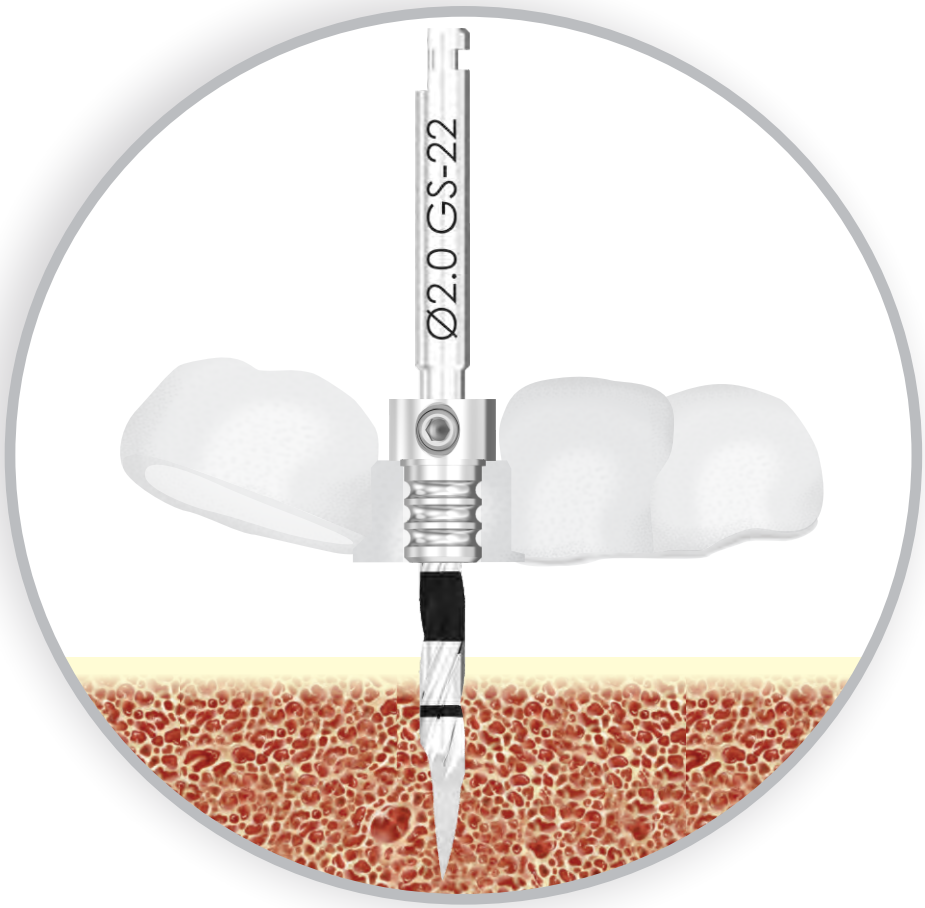
SOUTHERNIMPLANTS®

Innovative Treatment Solutions

PILOT DRILL

Guided Surgery

Product Catalogue



Southern Implants is a leading provider of unique and innovative dental implant products with a focus on top-end professional users who want more choices. Southern's expertise in research, development and manufacturing of dental implants allows us to provide Innovative Treatment Solutions that will reduce treatment times and improve patient outcomes.

Striving for excellence and meeting customer needs, has led to our wide product range characterized by Unique and Innovative products which include;

- Multiple interfaces, to suit customer preference.
- INVERTA® implant, featuring a body-shift design, engineered for primary stability and suitable for immediate loading.
- Co-Axis®, sub-crestal angle correcting implant, available in angulations of 12°, 24° & 36° and various internal and external connections.
- MAX implant, specifically designed for immediate molar tooth replacement.
- The ZYGAN® and ZYGEX® implants for severely resorbed maxilla and craniofacial reconstruction.

Our product portfolio is in synchronized evolution with protocol improvements and technological advances.

My sincere thanks to all specialists, dentists and technicians who put their trust in our company.

Graham Blackbeard
Managing Director, Southern Implants

CONTENTS

For more information scan the below

or visit

SOUTHERNIMPLANTS.COM

Introduction to pilot drill guided surgery

What is Pilot Guided Surgery?
The determination of the correct position of the implant with respect to anatomical structures and adjacent teeth, is a crucial factor for long term success of the implant.

The surgical guide is designed to guide ONLY the Initial pilot drill, to achieve the following:
- Optimal osteotomy angulation.
- Direction of osteotomy.
- Depth of osteotomy.

Pilot Guided Surgery treatment planning
Once the patients CT (Computer Tomography) and STL files of the oral cavity is loaded into the implant planning software, the surgical guide is designed according to the chosen pilot surgery option.

Clinicians can choose between 2 options:

Option 1: FIXED PILOT DRILLS

The pilot drill has a fixed stop.

This technique limits the user to a fixed total drill length.

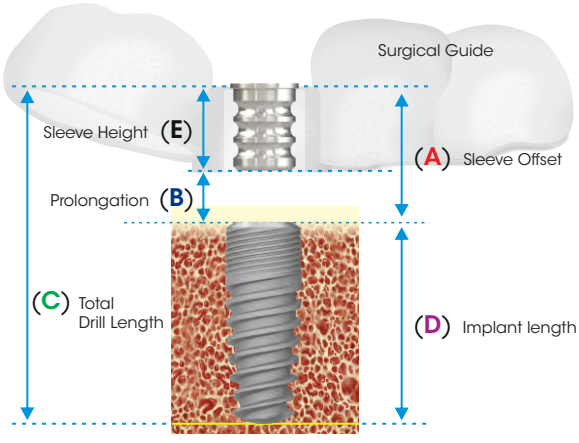
Option 2: ADJUSTABLE PILOT DRILLS

The pilot drill has an adjustable stop which can be changed to the desired total drill length.

This technique provides the user the freedom to change the adjustable stop position to any preplanned value.

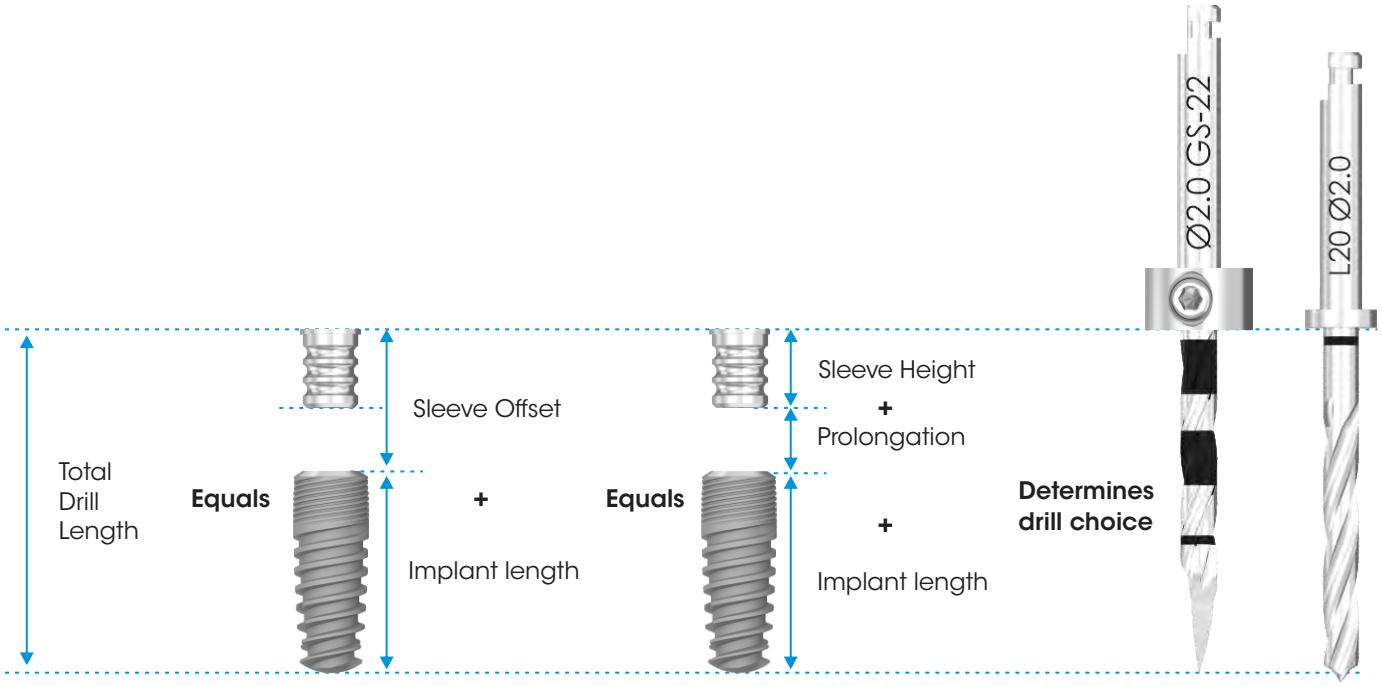
It is essential that the user chooses the correct option as per the corresponding measurements in the planning software.

Illustration of important measurements for guide design and pilot drill selection:



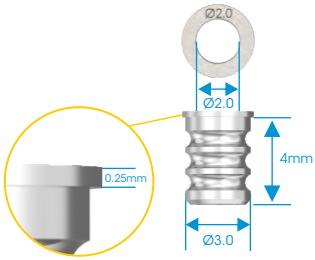
(A) Sleeve offset: length from the implant platform to the top of the guide sleeve.
(B) Prolongation: length from the implant platform to the bottom of the guide sleeve.
(C) Total Drill Length: drill length from the top of the guide sleeve to the bottom of the implant.
(D) Implant length.
(E) Sleeve height.

When determining the correct fixed pilot drill or adjusting the stop on the adjustable drill, it is important to choose the correct length that matches the planning software.

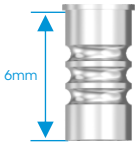


Guide Components:

Pilot Drill Guide Sleeves



I-GS-3020-L4



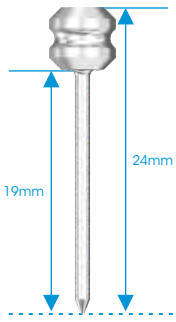
I-GS-3020-L6

The Pilot Drill Guide Sleeves are designed to be inserted into the surgical guide to guide the Pilot Drill in the correct angulation.

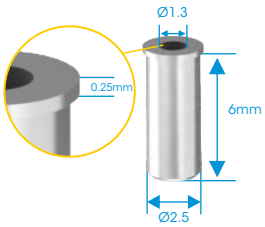
NOTE:

- The lip on the guide sleeve adds 0.25mm (this does not need to be taken into consideration as most Southern Implants drills extend 1mm longer).
- Always plan for at least 2mm from nerves /anatomical structures.

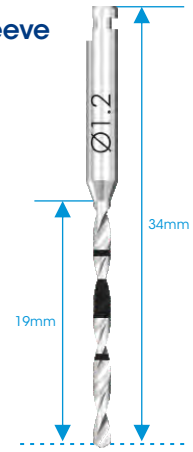
Guide Fixation pin & Fixation pin sleeve



I-D12T-GP
Guide Fixation Pin



I-GS-2513-L6
Guide Fixation Pin Sleeve



D-12T-M15
Ø1.20mm

Fixation pins are used to stabilise the surgical guide.

It is recommended to use a minimum of 3 pins to stabilise a full arch guide. Should a tooth supported guide require additional stability, it is recommended to use a minimum of 2 pins.

The Guide Fixation pins are inserted through the Guide Fixation Pin Sleeve once the osteotomy is prepared using the Ø1.2mm Twist Drill (D-12T-M15).

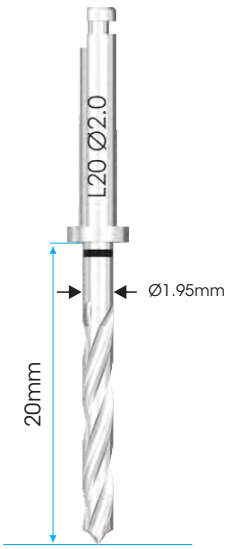
Due to the narrow diameter of the Ø1.2mm Twist Drill, it is advised to avoid lateral movement whilst drilling and to ensure a spare drill is available.

FIXED PILOT DRILLS

The Fixed Pilot Drills have a non-adjustable fixed stop.

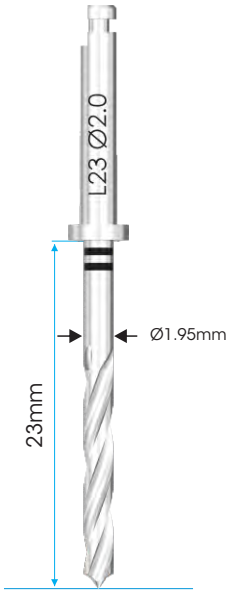
These drills are available in 3 different lengths to correspond with the total drill length.

Option 1
20mm



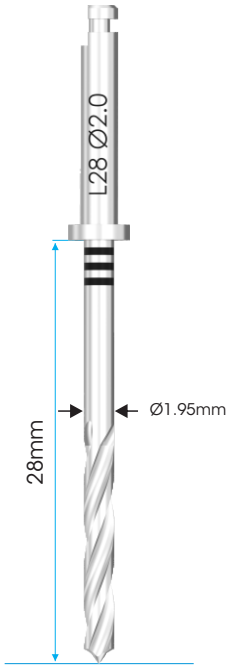
D-20T-GS-20

Option 2
23mm



D-20T-GS-23

Option 3
28mm



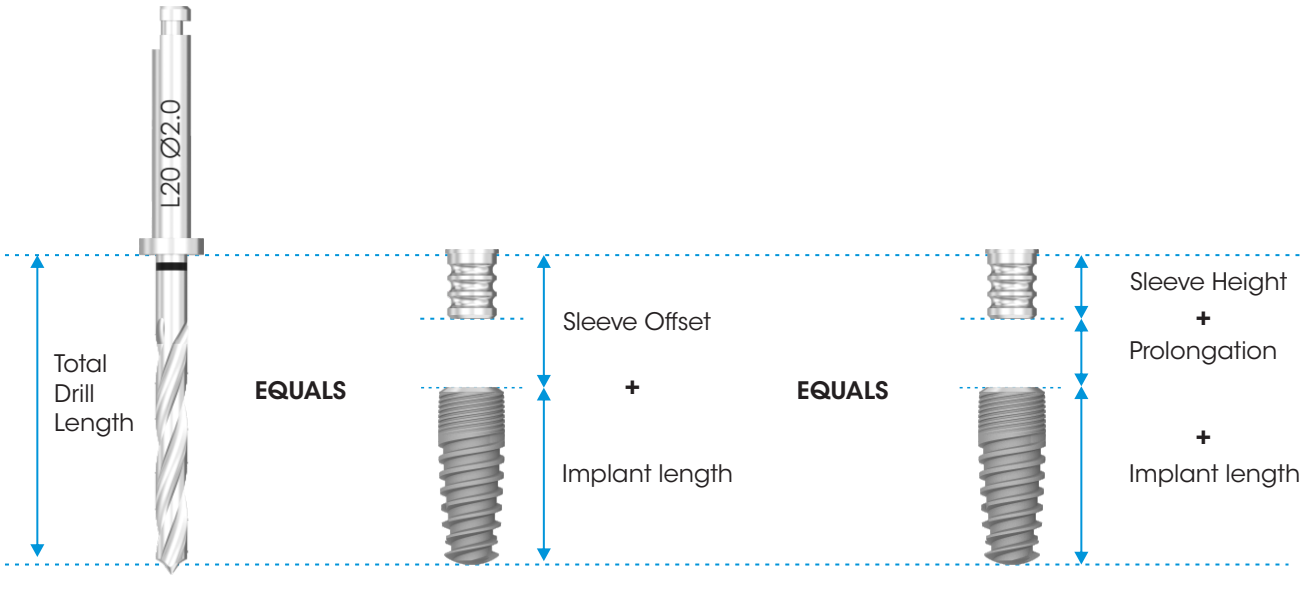
D-20T-GS-28

NOTE:

- All drills are Ø1.95mm in diameter which allows it to fit through the Pilot Drill Guided sleeves.
- Laser markings are for quick identification.

Step 1: Planning

Calculate the total drill length during the planning phase.

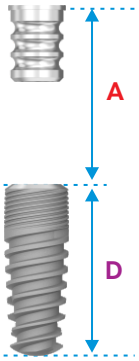


D-20T-GS-20

Step 2: Adjust the Total Drill Length to match one of the 3 Fixed Drill options

Depending on the software used by the planner, 3 adjustments can be made:

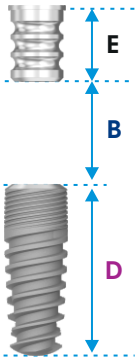
Can only adjust the **SLEEVE OFFSET**



Adjust the offset from the top of the guide sleeve to the top of the implant so that:

Offset (**A**)
+
Implant length (**D**)
=
Total Drill Length

Can only adjust the **PROLONGATION**



Adjust the prolongation (distance between bottom of guide sleeve and top of the implant) so that:

Prolongation (**B**)
+
Sleeve height (**E**)
+
Implant length (**D**)
=
Total Drill Length

Can only adjust the **FIXED OFFSETS**

Select the option which matches the correct Total Drill Length (i.e. 20mm, 23mm, 28mm).

NOTE: be sure to take anatomical constraints into consideration.

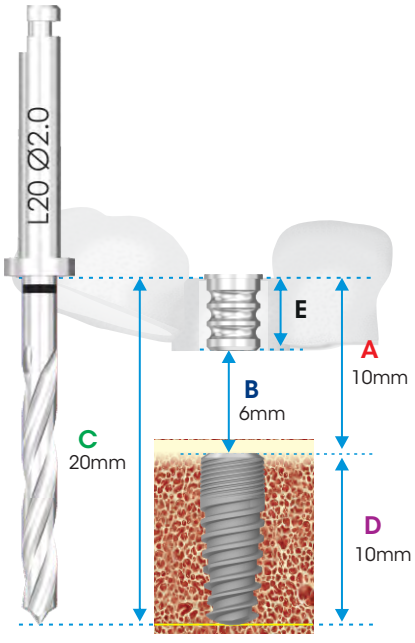
Step 3: Corresponding Fixed Pilot Drill

The total drill length in the software and the total drill length of the drill should match.

The below example shows surgical guide designs for placing a 10mm implant, using a 4mm sleeve with each fixed pilot drill option.

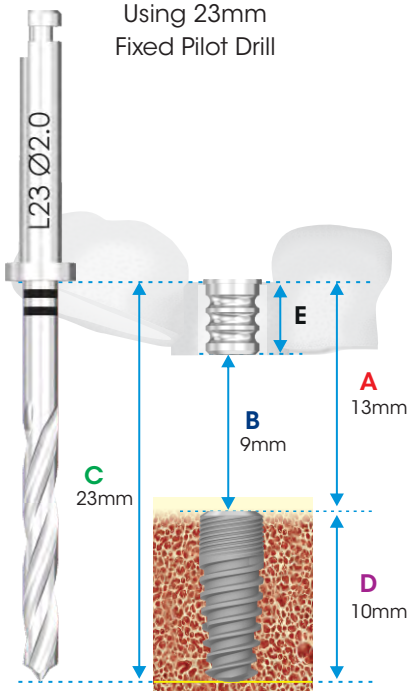
The offset (**A**) Prolongation (**B**) Total drill length (**C**)
Implant length (**D**) Sleeve height (**E**)

Option 1:
Using 20mm
Fixed Pilot Drill



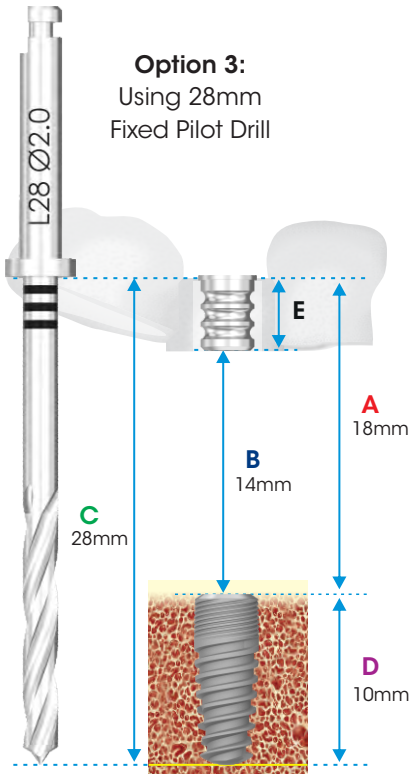
D-20T-GS-20

Option 2:
Using 23mm
Fixed Pilot Drill



D-20T-GS-23

Option 3:
Using 28mm
Fixed Pilot Drill

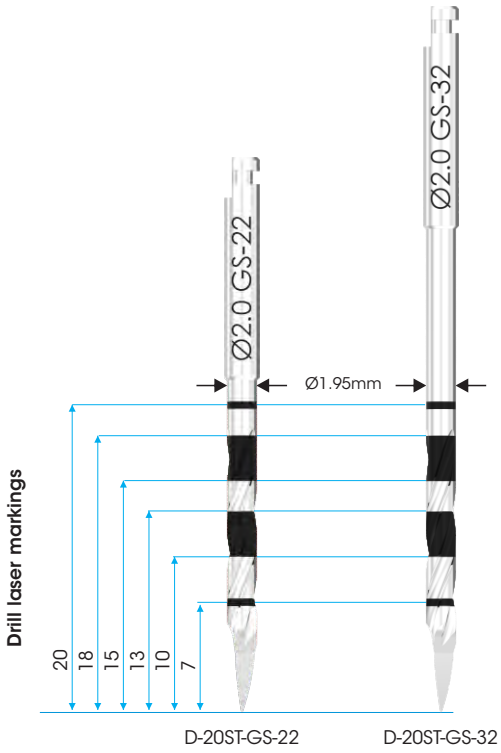


D-20T-GS-28

ADJUSTABLE PILOT DRILLS

The Adjustable Pilot Drill system has an adjustable stop enabling the user to select their total drill length to match their preference.

The Adjustable Pilot Drill is laser marked to indicate different drill lengths.



Stop and Instrumentation

Drill Stop

I-GS-TDS-20

I-HD-22U
(1.22 or
Universal Hex Driver)

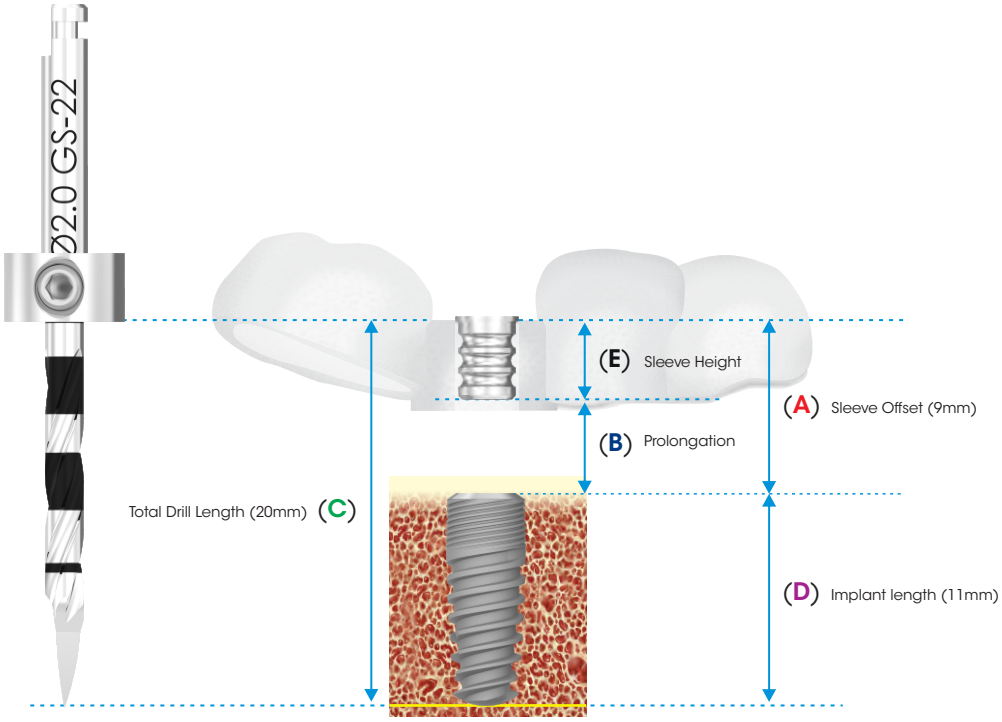
Step 1: Assembling the Pilot Drill

Place the guided surgery drill stop onto the shaft of the guided surgery pilot drill.

Lock the drill stop onto the drill by tightening the lug nut using the universal hex driver (or 1.22mm hex driver).

NOTE: the adjustable pilot drill is available in 2 lengths, depending on the patient's vertical opening.

Step 2: Setting the total drill length of the adjustable pilot drill



From your surgical plan, calculate the total length. This is calculated by adding the length of implant and the sleeve offset. Use an accurate measuring tool to set the guided surgery drill stop to the total drill length.

NOTE: the measurement should be from the tip of the pilot drill to the bottom surface of the drill stop (as indicated).

Additional information

Treatment planning

- Diagnostic and patient specific conditions influence the guided treatment plan.
- The type of restoration, provisionals, number of implants and imaging procedures must be taken into consideration during planning.

The following considerations should be reviewed during pre-planning:

- Quantity, quality and health of both soft and hard tissues.
- Occlusal analysis.
- Oral hygiene assessment.
- **The patient's vertical opening of the mouth needs to be sufficient to accommodate the instruments used during guided surgery.**

CT scanning

Several imaging technologies are available to accurately scan data. The dental professional and/or radiologist, needs to follow the instructions of the imaging system used.

Warning

There may be distortion in the CT image data. These distortions could lead to fit and trajectory problems. It is recommended to validate the guide fit and trajectory by taking a CT scan of the patient wearing the guide before surgery. Open the CT scan image to review both the position and orientation of the guide sleeve. Measure guide sleeve distance and orientation in the CT scan and compare it to the offset/prolongation selected during the planning phase.

If the guide was manufactured on a stone model, the inaccuracy of the model or poor image quality from the scan data may result in the guide not fitting. Should there be a variance, do not proceed, remake the guide.

The dental professional must follow Southern Implants sleeve offsets and prolongations for fixed pilot drill guided surgery. Failing to do so will result in patient injury. The guide manufacturer ensures compatibility with Southern Implants guided instruments by using the offsets and prolongations described in this manual.

Follow drill protocols as set out in implant specific catalogues, after removing guide.

ORDER GUIDE

Pilot guide sleeves

I-GS-3020-L4 4mm Guided Surgery Sleeve

I-GS-3020-L6 6mm Guided Surgery Sleeve

Adjustable stop pilot drills

D-20ST-GS-22 Ø2 x 22mm Guided Surgery Twist Drill Spade

D-20ST-GS-32 Ø2 x 32mm Guided Surgery Twist Drill Spade

I-GS-TDS-20 Ø2.0 Guided Surgery Drill Stop

Fixed stop pilot drills

D-20T-GS-20 Ø1.95 x20mm Guided Surgery Fixed Stop Twist Drill

D-20T-GS-23 Ø1.95 x23mm Guided Surgery Fixed Stop Twist Drill

D-20T-GS-28 Ø1.95 x28mm Guided Surgery Fixed Stop Twist Drill

NOTE: only dedicated guided pilot drills will fit through the pilot drill sleeves.

Guide Fixation components

I-D12T-GP Guide Fixation Pin

I-GS-2513-L6 Guide Fixation Pin Sleeve

D-12T-M15 Ø1.2mm x 15mm Fixation Pin Drill

NOTE:

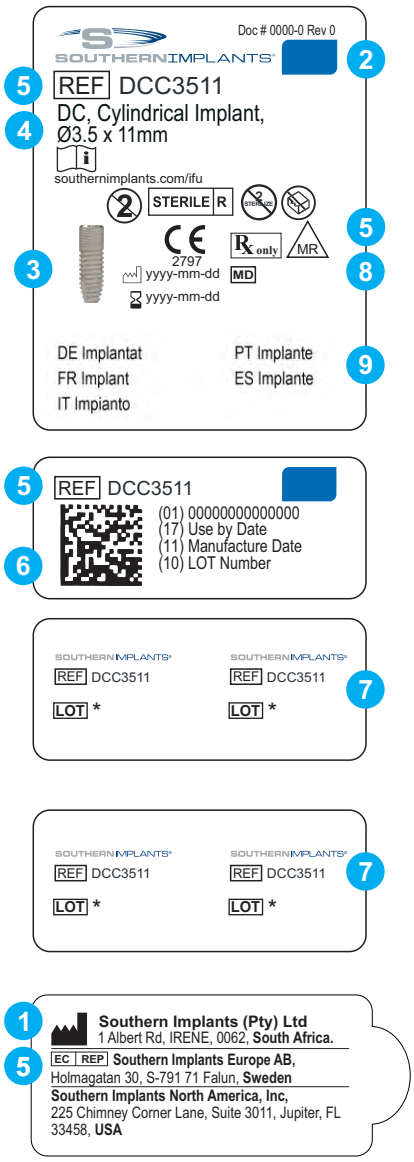
- Images are for illustration purposes only and do not necessarily accurately represent the product.
- All dimensions in this catalogue are in mm, unless otherwise specified.
- Not all products are cleared for sale in all countries.

EXPLANATION OF LABELING SYMBOLS

The following symbols are used on packaging labels and they indicate the following:

1. Manufacturer
2. Colour code indicating platform diameter
3. Implant image
4. Implant details and size
5. STERILE R — Sterilization using Irradiation
   - EC REP — European Representative
   - REF — Catalogue number
   - LOT — Batch Code
   - Do not Resterilize
   - Consult instruction for use
   - Do not reuse
   - CE mark and notified body number
   - Use by Date
   - Date of manufacture
   - Do not use if package is damaged
   - MD — Identifies the product as a medical device
   - MR — Magnetic resonance
6. 2D Bar coding
   Contains the GTIN, Use by Date and LOT Number
7. Patient sticker for documentation purposes
   (to be used by health care provider on patient file)
8. Rx — Prescription device

   CAUTION: FEDERAL LAW RESTRICTS THE DEVICE TO SALE BY OR ON THE ORDER OF A LICENCED HEALTH CARE PROVIDER.
9. Product description
   (translated as per international standards)



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