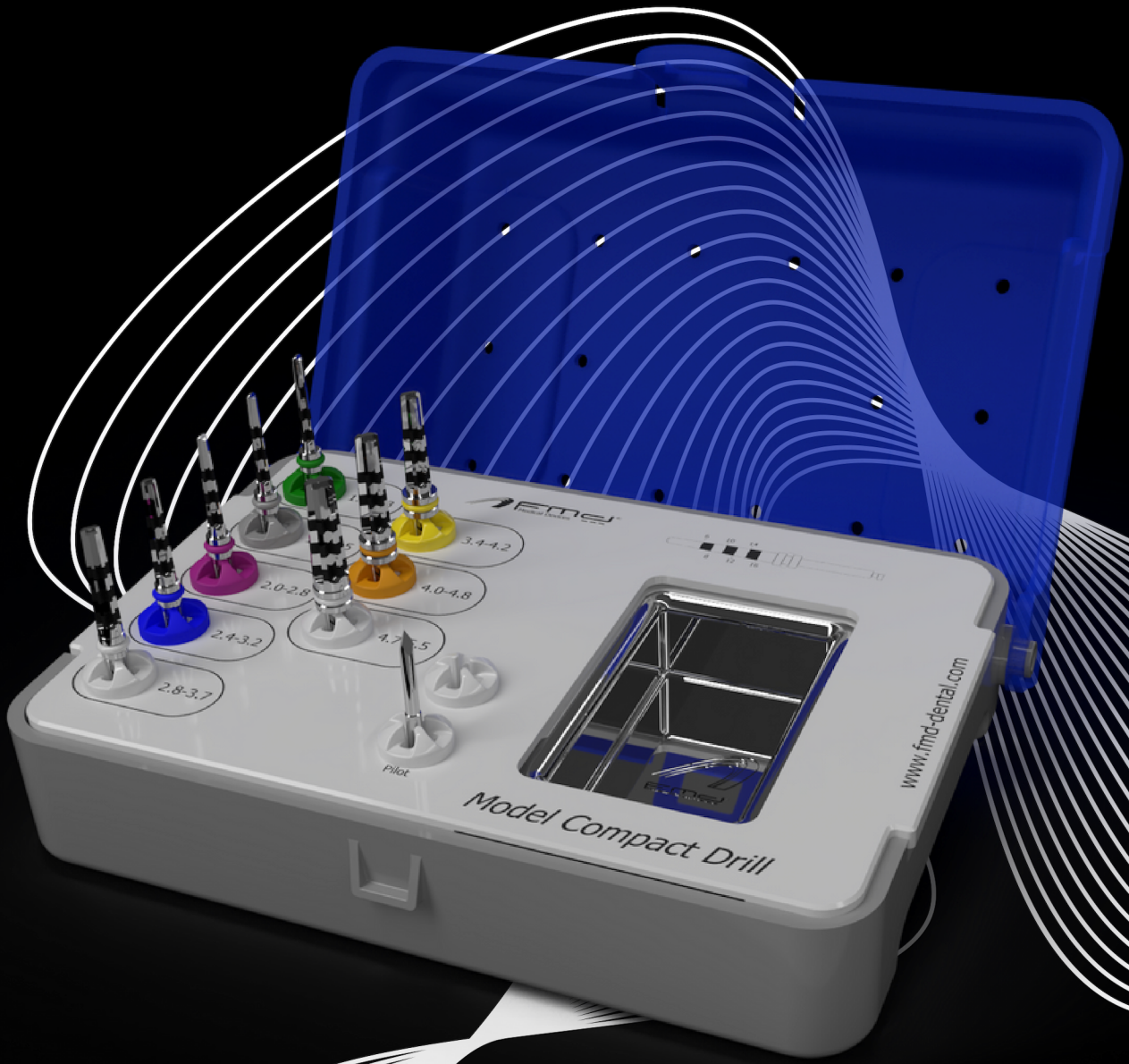
FMD Medical Devices

Model Compact Drill



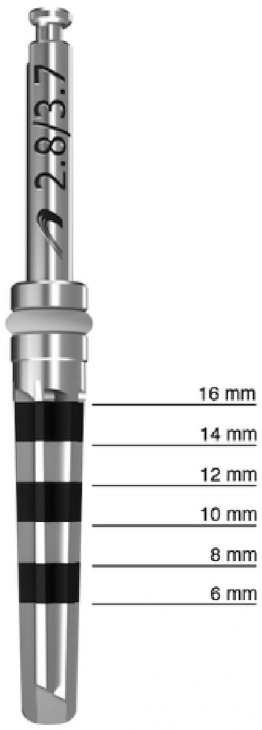
Design Innovation

THE "MODEL COMPACT DRILL" BURS ARE SPECIFICALLY DESIGNED TO REPLACE, IN SPECIFIC SURGICAL SITUATIONS, THE USUAL SITE PREPARATION PROCEDURE FOR IMPLANT PLACEMENT.

During the implant preparation procedure, the osteotomy, made by the burs with a helical cutting profile, creates an elliptical profile of the tunnel due to the oscillations caused by the burs' flutes. This leads to a suboptimal coupling between the osteotomy and the implant, with reduced contact areas and consequently a decrease in BIC (Bone to Implant Contact) and primary stability. The Model Compact Drill, thanks to the particular shape of the blade and the tip, adopt the principle of osteomodelling: instead of removing bone like normal burs, they compress the bone apically and laterally to the prepared site.

This generates dense and compact bone tissue, increasing the primary stability of the implant. The Model Compact Drill burs are conical shaped characterized by straight-edged blades that prevent overheating of the bone by eliminating, at the same time, the vibration of the bur during rotation, also ensuring constant centring of the hole.

They can be used counterclockwise, allowing the recovery of bone tissue or clockwise, for its compaction. In compaction mode they are particularly effective in the case of bone consistency >D3, as they increase the density of the bone around the implant tunnel.
In both directions of rotation the recommended speed is between 1000 and 1200 rpm, with constant irrigation, although they can also be used at a lower number of revolutions, in the case of hypodense bone.
The use of the Model Compact Drill is also indicated in bone crests with limited horizontal thickness. In these conditions, thanks to their expansive behavior, they can prevent dehiscences and/or fenestrations, reducing the need for bone regeneration. They can also be used in association with corticotomies in bone splitting procedures.
Even in the presence of vertical deficit, in the sub-antral region, the Model Compact Drill can be performed effectively used both for discontinuing the floor of the maxillary sinus and for moving the autologous bone and the graft material apically into the sub-Sneiderian space.
The Model Compact Drill, although designed for FMD HaLo, Kreo Ti, AdaptA implants, can adapt to other implant shapes, making the drilling process simpler, faster and safer thanks to the quick-fit depth stops.



Soft Bone Protocol

FMD IMPLANTS	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
AdaptA Ø3,0	Pilot	Ø 2,3	Ø 2,5					
Kreo Ti Ø3,4	Pilot	Ø 2,3	Ø 2,5	Ø 2,8				
AdaptA Ø3,4	Pilot	Ø 2,3	Ø 2,5	Ø 2,8				
HaLo Ø4,5	Pilot	Ø 2,3	Ø 2,5	Ø 2,8				
Kreo Ti Ø3,8	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2			
AdaptA Ø3,8	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2			
HaLo Ø5,0	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2			
Kreo Ti Ø4,5	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2	Ø 3,7		
AdaptA Ø4,5	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2	Ø 3,7		
HaLo Ø5,5	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2	Ø 3,7		
Kreo Ti Ø5,5	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2	Ø 3,7	Ø 4,2	Ø 4,8
AdaptA Ø5,5	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2	Ø 3,7	Ø 4,2	Ø 4,8
HaLo Ø6,0	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2	Ø 3,7	Ø 4,2	Ø 4,8

Clockwise (compact drill)
1000-1200 RPMs

Counterclockwise (cutting drill)
1000-1200 RPMs

In conjunction with the Model Compact Drill system, we recommend that you always use your own judgment and clinical experience

Hard Bone Protocol

FMD SYSTEMS	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9
AdaptA Ø3,0	Pilot	Ø 2,3	Ø 2,5	Ø 2,8					
Kreo Ti Ø3,4	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2				
AdaptA Ø3,4	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2				
Kreo Ti Ø3,8	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2	Ø 3,7			
AdaptA Ø3,8	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2	Ø 3,7			
Kreo Ti Ø4,5	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2	Ø 3,7	Ø 4,2		
AdaptA Ø4,5	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2	Ø 3,7	Ø 4,2		
Kreo Ti Ø5,5	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2	Ø 3,7	Ø 4,2	Ø 4,8	Ø 5,5
AdaptA Ø5,5	Pilot	Ø 2,3	Ø 2,5	Ø 2,8	Ø 3,2	Ø 3,7	Ø 4,2	Ø 4,8	Ø 5,5

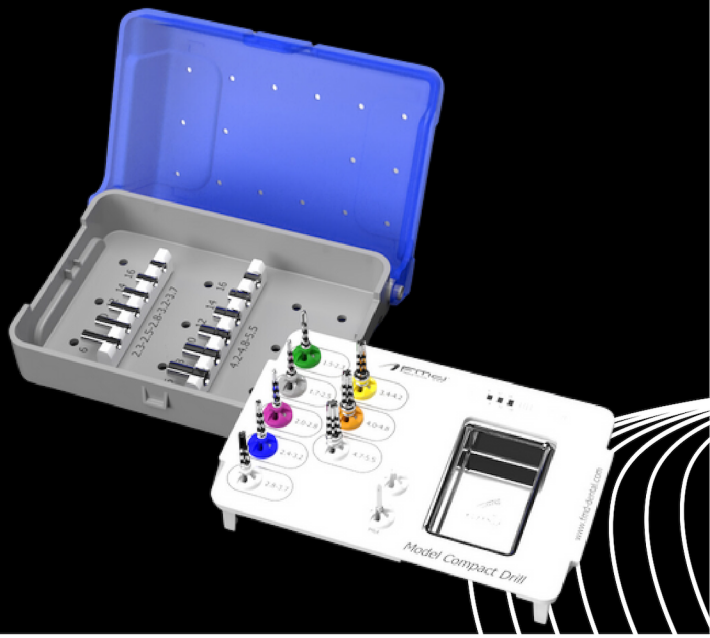
In case of particularly high bone density, it is recommended to also use the last drill counterclockwise (cutting drill)

In conjunction with the Model Compact Drill system, we recommend that you always use your own judgment and clinical experience

Clockwise (compact drill)
1000-1200 RPMs

Counterclockwise (cutting drill)
1000-1200 RPMs

Main uses of Model Compact Drill



- PREPARATION OF THE SELF-CENTERING IMPLANT SITE
- DUAL CUTTING AND COMPACTING FUNCTION
- HIGHLY PERFORMING IN OSTEOMODELLING
- IDEAL FOR USE IN BONE COMPACTION > D3
- EXCELLENT IN CRESTAL ELEVATIONS, ALSO IN ASSOCIATION WITH THE "SINUS EASY FLUID KIT"
- DEPTH STOP TO MAKE MILLING WORK SIMPLE, FAST AND SAFE

"IN ASSOCIATION WITH THE SINUS EASY FLUID KIT"

The SINUS EASY FLUID kit has been specifically designed to carry out an innovative crestal elevation technique of the maxillary sinus called HySiLift.

EFFECTS OF OSSEODENSIFICATION PROTOCOLS ON INSERTION TORQUES AND THE RESONANCE FREQUENCY ANALYSIS OF CONICAL-SHAPED IMPLANTS: AN IN VITRO STUDY ON POLYURETHANE FOAM BLOCKS

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Abstract:
Bone density at the implant site is correlated to the success of osseointegration. The objective of this in vitro study was to evaluate the efficacy of osseodensification burs in increasing bone density using a solid polyurethane foam block model. The osseodensification burs kit was used to perform 48 osteotomies on a rigid polyurethane foam test ground. Burs were utilized on a TMM2 implant motor for data collection. The osteotomies were divided into two study groups (A and C) in which implant sites, extended 12 and 14 mm deep, respectively, were prepared using the drills to a compaction rotation; two control groups, B and D, represented the osteotomies for which the drills were used in cutting direction. A 3.8 × 12 mm conical implant was inserted into each site; for each implant, data were collected on the peak torque (Cp), mean torque (Cm), and integral depth curve (I). The implants underwent resonance frequency analysis (RFA) to assess the implant stability quotient (ISQ). Correlation analysis was performed between I, Cm, Cp and ISQ. Oneway analysis of variance (ANOVA) was used to identify statistically significant differences between groups. Group C, representing osteotomies prepared at 14 mm with osseodensification burs, showed a significantly higher value for each parameter. Implants at sites obtained with osteocondensation drills and prepared at greater depth for autologous particle grafting showed significant increases in each implant stability parameter.

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"Innovation & Flexibility" here at FMD are considered the foundations on which to build, together with implantology professionals, a common growth project.
Over the years, FMD has progressively earned the trust of dentists, first at a national level and later at an international level, becoming a consolidated and appreciated reality in the dental sector.

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