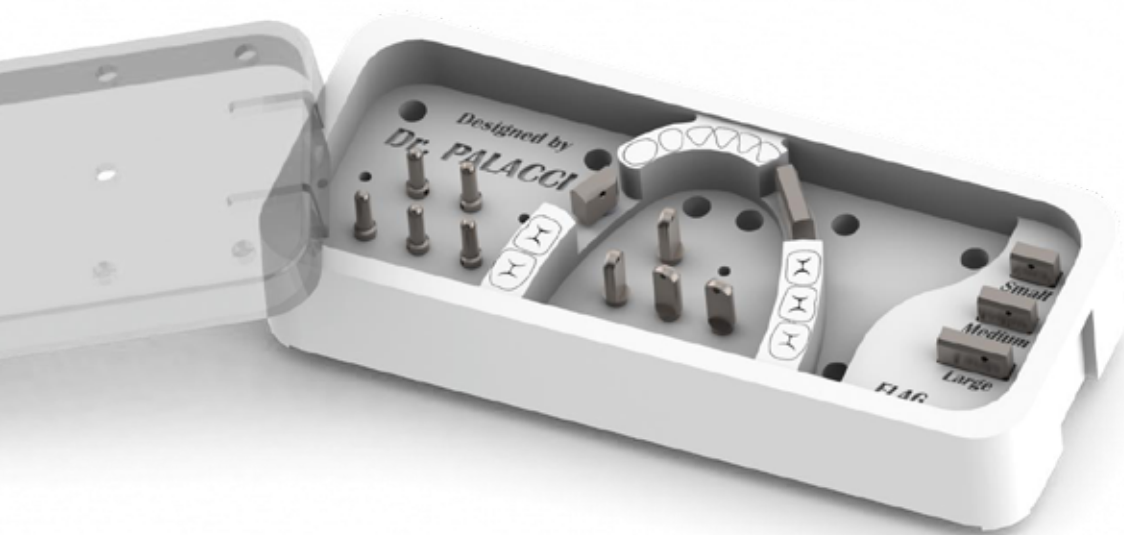


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Positioning Guides for Implantology



Introduction

The quality of a restoration final result depends on the treatment plan that includes a surgical aspect and a prosthetic aspect.

From a surgical point of view, careful analysis of the final implant positioning is essential. Traditionally, Implantologist surgeons mainly rely on the surgical guide and direction indicators.

Even with these devices, it is difficult to visualize the prosthetic result. Today, these surgical components can facilitate implants positioning. Based on biological, biomechanical and aesthetic considerations, these components make implants placement safer and easier.



The design of these components is based on four key points:

1. Sufficient space is required between implants. The optimum distance from a biomechanical and aesthetic point of view was determined at 7mm.
2. Ideally, prosthesis is the continuation of a virtual cylinder emerging from implant abutment.
3. Advanced horizontal bone resorption affect the number of implants required to support a bridge. There is no relationship between the number of teeth being replaced and the number of implants placed.
4. The type of implant is depending on its position on the arcade and the space between adjacent teeth.

These surgical guides can be used with 3D imaging or computerized implant positioning system. Indeed, through the use of drill guides, the measures calculated on the computer site are reproducible on the patient during surgery.



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Positioning Guides for Implantology

Step 1

Edentulous area to be treated



Step 2

Initial drilling
(with or without surgical guide)



Step 3

Direction indicator
(can be used with a surgical guide)

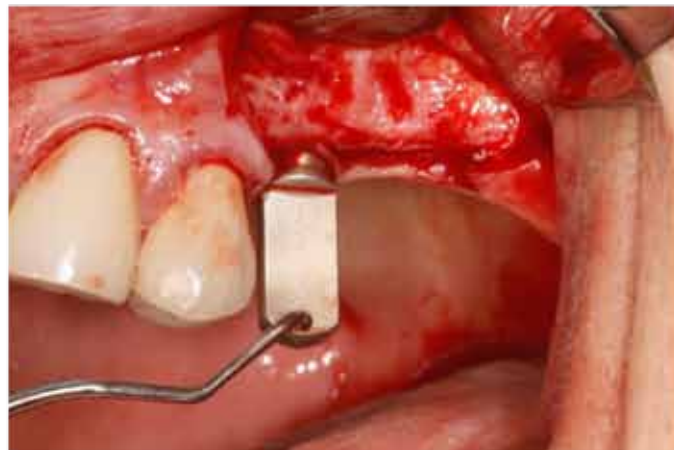
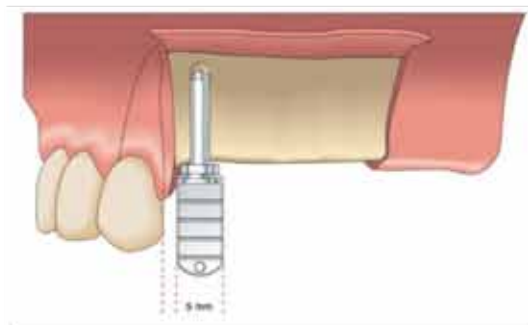


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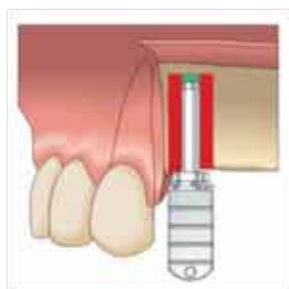
Positioning Guides for Implantology

Step 4

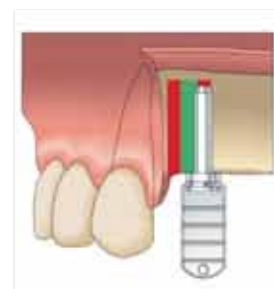
During the initial preparation of the implant site, the use of guide I (milestone) makes easier the validation of the right position and inclination (during the drilling sequence to 2mm). The direction of the guide (milestone) is the same than the prosthetic abutment or crown.



(a) The guide allows to visualize the space around the crown as its position and inclination for an optimum implant position.



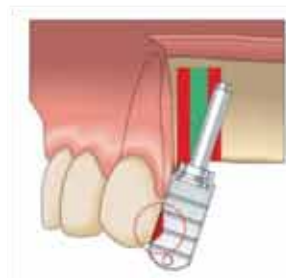
(c) When the space between the tooth and the guide I is too large, difficulties may arise compromising recess anatomy and prosthetic..



(b) When the guide I impinges with the adjacent tooth, the space between the two teeth, as the shape of the final crown will be compromised.



(d) The use of guide I reveal an unfavorable inclination of the implant which can cause difficulties in the implementation of the implant-prosthetic restoration



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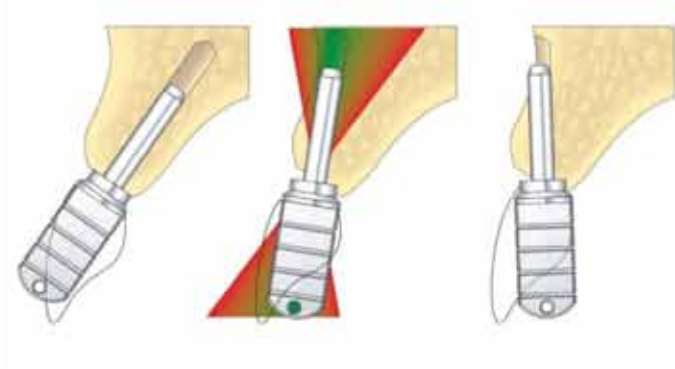
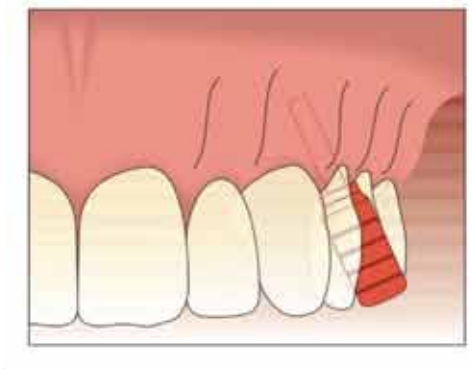
Positioning Guides for Implantology

(a - c) The Guide Pin(guide I) (milestone) gives to the clinician a picture of the outline of the future restoration and allows you to view the , the space between the two teeth in the mesial-distal direction. Turning the guide 90 degrees gives an image of the vestibular crown contour.



Milestone (control of the mesiodistal angulation of the implant and prosthesis)

Milestone (control of the vestibulo-palatal implant angulation and prosthesis)



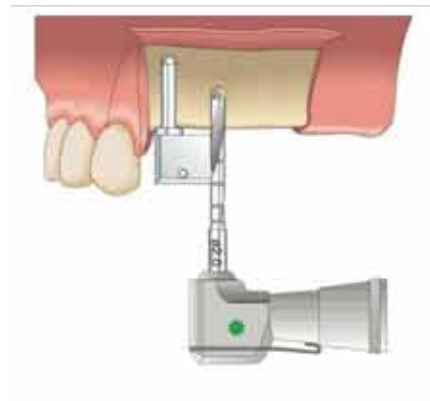
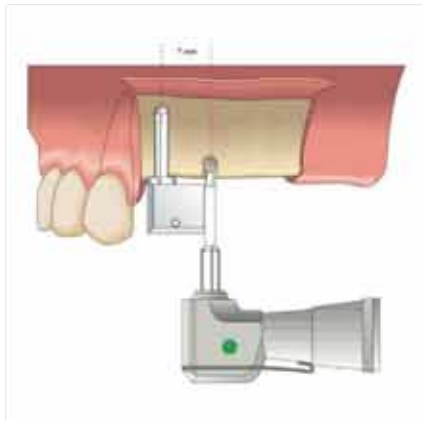
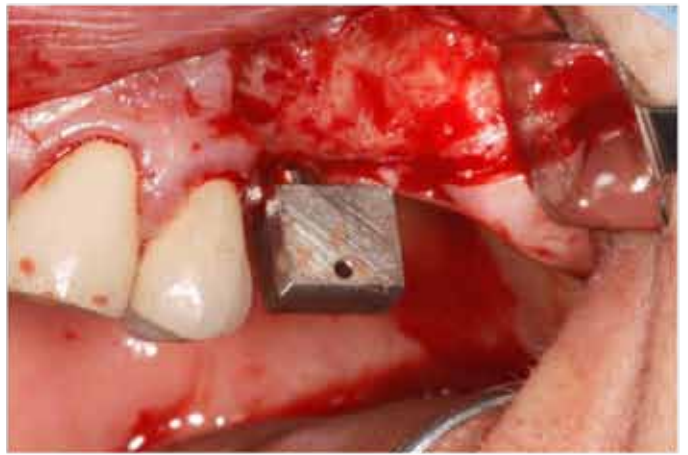
Milestone I can be very useful in the jaw area where aesthetic requirements are very important:

- If the implant site preparation is too tilted (toward the vestibule), access to the screw hole will be visible on the facial surface and create an aesthetic problem. Moreover, such an inclination is not favorable from a biomechanical point of view
- If the inclination of the implant is too palate, complications can be aesthetic, biomechanical and hygienic. The correct inclination of the implant is very important and reduces the need to resort to the use of angled abutments.



Step 5

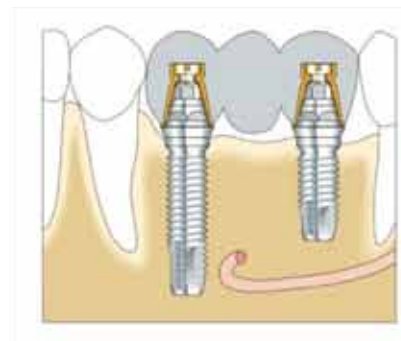
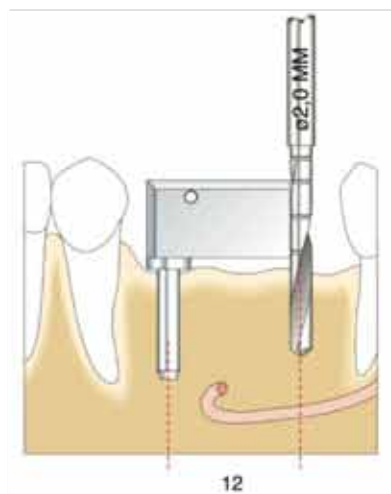
The use of small flag provides a distance of 7 mm between the centers of the implant sites, resulting in a favorable anatomy implant-crowns. In addition, the 7mm distance between the centers of implants optimize the soft tissue management with connecting the pillars. This tissue volume allows the surgeon to create inter-implant papillae with an appropriate anatomy and a good vascularization.



Flag 7mm: Determination minimum space between two implants

The middle flag (9mm) can also be used.

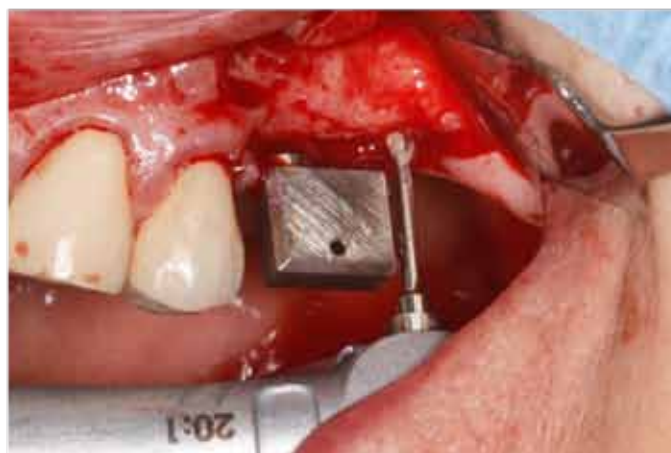
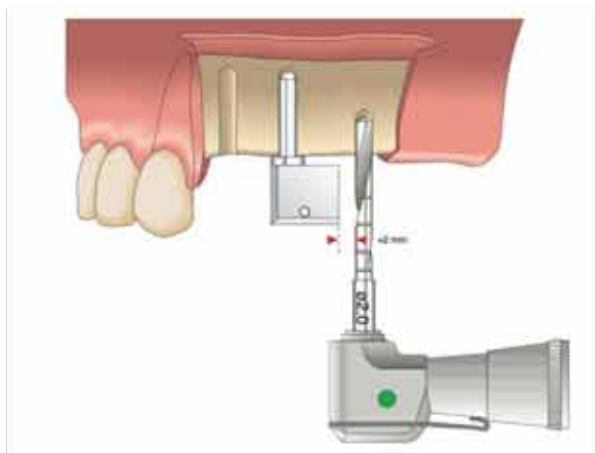
For bridges, the use of a large flag (with the same protocol than for the small flag) give inter-center distance of 12mm between the two implant sites. This is the minimum distance to place an intermediary between implants and get good cosmetic results.



Flag Set

Positioning Guides for Implantology

When a molar should be placed on the most distal implant, site preparation should begin at about 2mm distal to the small flag, which ensures a 9mm distance between the centers of the implants.



Flag - Drilling 2 mm from flag

Step 6

Guide Pin in place

2nd drilling

The implant may be parallel to the first or inserted with a calculated angle



Step 7

Control of the implants position (mesiodistal, vestibulo-palatal)

Validation for the next stage of drilling and insertion of implants.

It should be noted that at this stage, the implant position can be changed.



Flag Set

Positioning Guides for Implantology

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Conclusion

Pre-surgical Positioning Guides and fixtures positioning guides have been developed not only to simplify the implant surgery, but also to increase the accuracy of implant positioning. These device designs are based on the implant positioning philosophy:

- respect for the space between the implants in order to optimize development and preservation of the papillae, the space between the two teeth and good cosmetic results.
- optimal angulation of the implant considering biomechanics but also aesthetics and function.

Systematic use of these components allows the surgeon and dental-technician a reliable and reproducible treatment avoiding problems and misunderstanding between practitioners. The optimal implant positioning is becoming a reality for the majority of cases treated.

Catalog Numbers

Description	
Premium Set <i>Including 6 guide pins, 4 milestones, 2 Flags 8 mm and 1 Flag 13 mm, 1 tray , 1 Led</i>	
Standard Set <i>Including 6 guide pins, 4 milestones, 2 Flags 8 mm and 1 Flag 13 mm, 1 box</i>	
Spare parts	
Flag 8 mm/11mm/13mm	
Milestone	
Guide pin	

For more information:

