Guided & conventional SURGERY

p-i

Developed By P-I Brånemark

DIGITAL

Fully Guided Surgery
novel stepwise approach

Precision • Sensitivity • Versatility

Guided & conventional | D DIGITAL prosthetics

Guided & conventional

Developed By P-I Brånemark

The P-I Brånemark • Guided & Conventional novel stepwise approach was developed to simplify clinical procedures and reduce the potential risks associated with guided surgery providing flexibility for conventional procedures by using the same Instruments and Kit.

Designed to increase tridimensional accuracy of Implant positioning, the Instruments overcome the inherent tactile feedback reduction, visualization and access limitations of surgical site preparation and Implant installation when using surgical guides.

Combined with the MT-F Implant System, the novel Guided & Conventional concept is a stepwise approach to the modern, immediate and digitalized implantology which keeps clinicians focused on patients and in control of procedures, even when plans change during surgery.

The P-I Guided & Conventional provides a predictable, minimally invasive and versatile solution for precise tridimensional positioning of Implants with an optimal esthetic outcome when used with integrated digital diagnostic, planning and prosthetic software.

D DIGITAL prosthetics

Contents

Consult Instructions for Use. Some products might not be available in your region. Images are for illustrative purposes only.
Measurements in millimeters. Ø = diameter, h = height, [ ] = Offset
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Guided &
conventional

Wash Tray

Surgical + Prosthetic

State-of-the-art

Less friction

Only titanium Stop is in contact with Sleeve

Less trauma

Constant apical angle • Diamond Like Carbon

High performance

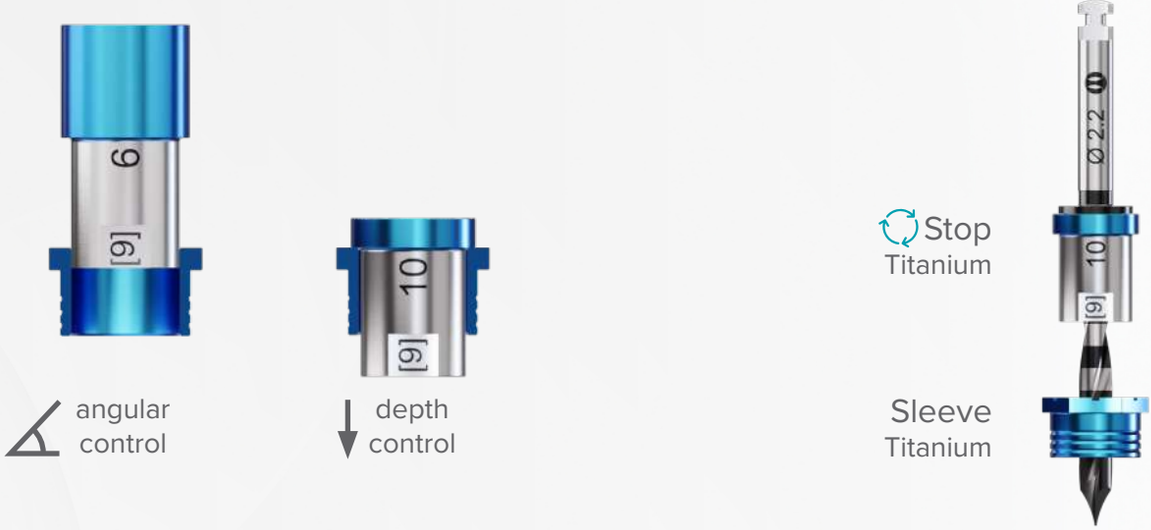
P-I custom technology

Exceptional cutting performance

P-I Conical Drills' performance in dense bone, at the highest recommended rotation, without gradual diameter increments and applying constant feeding, present a very low friction coefficient therefore lower temperature transmission to bone tissue. Data on file.

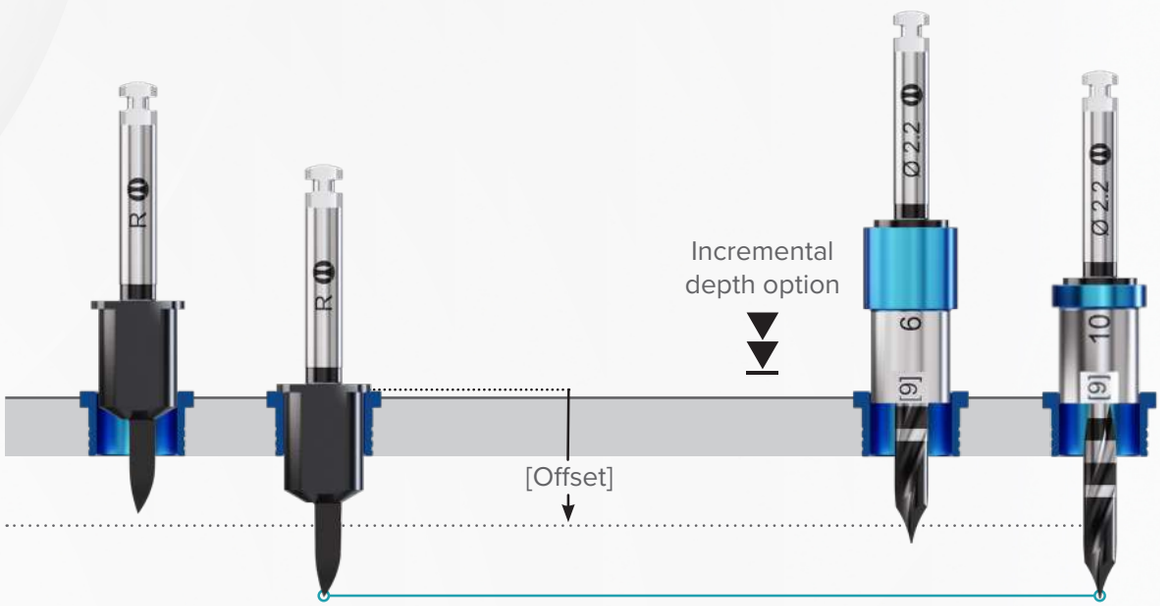
Drill frictionless through Sleeve

Screw-retained Stops are the only contact with Sleeves • Titanium to titanium
Initial and Conical Drills do not rotate against surgical guide or Sleeves
Potential reduction of both temperature and debris release on surgical site



Fully Guided • Precision in all steps

Crestal Drills are continuously guided through Sleeves in Offset [9] and [10.5]
Initial and Conical Drills are oriented by previous drilling steps and Stops
Screw-retained Stops provide accuracy and stability



Same Instruments for Guided & Conventional

Guided Surgery - GS identification

- Guided • All
- Narrow - N
- Regular - R • Long - L
- Regular - R • Short - S

For conventional procedure

Short and Long Drills GS

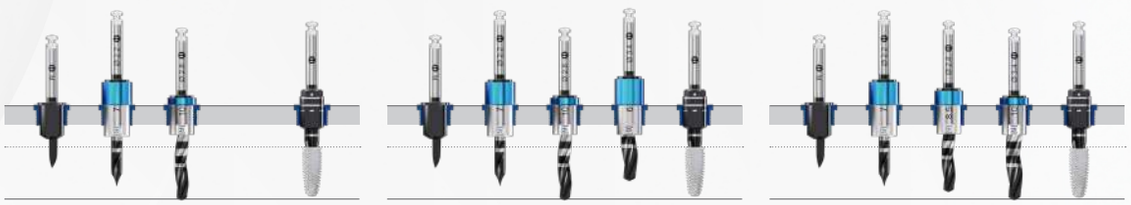
Insertion Drivers GS

Unmatched versatility

Less Instruments • Keyless • Mountless
Shorter Drills and Stops can be used for incremental preparation depth of osteotomy
Stops can be pre-assembled according to planning

Incremental depth option

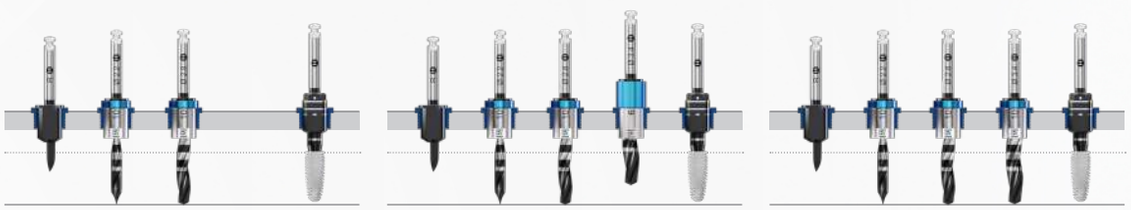
MT-F 3.75 x 10 • Offset [9]



Soft Normal Dense

Full depth option

MT-F 3.75 x 10 • Offset [9]

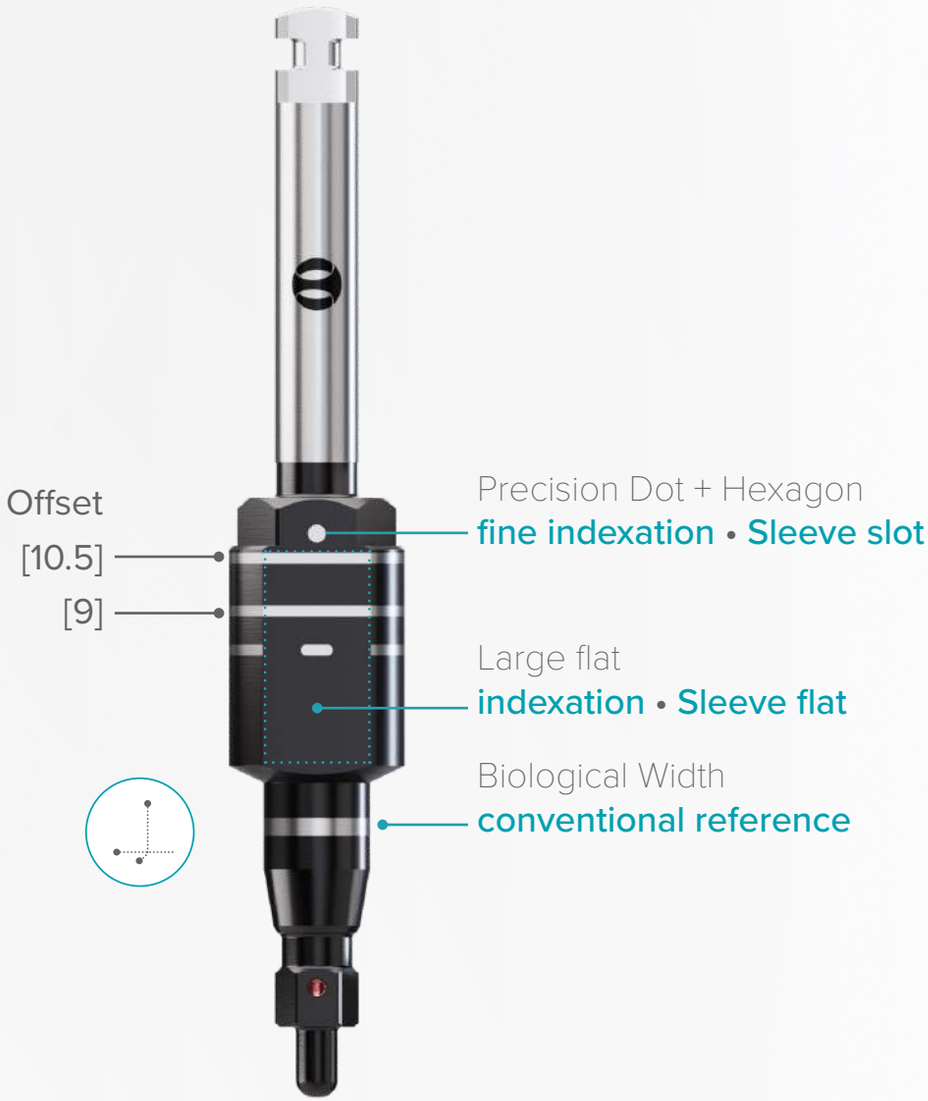


Soft Normal Dense

Surgical Sequence according to bone density

Implant installation

DIGITAL prosthetics



Effective Insertion Torque Value ITV

Reduced contact area • Diamond Like Carbon • Less friction on Sleeve
Safe pick-up, installation and removal • Avoids undesired movement
Possible further Implant submersion through Sleeve

Handpiece • Manual • Torque Wrench

Combinations

[10.5] Offset [10.5] and Biological Width oriented positioning should consider drilling depth compensation. Offset [10.5] cannot be used with MT-F h = 15.

h=18 For MT-F h=18 use Drill Stop - GS - 15, and the final drilling depth is determined conventionally without surgical guide.

4.8 For MT-F Ø4.8 use Conical Drill - GS - 3.8 for soft bone. The following drilling steps are performed conventionally without surgical guide. Implant insertion can be performed through Sleeve - GS - R.

Consult Instructions for Use and Guided Surgical Sequence.
Measurements in millimeters. Images for illustrative purposes only.
Verify available libraries and updates before planning.

Dimensions

	Pin	Narrow	Regular Short	Regular Long
h	35	40	35	40

Drill • GS

Stop • GS

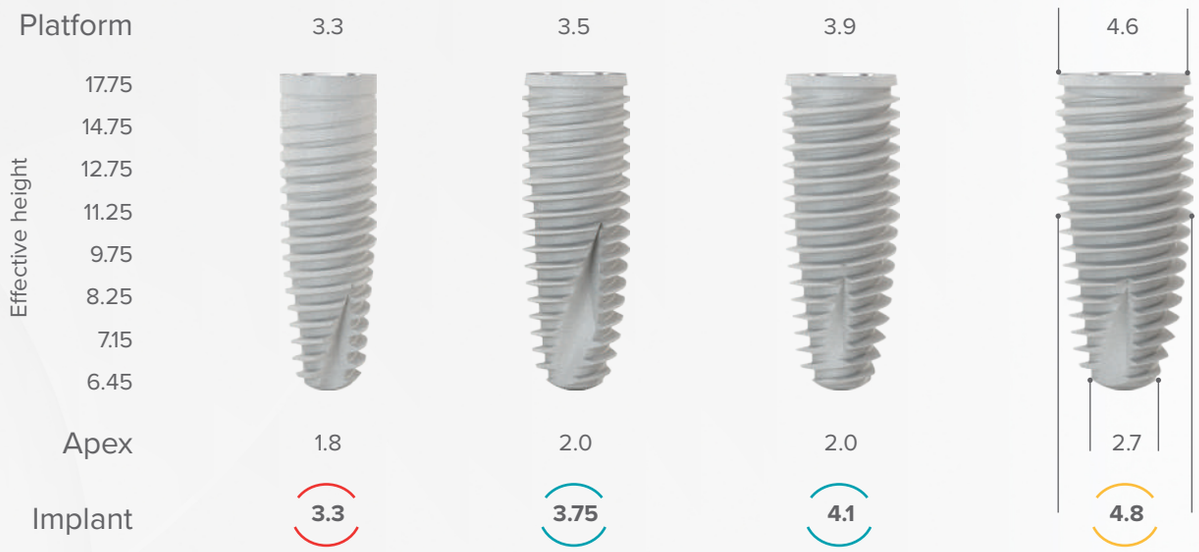
Sleeve • GS

d	1.8	3.5	5
D	4.2	4	6
h	0.7	1	1
H	7	4	4
f	5	4.5	6
F	5	4.5	7

Sleeve - GS - N can also be used in limited spaces and for marking the initial drilling steps preceding conventional (free hand) surgical site finalization for the sleeveless installation of MT-F Ø3.75, 4.1 and 4.8.

Consult Instructions for Use, Implant Dimensions and Guided Surgical Sequence.
Measurements in millimeters. Images for illustrative purposes only.
Verify available libraries and updates before planning.

MT-F Dimensions



One Interface for all Implants

DIGITAL prosthetics

DIGITAL Prosthetic Solutions at
pibranemark.com

Alignments

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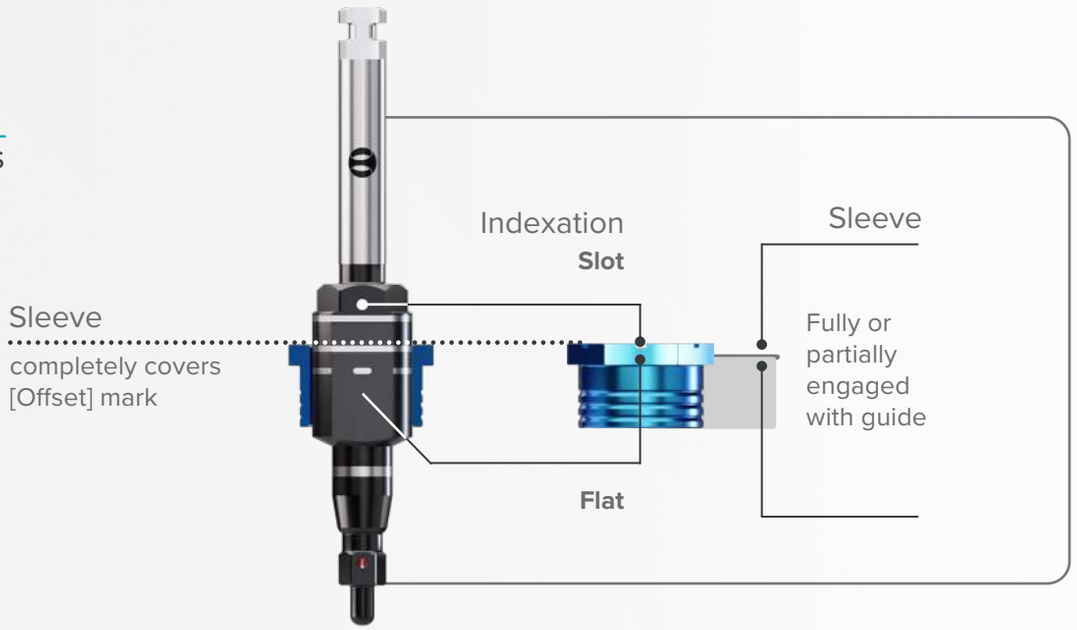
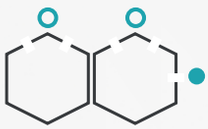


Flat to Buccal

- The flat part of the Sleeve - R and the Sleeves' slots can be positioned buccally to align with the prosthetic orientation of the Implant Insertion Driver (flat areas, upper hexagon and precision dot) which are aligned to Implant and Prosthetic Components' indexation.

Corner to Buccal



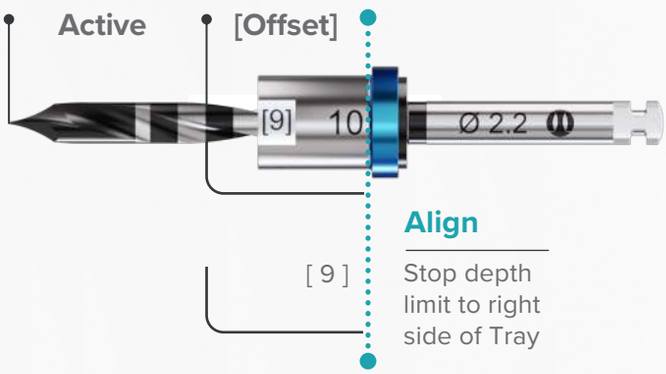
- For angled Conical Abutments, and in case of mesiodistal space limitation, the flat part of the Sleeve - R can be mesially oriented leading to a Sleeve corner to buccal positioning.

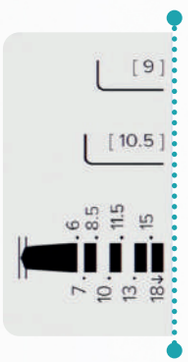
- When the Sleeve – R is positioned corner to buccal, the prosthetic orientation of the Implant Insertion Driver can be directed to the corner of the Sleeve - R, and between the Sleeves' slots, for a buccal indexation of Implant and Prosthetic Components (except with angled Conical Abutments).

⚠ **A minimum distance of 3mm should be ensured between 2 Implants**

Depth verification

Offset [9] example





Wash Tray • GS

Surgical + Prosthetic

Guided & Conventional

181040

All Instruments

Guided +

181041

Guided Surgery Instruments only

includes Prosthetic Instruments

Tray • GS

131162

Tray only

width	190
height	61
depth	138

Stop Organizer • GS

141399

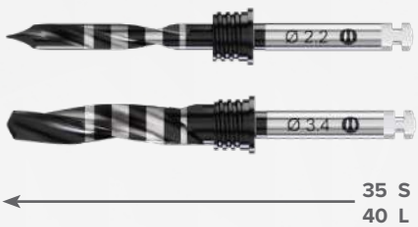
Organizer [9] only

Guided & Conventional Kit Composition
pibranemark.com

Instruments • GS

Drill

		Narrow	Regular	
Crestal Drill		141330	141335	
	Ø	N • Long	R • Short	R • Long
Initial	2.2	141378	141336	141340
	2.8	141381	141337	141341
Conical	3.4		141338	141342
	3.8		141339	141343



Stop • GS
Offset [9]

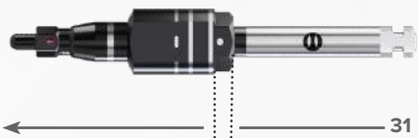
h			
6		141365	
7		141366	
8.5		141367	
10	141360	141368	
11.5	141361		141369
13	141362		141370
15	141363		141371

Set • 11 Stops - GS 181043
without organizer

Sleeve

141375	141376

Implant Insertion Driver



131153 131152

Insertion Driver must be completely connected into the Implant internal hexagonal indexation. When used manually or with Torque Wrench, the upper hexagonal portion of the Insertion Driver must be entirely connected to the hexagon of the Driver Adapter.

Guide Fixation

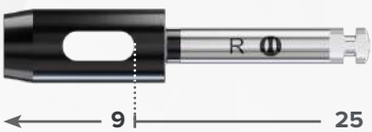
Sleeve - Pin 141382

Pin Drill Ø1.7 141377

Fixation Pin 131167

GUIDE STABILITY
Conical seating of Pin

Surgical Accessories

		Narrow	Regular
Punch			
	Soft Tissue Punch	141331	141332
Dense Drill			
	Dense Drill	141344	141345

Torque Wrench Kit

C14569 ■

HIGH TORQUE VERSION
originally developed for OSPOL • P-I

Prosthetic Instruments

Hexagonal Ø 1.2

Short	131010
Medium	131011
Long	131012

Conical Abutment Ø 2.0

Handling Tool, Angled

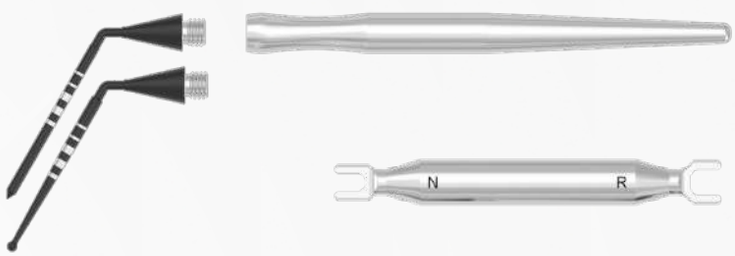
Short	131016
Medium	131017
	102964

Retriever MT

Short	141564
Medium	131131

Surgical Accessories • GS

In the event Stop cannot be easily removed by hand, use handpiece in reverse or the Surgical Adapter, with or without Torque Wrench, to stabilize the Drill and apply manual counter torque on the Stop using the Stop Removal Tool.



Depth Probe • GS
[9] Offset tip + Round tip — 141439 ●

Stop Removal Tool — 131172 ●

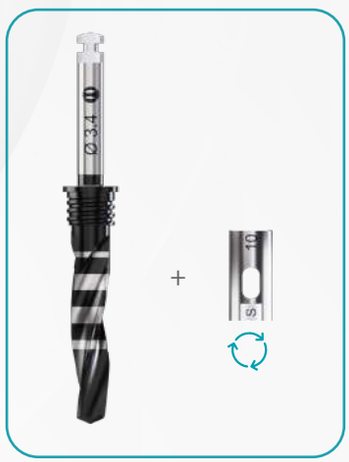
■ Manufactured by Elos MedTech Pinol A/S. Torque Wrench Kit includes Surgical & Prosthetic Adapters.
● Stop Removal Tool should be used when Surgical Adapter is not sufficient for the removal of Stop from Drill. Depth Probe is not part of Kit • GS and should be ordered separately.

Stop • Conventional

STOP
conventional

FREE
HAND

Short • Long
Drills GS



h	R • Short	R • Long
6	141592	
7	141593	
8.5	141594	
10	141590	
11.5	141591	141584
13	141600	141586
15	141601	141586
18		141602

MT-F Guided Surgical Sequence

rpm	**600** - 1,200 Lowest possible rpm
In-Out	⚠ Coordinated in-and-out movement of Drills for better cooling
Ncm ITV	**≤ 70 Ncm** Insertion Torque Value
Full Length	Prepare at planned full length of Implant position combining the Drills GS and Stops GS
Irrigation	Constant irrigation to the insertion margin of Conical Drills

⚠ Drills are less than 1 mm longer than Drill marks

3.3

Crestal	2.2	2.8	3.4
✓	✓	S ↓ N	D ↓

3.75

Crestal	2.2	2.8	3.4
✓	✓	S	N ↓ D

4.1

Crestal	2.2	2.8	3.4	3.8
✓	✓	S	N	D
		Optional for Dense		

4.8

Crestal	2.2	2.8	3.8	4.6
✓	✓	✓	S	N ↓ D

↓ Incremental depth option

Bone Density: **S** Soft **N** Normal **D** Dense

↓ 6 mm Drill tip

The subsequent Conical Drill, in terms of diameter, should be considered with a drilling depth of 6 mm, in order to not exceed 70 Ncm of Insertion Torque Value. The use of Dense Drills (15 - 50 rpm) can also be considered to lower the Insertion Torque Value. The use of Soft Tissue Punch (15 - 50 rpm) precedes Crestal Drill - GS use and can also be used in conventional surgery procedures.

Consult Instructions for Use and Guided Surgical Sequence in detail.

MT-F Guided Surgical Sequence
in detail

MT-F		Guide		Guided Surgical Sequence						
Ø	h	Offset	Sleeve 	Punch optional 15-50 rpm	1 Crestal 600 - 1,200 rpm	2 Initial 600 - 1,200 rpm	3 Bone Density SOFT 600 - 1,200 rpm	NORMAL	DENSE	Implant Driver ≤ 70 Ncm
3.3	8.5	[9]	R	R	R	Ø 2.2 + 8.5	Ø 2.8 + 6 ▲	Ø 2.8 + 8.5	Ø 3.4 + 6	R
3.3	10.0	[9]	R	R	R	Ø 2.2 + 10	Ø 2.8 + 6 ▲	Ø 2.8 + 10	Ø 3.4 + 6	R
3.3	11.5	[9]	R	R	R	Ø 2.2 + 11.5	Ø 2.8 + 6 ▲	Ø 2.8 + 11.5	Ø 3.4 + 6	R
3.3	13.0	[9]	R	R	R	Ø 2.2 + 13	Ø 2.8 + 6 ▲	Ø 2.8 + 13	Ø 3.4 + 6	R
3.3	15.0	[9]	R	R	R	Ø 2.2 + 15	Ø 2.8 + 6 ▲	Ø 2.8 + 15	Ø 3.4 + 6	R
3.75	6.0	[9]	R	R	R	Ø 2.2 + 6	Ø 2.8 + 6	Ø 3.4 + 6 ▲	Ø 3.4 + 6	R
3.75	7.0	[9]	R	R	R	Ø 2.2 + 7	Ø 2.8 + 7	Ø 3.4 + 6 ▲	Ø 3.4 + 7	R
3.75	8.5	[9]	R	R	R	Ø 2.2 + 8.5	Ø 2.8 + 8.5	Ø 3.4 + 6 ▲	Ø 3.4 + 8.5	R
3.75	10.0	[9]	R	R	R	Ø 2.2 + 10	Ø 2.8 + 10	Ø 3.4 + 6 ▲	Ø 3.4 + 10	R
3.75	11.5	[9]	R	R	R	Ø 2.2 + 11.5	Ø 2.8 + 11.5	Ø 3.4 + 6 ▲	Ø 3.4 + 11.5	R
3.75	13.0	[9]	R	R	R	Ø 2.2 + 13	Ø 2.8 + 13	Ø 3.4 + 6 ▲	Ø 3.4 + 13	R
3.75	15.0	[9]	R	R	R	Ø 2.2 + 15	Ø 2.8 + 15	Ø 3.4 + 6 ▲	Ø 3.4 + 15	R
3.75	18.0	[9]	R	R	R	Ø 2.2 + 15	Ø 2.8 18 mark	Ø 3.4 6 mark ▲	Ø 3.4 18 mark	R
4.1	6.0	[9]	R	R	R	Ø 2.2 + 6	Ø 2.8 + 6	Ø 3.4 + 6 ▲	Ø 3.8 + 6	R
4.1	7.0	[9]	R	R	R	Ø 2.2 + 7	Ø 2.8 + 7	Ø 3.4 + 7 ▲	Ø 3.8 + 7	R
4.1	8.5	[9]	R	R	R	Ø 2.2 + 8.5	Ø 2.8 + 8.5	Ø 3.4 + 8.5 ▲	Ø 3.8 + 8.5	R
4.1	10.0	[9]	R	R	R	Ø 2.2 + 10	Ø 2.8 + 10	Ø 3.4 + 10 ▲	Ø 3.8 + 10	R
4.1	11.5	[9]	R	R	R	Ø 2.2 + 11.5	Ø 2.8 + 11.5	Ø 3.4 + 11.5 ▲	Ø 3.8 + 11.5	R
4.1	13.0	[9]	R	R	R	Ø 2.2 + 13	Ø 2.8 + 13	Ø 3.4 + 13 ▲	Ø 3.8 + 13	R
4.1	15.0	[9]	R	R	R	Ø 2.2 + 15	Ø 2.8 + 15	Ø 3.4 + 15 ▲	Ø 3.8 + 15	R

Incremental depth option — Possible use of shorter Stops - GS preceding final depth for increased angular accuracy through Sleeve

R = Regular

● Short ● Long

▲ Optional step for dense bone

MT-F Guided Surgical Sequence
in detail

MT-F		Guide		Guided Surgical Sequence						
Ø	h	Offset	Sleeve 	Punch optional 15-50 rpm	1 Crestal 600 - 1,200 rpm	2 Initial 600 - 1,200 rpm	3 Bone Density SOFT 600 - 1,200 rpm	NORMAL	DENSE	Implant Driver ≤ 70 Ncm
4.8	6.0	[9]	R	R	R	Ø 2.2 **+ 6**	Ø 2.8 + 3.8 **+ 6**	Ø 4.6 6 mark ▲	Ø 4.6 6 mark	R
4.8	7.0	[9]	R	R	R	Ø 2.2 **+ 7**	Ø 2.8 + 3.8 **+ 7**	Ø 4.6 6 mark ▲	Ø 4.6 7 mark	R
4.8	8.5	[9]	R	R	R	Ø 2.2 **+ 8.5**	Ø 2.8 + 3.8 **+ 8.5**	Ø 4.6 6 mark ▲	Ø 4.6 8.5 mark	R
4.8	10.0	[9]	R	R	R	Ø 2.2 **+ 10**	Ø 2.8 + 3.8 **+ 10**	Ø 4.6 6 mark ▲	Ø 4.6 10 mark	R
4.8	11.5	[9]	R	R	R	Ø 2.2 **+ 10**	Ø 2.8 + 3.8 11.5 mark	Ø 4.6 6 mark ▲	Ø 4.6 11.5 mark	R
4.8	13.0	[9]	R	R	R	Ø 2.2 **+ 10**	Ø 2.8 + 3.8 13 mark	Ø 4.6 6 mark ▲	Ø 4.6 13 mark	R
3.3	10.0	[9]		N	N	Ø 2.2 **+ 10**	Dense N ▲	Ø 2.8 **+ 10**	Dense N	N
3.3	11.5	[9]	N	N	N	Ø 2.2 **+ 11.5**	Dense N ▲	Ø 2.8 **+ 11.5**	Dense N	N
3.3	13.0	[9]	N	N	N	Ø 2.2 **+ 13**	Dense N ▲	Ø 2.8 **+ 13**	Dense N	N
3.3	15.0	[9]	N	N	N	Ø 2.2 **+ 15**	Dense N ▲	Ø 2.9 **+ 15**	Dense N	N

Incremental depth option Possible use of shorter Stops - GS preceding final depth for increased angular accuracy through Sleeve

R = Regular **N** = Narrow ● **Short** ● **Long** ● **Narrow** ▲ Optional step for dense bone

Full Prepare at planned full length of Implant position combining the Drills - GS and Stops - GS

In-Out △ Coordinated in-and-out movement of Drill for better cooling

Irrigation Constant cooled irrigation to the insertion margin of Drills

6 mm Drill tip The subsequent Conical Drill, in terms of diameter, should be considered with a drilling depth of 6 mm, in order to not exceed 70 Ncm of Insertion Torque Value. The use of Dense Drills (15 - 50 rpm) can also be considered to lower the Insertion Torque Value.

[10.5] Offset [10.5] and Biological Width oriented positioning should consider drilling depth compensation

Consult Instructions for Use

MT-F Guided Surgical Sequence
in detail

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⚠ When using Stops, only use them with designated Drills.
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Guided & conventional SURGERY

p-i

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exocad DentalCAD® exoplan

3DIEMME