

# DRILLING PROTOCOL FOR ROOTT **M** AND ROOTT **S** IMPLANTS

## CAVITY PREPARATION

Every person has a unique bone structure and the clinician has to adapt the drilling protocol to the individual bone quality and anatomical situation. Our drilling protocol is an optimal scheme for different types of bones: D1, D2-D3, D4.

**IMPORTANT!  
WHEN PREPARING THE CAVITY FOR  
THE IMPLANT, ALWAYS ENSURE COOLING.  
USE ONLY SHARP INSTRUMENTS.**

## DRILLING SPEED

Recommended drilling speed:

- initial drilling – 1200–1500 Rpm;
- pilot drilling – 900–1200 Rpm;
- form drilling – 200–800 Rpm.

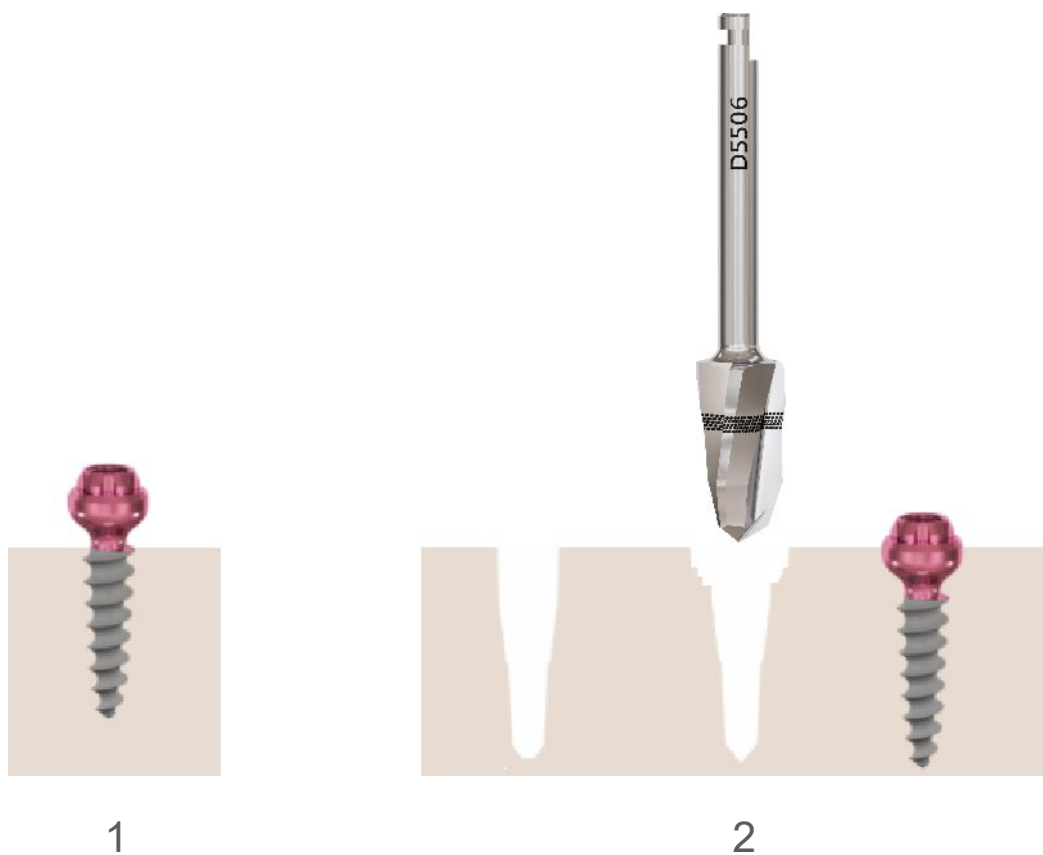
Implantologist is responsible of drilling speed choice, taking into consideration his experience, preferences and special necessities of the patient.

Important notice: this protocol was prepared with a max speed of 700 rpm, with insertion torque for implants is from 35 to 50 Ncm.

## IMPLANT POSITION

1. The length of the implant thread without the neck. Placing the implant to the bone till the start of the implant neck and till the end-point of the implant thread.
2. The length of the implant thread + implant's neck. Placing the implant to the bone till the abutment level, leaving only abutment over the bone.

For the 2<sup>nd</sup> option, ROOTT M drilling should go 2.7 mm deeper than implant length, for ROOTT S - 2.5 mm deeper than implant length. To widen only the top of the cavity, use cortical drill D5506.



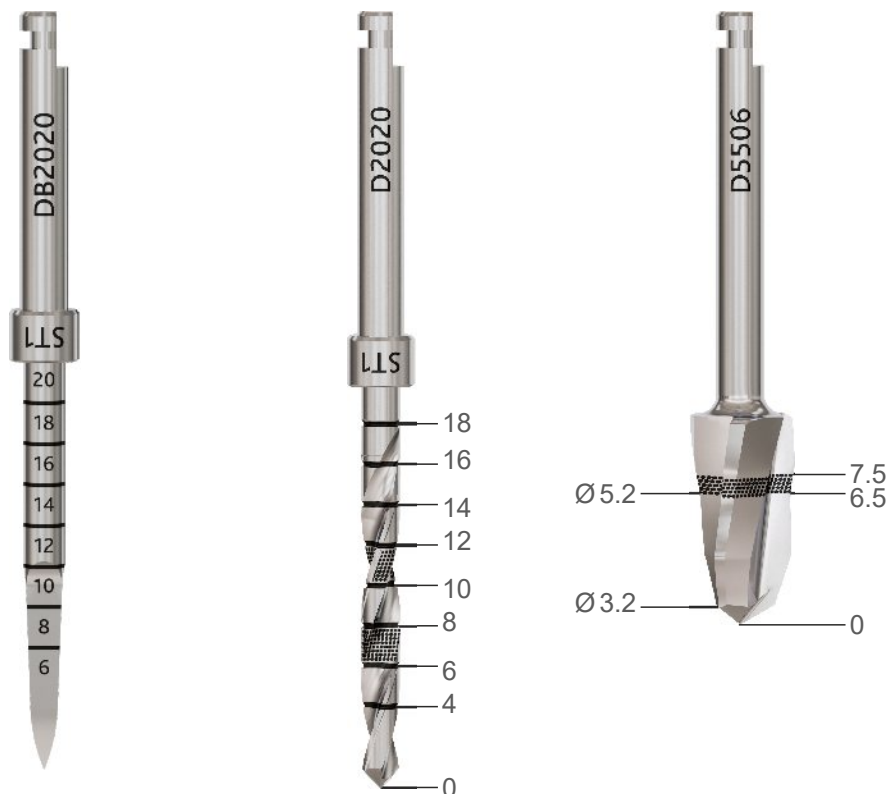
# ROOTT **M** **S** implants installation using tapered drills

## DRILLS

Lance drill DB2020 can be used for initial drilling by setting the drilling axis before using pilot drill D2020.

Drill with tapered drills to the appropriate depth, required for a specific case. If after using the previous drill the torque is still more than 50 Ncm while inserting the implant, the cavity has to be widened. Just widen the osteotomy with drill D5506.

All drills have laser marking, which indicates drill's depth in the bone. Markings are lasered every 2 millimetres, pilot drill from 4 to 18 mm, tapered drills from 4 to 16 mm.



Tapered drills have V-shaped tips, for better correlation with the implant, 3 cutting edges offer good stability. The tapered shape reduces frictional heating. Variable helix for enhanced drilling control and twisted flute for bone extraction. Angled back cutting edge allows compressing of bone when drilling in counter-clock wise (reverse).



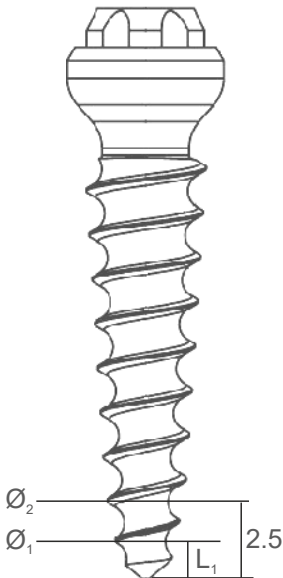
**NOTE**

For the best result it is recommended to use a smaller diameter drill and try inserting the implant.

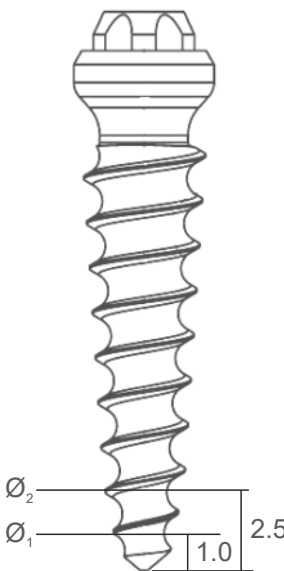
# IMPLANTS

ROOTT M/S implants have a “V” shape and compressive thread. Different diameter implants have different anatomy. From implant’s first thread diameter and diameter of a second thread depends drilling protocols for thin and wide implants.

**ROOTT M**














**ROOTT S**



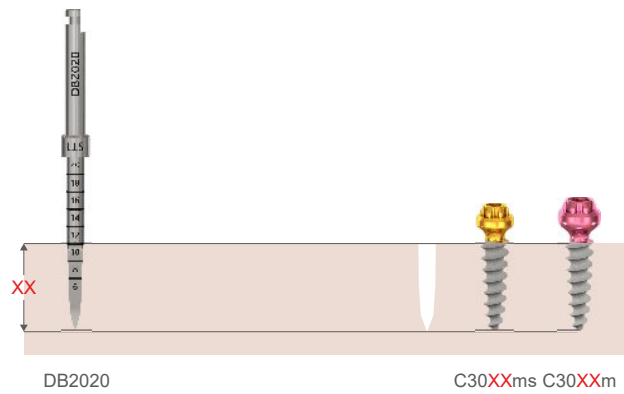
$\varnothing_1$  - diameter of the first thread, mm  
 $\varnothing_2$  - diameter of the second thread, mm  
 $L_1$  - length from bottom till the first thread, mm

	6 mm	8 mm	10 mm	12 mm	14 mm	16 mm	18 mm	20 mm
$\varnothing$ 3.0		C3008m	C3010m	C3012m	C3014m	C3016m	C3018m	C3020m
$\varnothing_1$		1.7	1.7	1.7	1.65	1.65	1.6	1.6
$\varnothing_2$		2.3	2.2	2.2	2.2	2.1	2.1	2.1
$\varnothing$ 3.5	C3506m	C3508m	C3510m	C3512m	C3514m	C3516m	C3518m	C3520m
$\varnothing_1$	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.65
$\varnothing_2$	2.65	2.5	2.4	2.3	2.25	2.2	2.2	2.2
$\varnothing$ 4.0	C4006m	C4008m	C4010m	C4012m	C4014m	C4016m		
$\varnothing_1$	2.0	1.9	1.9	1.9	1.9	1.85		
$\varnothing_2$	3.2	3.0	2.9	2.8	2.8	2.7		
$\varnothing$ 5.0	C5006m	C5008m	C5010m	C5012m	C5014m			
$\varnothing_1$	2.4	2.3	2.3	2.3	2.3			
$\varnothing_2$	4.2	4.0	3.9	3.8	3.8			
$\varnothing$ 6.0	C6006m	C6008m	C6010m	C6012m	C6014m			
$\varnothing_1$	2.4	2.3	2.3	2.3	2.3			
$\varnothing_2$	5.25	5.05	4.9	4.8	4.8			

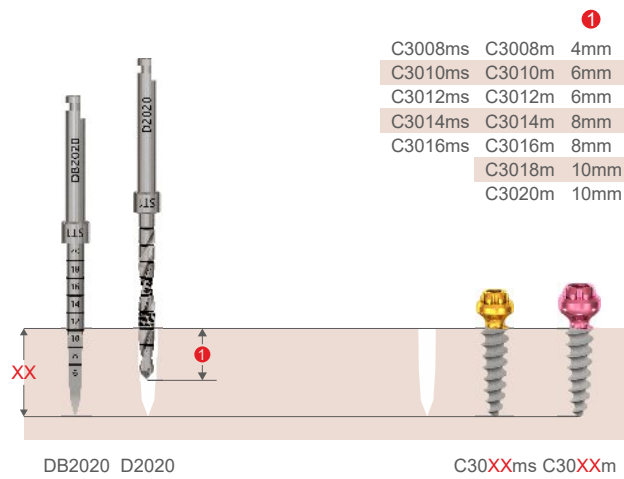
	6 mm	8 mm	10 mm	12 mm	14 mm	16 mm
$\varnothing 3.0$		<b>C3008ms</b>	<b>C3010ms</b>	<b>C3012ms</b>	<b>C3014ms</b>	<b>C3016ms</b>
$\varnothing_1$		1.7	1.7	1.7	1.65	1.65
$\varnothing_2$		2.3	2.2	2.2	2.2	2.1
						
$\varnothing 3.5$	<b>C3506ms</b>	<b>C3508ms</b>	<b>C3510ms</b>	<b>C3512ms</b>	<b>C3514ms</b>	<b>C3516ms</b>
$\varnothing_1$	1.8	1.7	1.7	1.7	1.7	1.7
$\varnothing_2$	2.65	2.5	2.4	2.3	2.25	2.2
						

# IMPLANTS C30XXms / C300XXm

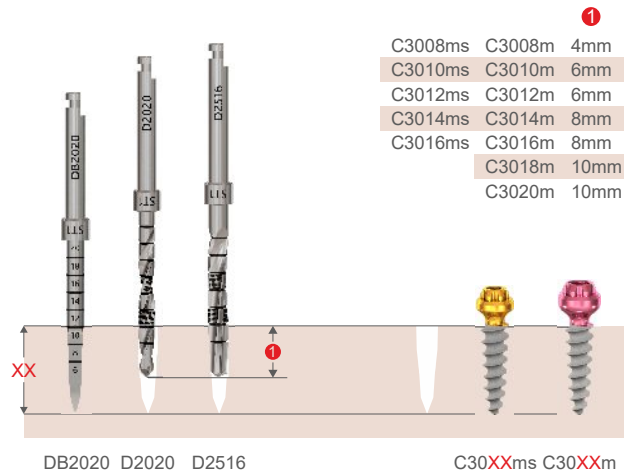
## D4 BONE



## D2-D3 BONE



## D1 BONE

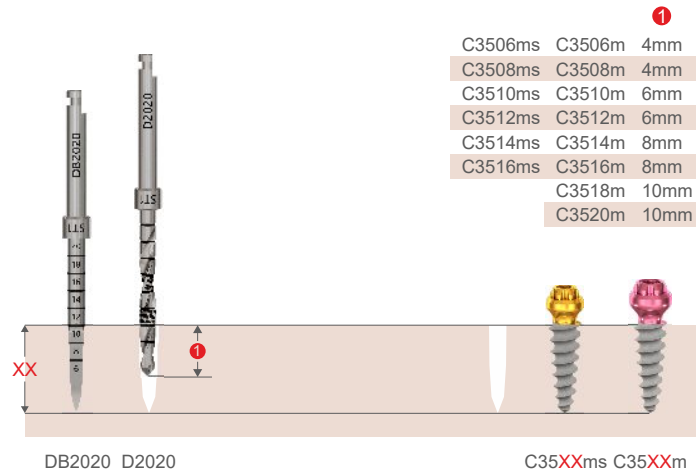


Here xx is the length of the implant, mm

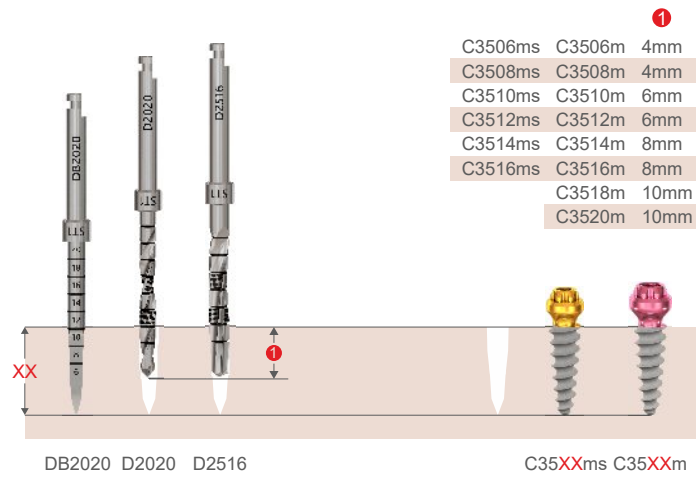


# IMPLANTS C35XXms / C350XXm

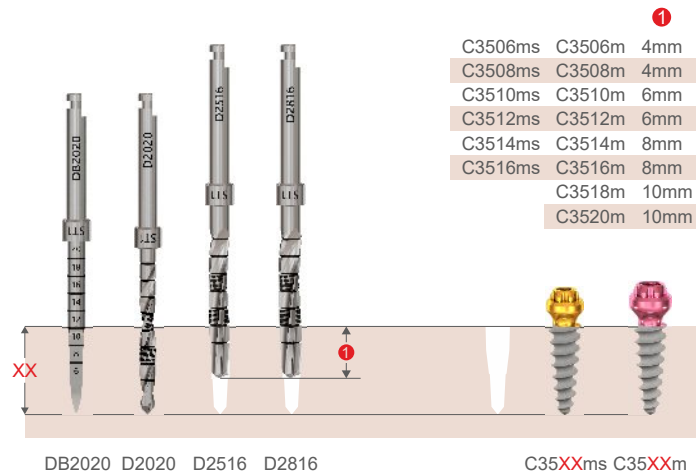
## D4 BONE



## D2-D3 BONE



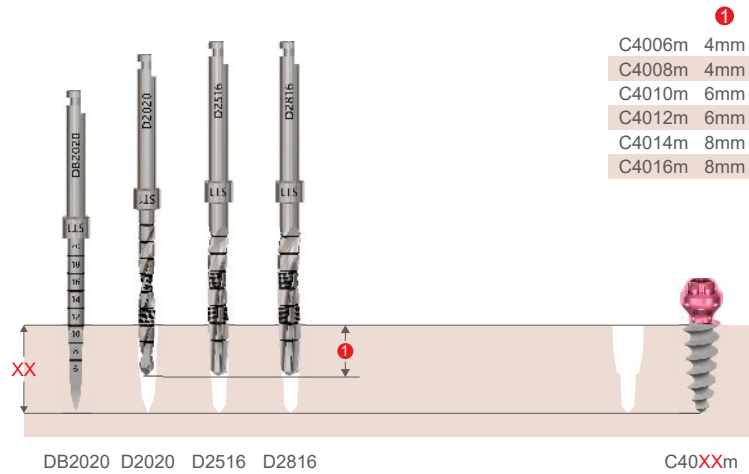
## D1 BONE



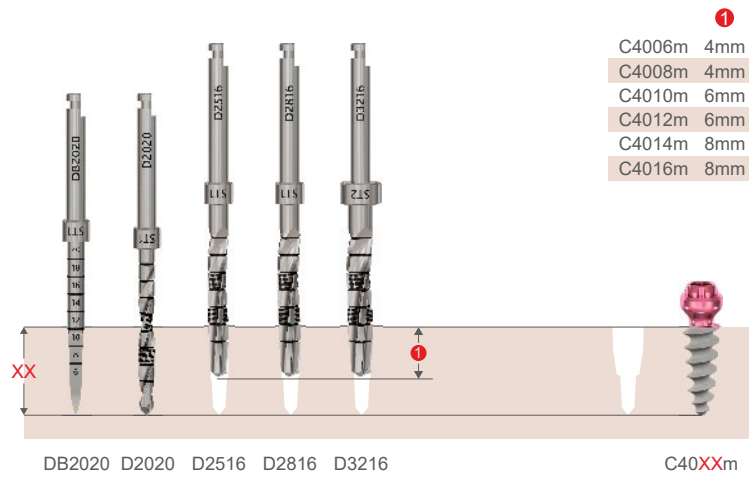
Here xx is the length of the implant, mm

# IMPLANTS C40XXm

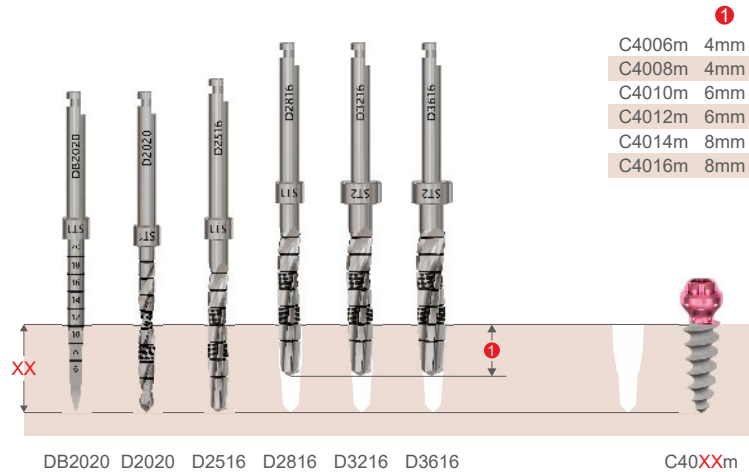
## D4 BONE



## D2-D3 BONE



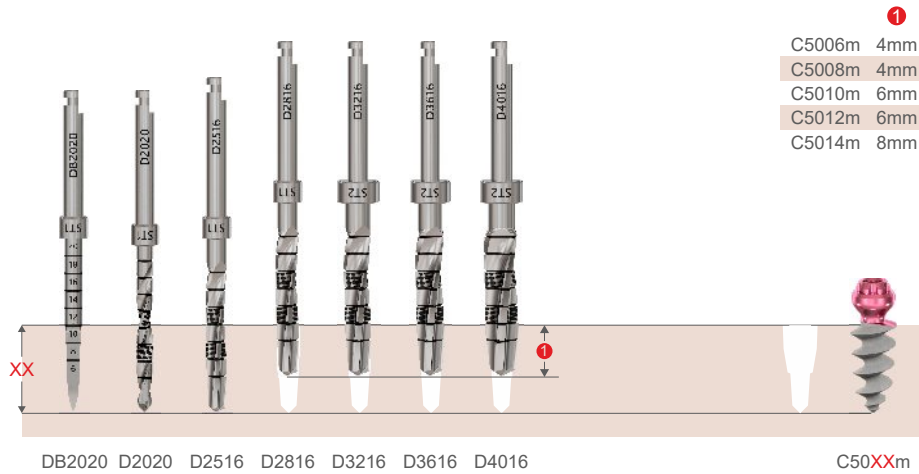
## D1 BONE



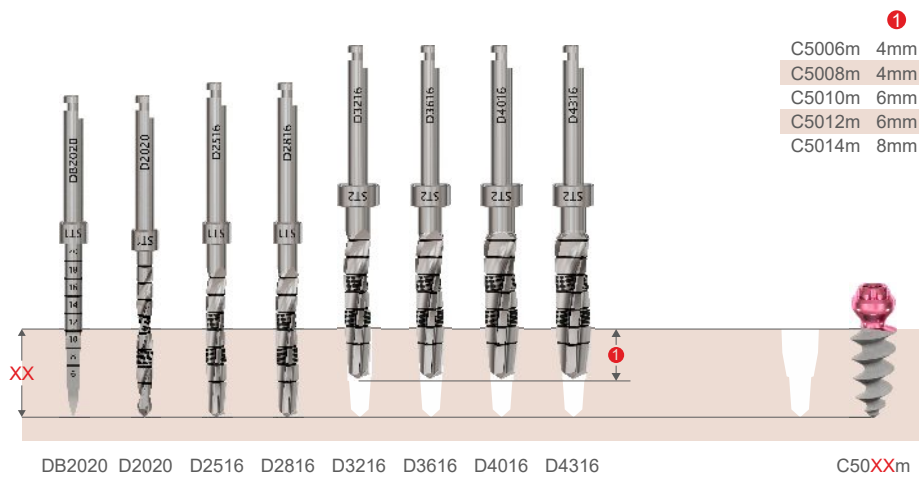
Here xx is the length of the implant, mm

# IMPLANTS C50XXm

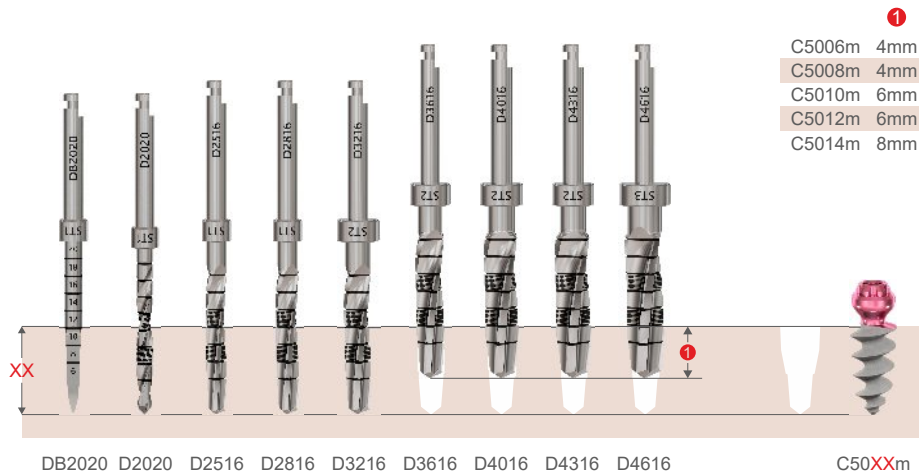
## D4 BONE



## D2-D3 BONE



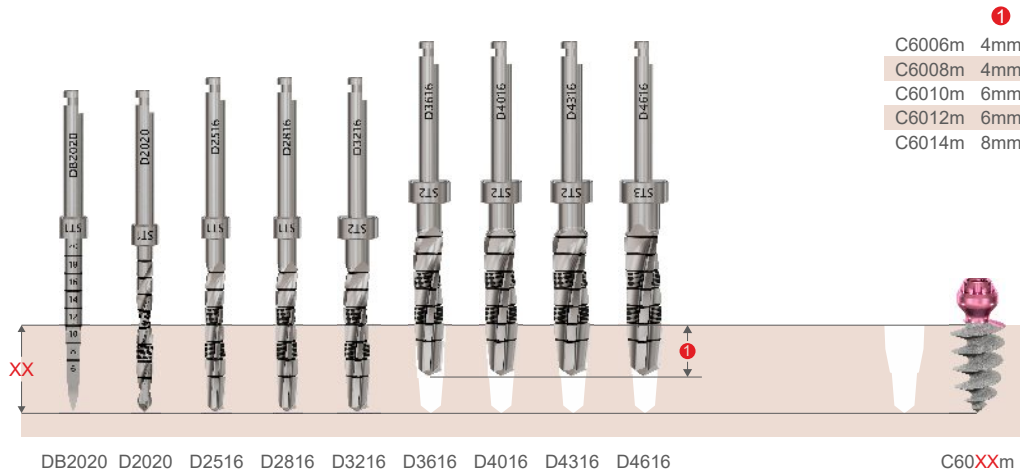
## D1 BONE



Here xx is the length of the implant, mm

# IMPLANTS C60XXm

## D4 BONE



## D2-D3 BONE



## D1 BONE



Here xx is the length of the implant, mm

# ROOTT **M** **S** implants installation using tapered drills

Implant	D4 BONE	D2-D3 BONE	D1 BONE	
Ø 3.0 mm	DB2020	DB2020 D2020*	DB2020 D2020* D2516*	C3008ms/C3008m - 4 mm, C3010ms/C3010m, C3012ms/C3012m - 6 mm, C3014ms/C3014m, C3016ms/C3016m - 8mm, C3018m, C3020m - 10 mm
Ø 3.5 mm	DB2020 D2020*	DB2020 D2020* D2516*	DB2020 D2020* D2516* D2816*	C3508ms/C3508m - 4 mm, C3510ms/C3510m, C3512ms/C3512m - 6 mm, C3514ms/C3514m, C3516ms/C3516m - 8mm, C3518m, C3520m - 10 mm
Ø 4.0 mm	DB2020 D2020* D2516* D2816*	DB2020 D2020 D2516* D2816* D3216*	DB2020 D2020 D2516 D2816* D3216* D3616*	C4006m, C4008m - 4 mm C4010m, C4012m - 6 mm C4014m, C4016m - 8mm
Ø 5.0 mm	DB2020 D2020 D2516 D2816* D3216* D3616* D4016*	DB2020 D2020 D2516 D2816 D3216* D3616* D4016* D4316*	DB2020 D2020 D2516 D2816 D3216 D3616* D4016* D4316* D4616*	C5006m, C5008m - 4 mm C5010m, C5012m - 6 mm C5014m - 8mm
Ø 6.0 mm	DB2020 D2020 D2516 D2816 D3216 D3616* D4016* D4316* D4616*	DB2020 D2020 D2516 D2816 D3216 D3616* D4016* D4316* D4616* D5016*	DB2020 D2020 D2516 D2816 D3216 D3616 D4016* D4316* D4616* D5016* D5316*	C6006m, C6008m - 4 mm C6010m, C6012m - 6 mm C6014m - 8mm