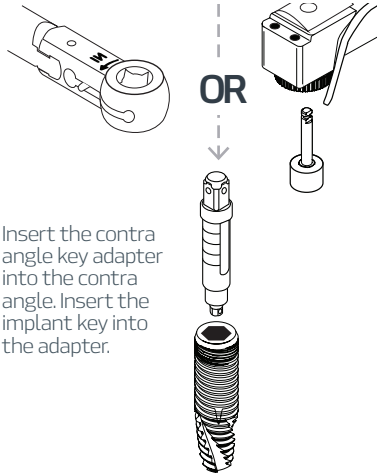


This number indicates the implant insertion depth and the countersink depth.
2 diameters of implant keys correspond to the narrow and wide sleeves.

There are 2 connections (NP/PCA & SP) corresponding to the implant connections and 3 lengths of implant keys: (Short, Medium and Long). Choose the shortest length implant key that has the indicated offset number on the drilling protocol.

STEP 12

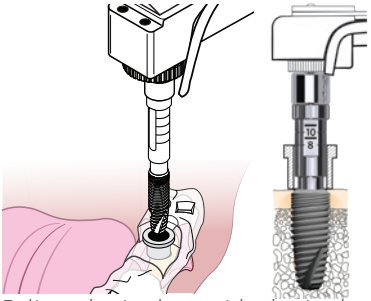
Connecting the implant key to the adapter/ratchet



Insert the contra angle key adapter into the contra angle. Insert the implant key into the adapter.

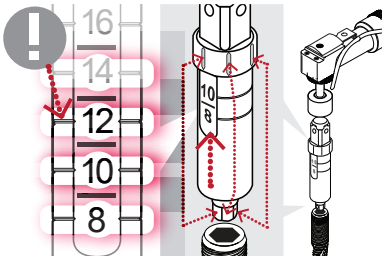
STEP 13

Placing the implant with the implant key



Deliver the implant with the implant insertion key through the guide (contra angle driven or ratchet driven) to the appropriate height as per the offset number indicated on the report.

The implant motor is set to 15 rpm and 30 ncm torque.

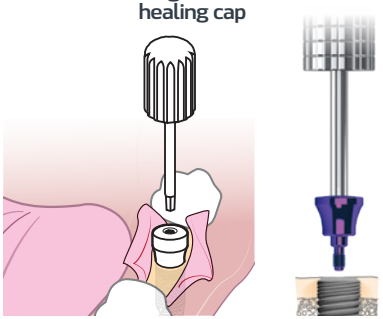


The height of the offset number on the key is determined by the line in the middle of the number.

The flat side of the implant key corresponds to the flat on the implant hex connection and

STEP 14

Attaching the concave healing cap



Place a healing screw or healing abutment over the implant.

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