ROOTT

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.

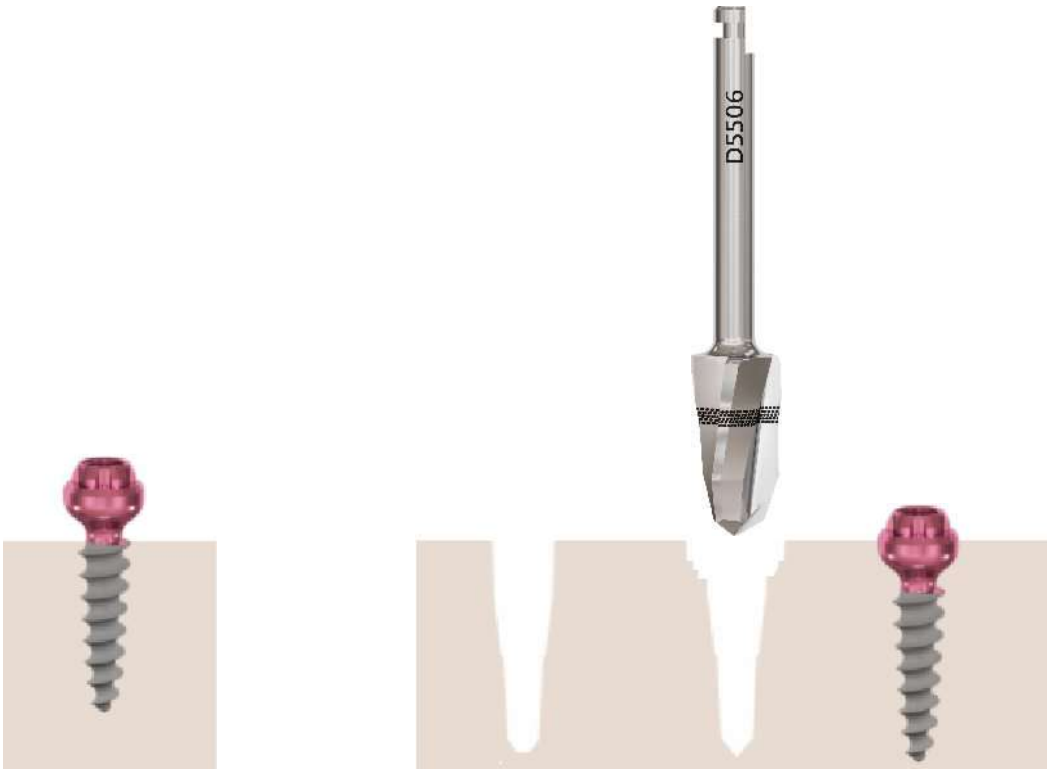
Important notice: this protocol was prepared with a max speed of 700 rpm, with insertion torque for implants is from 35 to 50 Ncm.

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 2nd 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.



1 2

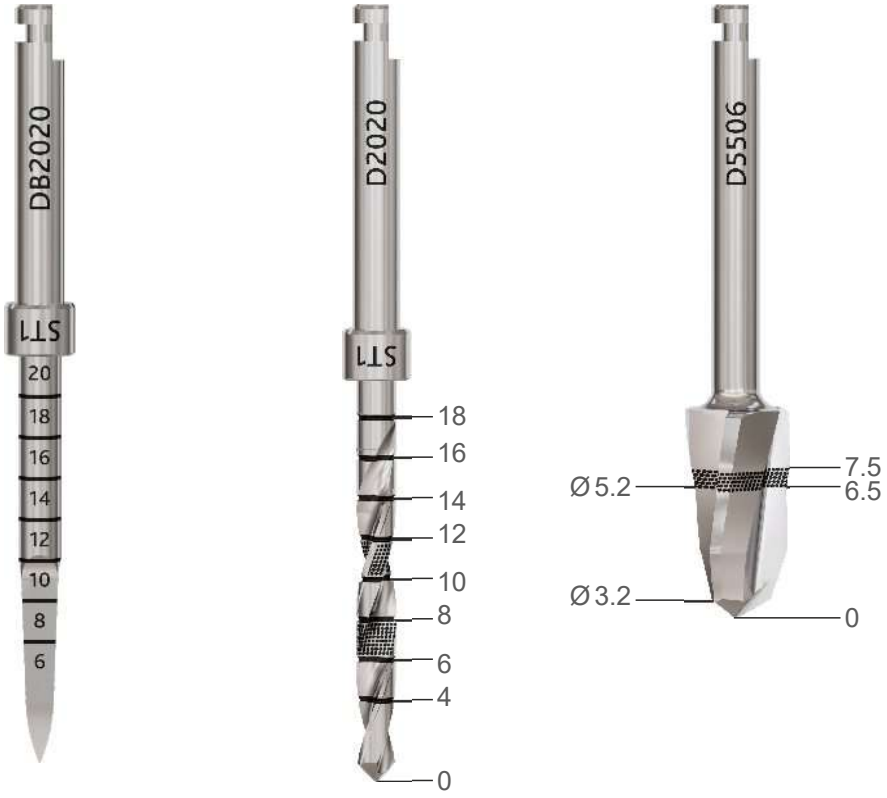
ROOTT M S implants installation using tapered drills

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).

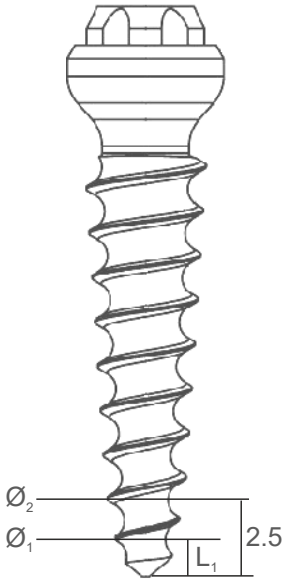
$Ø_2$	2.5	2.8	3.2	3.6	4.0	4.3	4.6	5.0	5.3
$Ø_1$	2.0	2.3	2.5	2.8	2.8	3.0	3.5	3.8	4.0

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

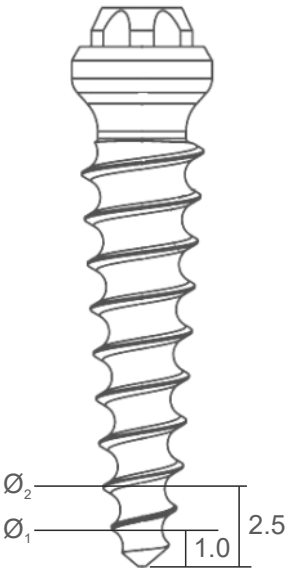
IMPLANTS

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



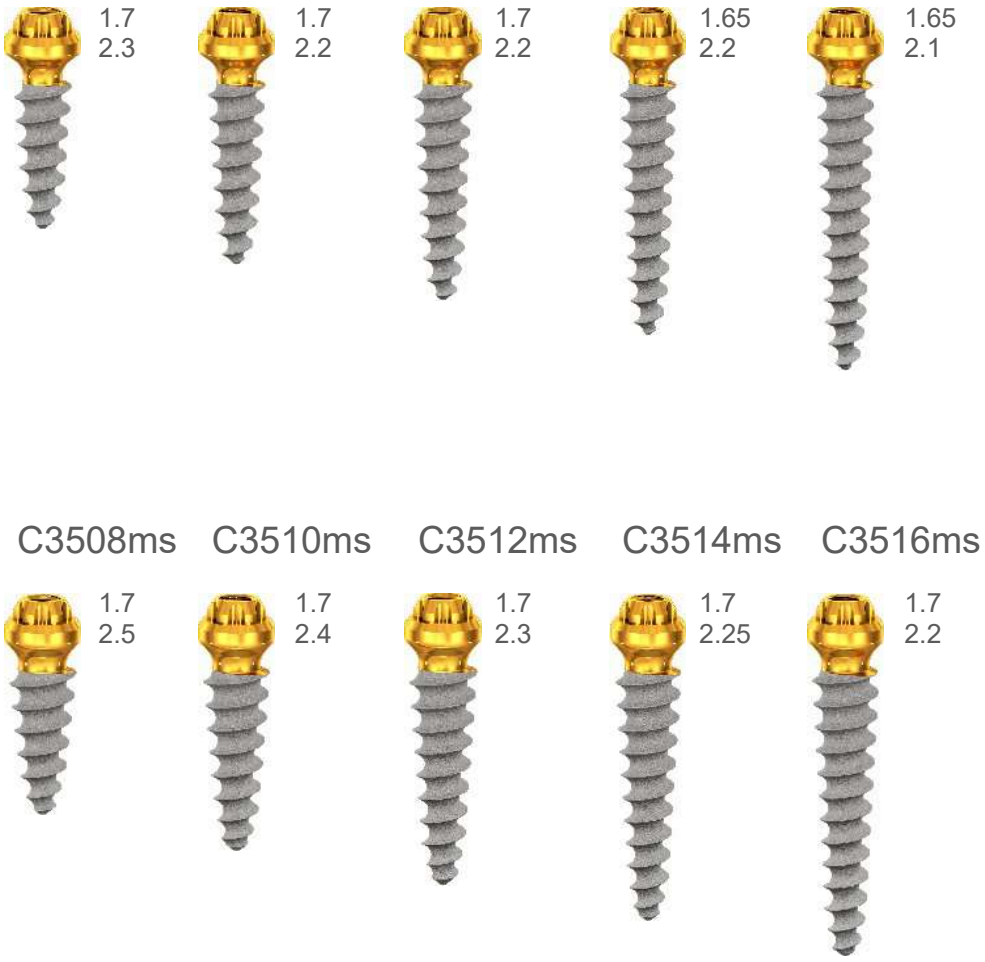
ROOTT S



$Ø_1$ - diameter of the first thread, mm
$Ø_2$ - diameter of the second thread, mm
L_1 - length from bottom till the first thread, mm

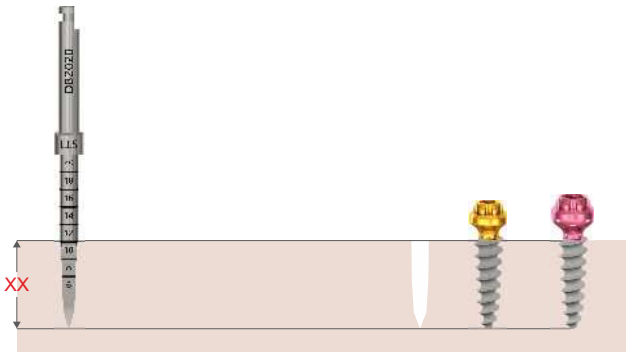
	6 mm	8 mm	10 mm	12 mm	14 mm	16 mm	18 mm	20 mm
Ø 3.0		C3008m	C3010m	C3012m	C3014m	C3016m	C3018m	C3020m
$Ø_1$		1.7	1.7	1.7	1.65	1.65	1.6	1.6
$Ø_2$		2.3	2.2	2.2	2.2	2.1	2.1	2.1
Ø 3.5	C3506m	C3508m	C3510m	C3512m	C3514m	C3516m	C3518m	C3520m
$Ø_1$	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.65
$Ø_2$	2.65	2.5	2.4	2.3	2.25	2.2	2.2	2.2
Ø 4.0	C4006m	C4008m	C4010m	C4012m	C4014m	C4016m		
$Ø_1$	2.0	1.9	1.9	1.9	1.9	1.85		
$Ø_2$	3.2	3.0	2.9	2.8	2.8	2.7		
Ø 5.0	C5006m	C5008m	C5010m	C5012m	C5014m			
$Ø_1$	2.4	2.3	2.3	2.3	2.3			
$Ø_2$	4.2	4.0	3.9	3.8	3.8			
Ø 6.0	C6006m	C6008m	C6010m	C6012m	C6014m			
$Ø_1$	2.4	2.3	2.3	2.3	2.3			
$Ø_2$	5.25	5.05	4.9	4.8	4.8			

	6 mm	8 mm	10 mm	12 mm	14 mm	16 mm
Ø 3.0		C3008ms	C3010ms	C3012ms	C3014ms	C3016ms
$Ø_1$		1.7	1.7	1.7	1.65	1.65
$Ø_2$		2.3	2.2	2.2	2.2	2.1
Ø 3.5	C3506ms	C3508ms	C3510ms	C3512ms	C3514ms	C3516ms
$Ø_1$	1.8	1.7	1.7	1.7	1.7	1.7
$Ø_2$	2.65	2.5	2.4	2.3	2.25	2.2



IMPLANTS **C30XXms / C300XXm**

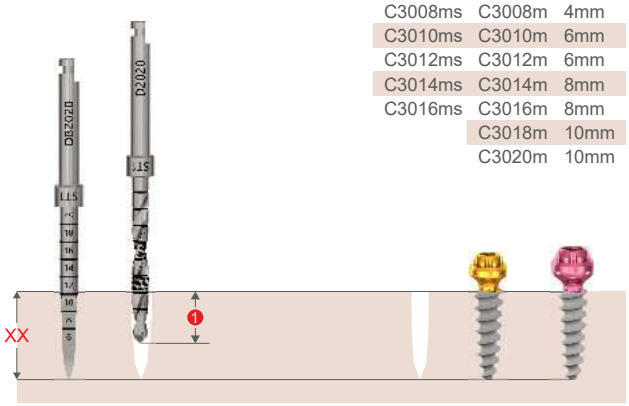
D4 BONE



DB2020 C30XXms C30XXm

D2-D3 BONE

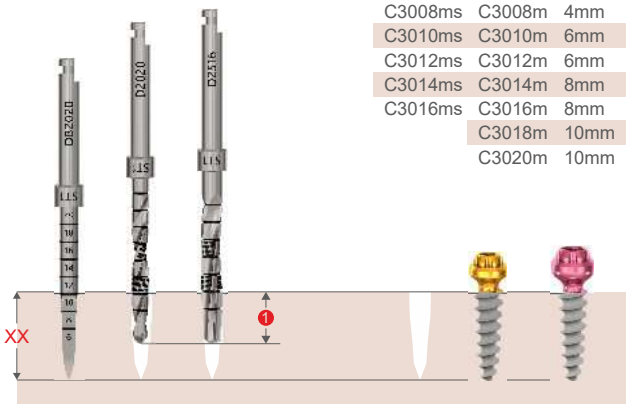
		❶
C3008ms	C3008m	4mm
C3010ms	C3010m	6mm
C3012ms	C3012m	6mm
C3014ms	C3014m	8mm
C3016ms	C3016m	8mm
	C3018m	10mm
	C3020m	10mm



DB2020 D2020 C30XXms C30XXm

D1 BONE

		❶
C3008ms	C3008m	4mm
C3010ms	C3010m	6mm
C3012ms	C3012m	6mm
C3014ms	C3014m	8mm
C3016ms	C3016m	8mm
	C3018m	10mm
	C3020m	10mm



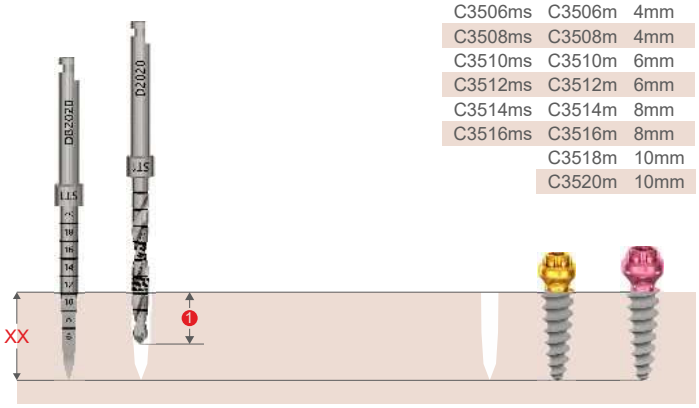
DB2020 D2020 D2516 C30XXms C30XXm

Here xx is the length of the implant, mm

IMPLANTS **C35XXms / C350XXm**

D4 BONE

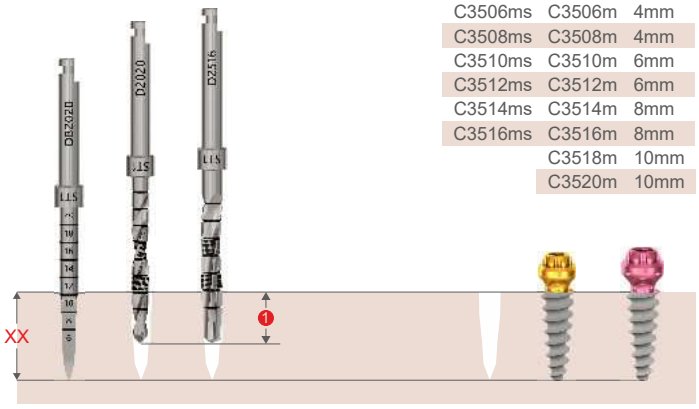
		❶
C3506ms	C3506m	4mm
C3508ms	C3508m	4mm
C3510ms	C3510m	6mm
C3512ms	C3512m	6mm
C3514ms	C3514m	8mm
C3516ms	C3516m	8mm
	C3518m	10mm
	C3520m	10mm



DB2020 D2020 C35XXms C35XXm

D2-D3 BONE

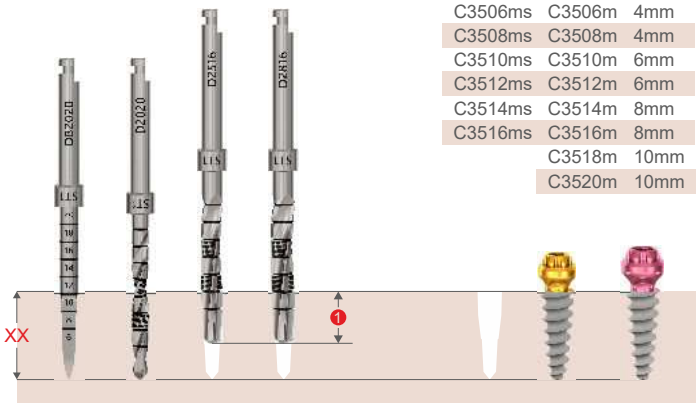
		❶
C3506ms	C3506m	4mm
C3508ms	C3508m	4mm
C3510ms	C3510m	6mm
C3512ms	C3512m	6mm
C3514ms	C3514m	8mm
C3516ms	C3516m	8mm
	C3518m	10mm
	C3520m	10mm



DB2020 D2020 D2516 C35XXms C35XXm

D1 BONE

		❶
C3506ms	C3506m	4mm
C3508ms	C3508m	4mm
C3510ms	C3510m	6mm
C3512ms	C3512m	6mm
C3514ms	C3514m	8mm
C3516ms	C3516m	8mm
	C3518m	10mm
	C3520m	10mm

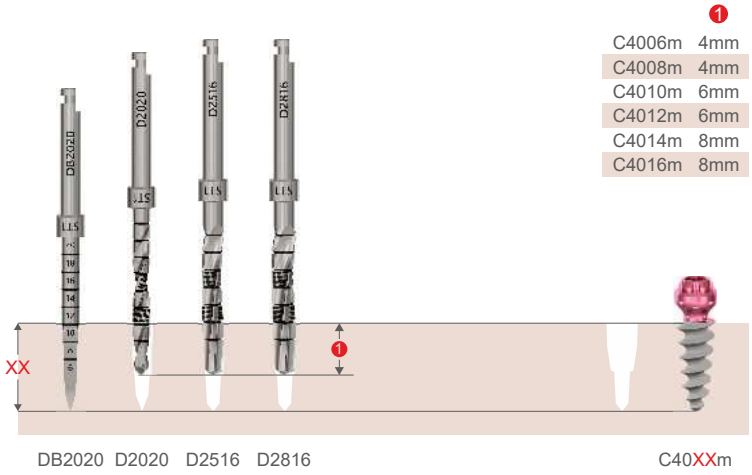


DB2020 D2020 D2516 D2816 C35XXms C35XXm

Here xx is the length of the implant, mm

IMPLANTS **C40XXm**

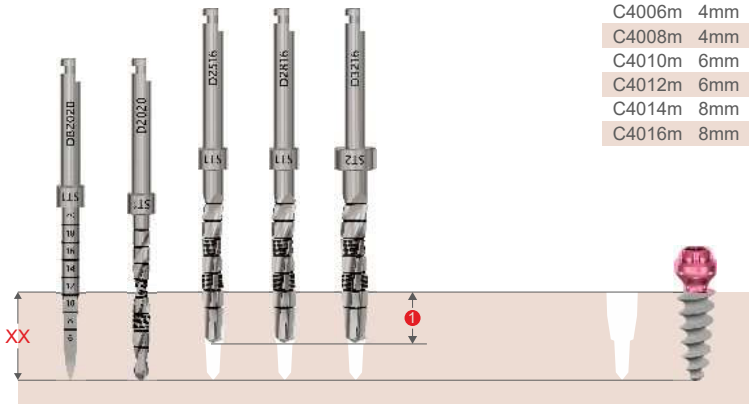
D4 BONE



1	
C4006m	4mm
C4008m	4mm
C4010m	6mm
C4012m	6mm
C4014m	8mm
C4016m	8mm

DB2020 D2020 D2516 D2816 C40XXm

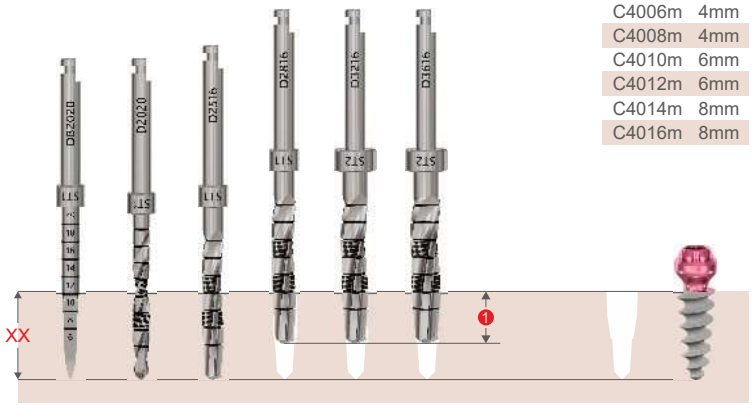
D2-D3 BONE



1	
C4006m	4mm
C4008m	4mm
C4010m	6mm
C4012m	6mm
C4014m	8mm
C4016m	8mm

DB2020 D2020 D2516 D2816 D3216 C40XXm

D1 BONE



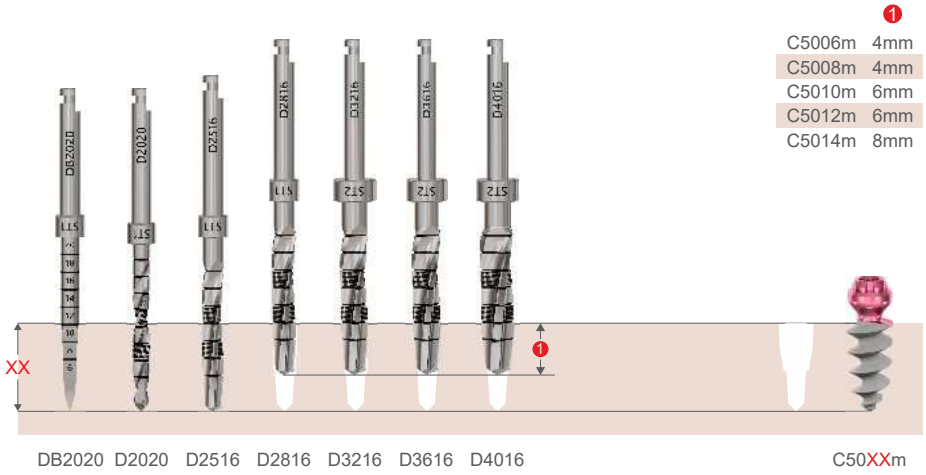
1	
C4006m	4mm
C4008m	4mm
C4010m	6mm
C4012m	6mm
C4014m	8mm
C4016m	8mm

DB2020 D2020 D2516 D2816 D3216 D3616 C40XXm

Here xx is the length of the implant, mm

IMPLANTS **C50XXm**

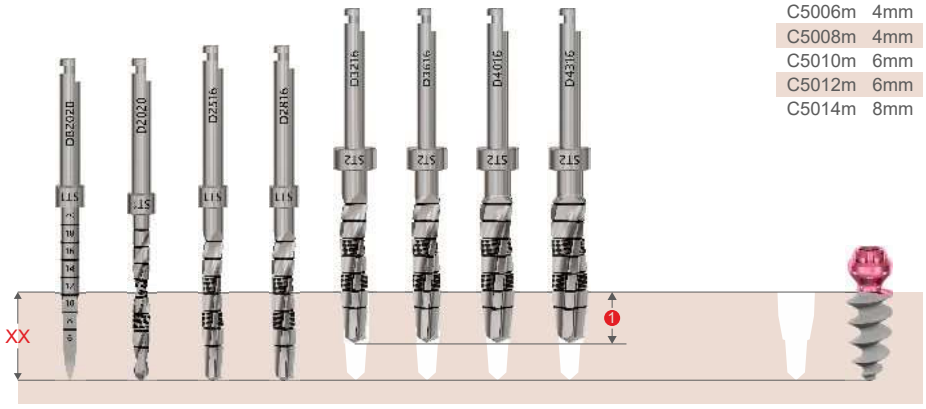
D4 BONE



1	
C5006m	4mm
C5008m	4mm
C5010m	6mm
C5012m	6mm
C5014m	8mm

DB2020 D2020 D2516 D2816 D3216 D3616 D4016 C50XXm

D2-D3 BONE



1	
C5006m	4mm
C5008m	4mm
C5010m	6mm
C5012m	6mm
C5014m	8mm

DB2020 D2020 D2516 D2816 D3216 D3616 D4016 D4316 C50XXm

D1 BONE

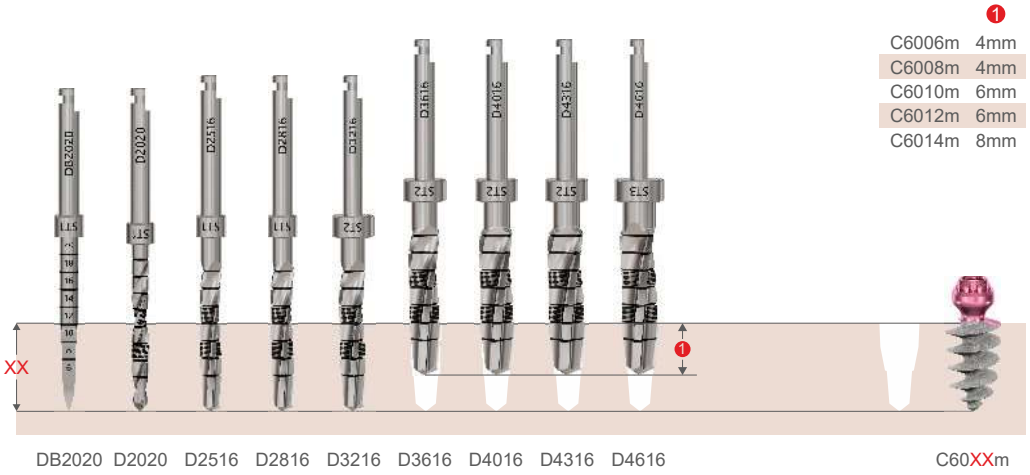
1	
C5006m	4mm
C5008m	4mm
C5010m	6mm
C5012m	6mm
C5014m	8mm

DB2020 D2020 D2516 D2816 D3216 D3616 D4016 D4316 D4616 C50XXm

Here xx is the length of the implant, mm

IMPLANTS **C60XXm**

D4 BONE

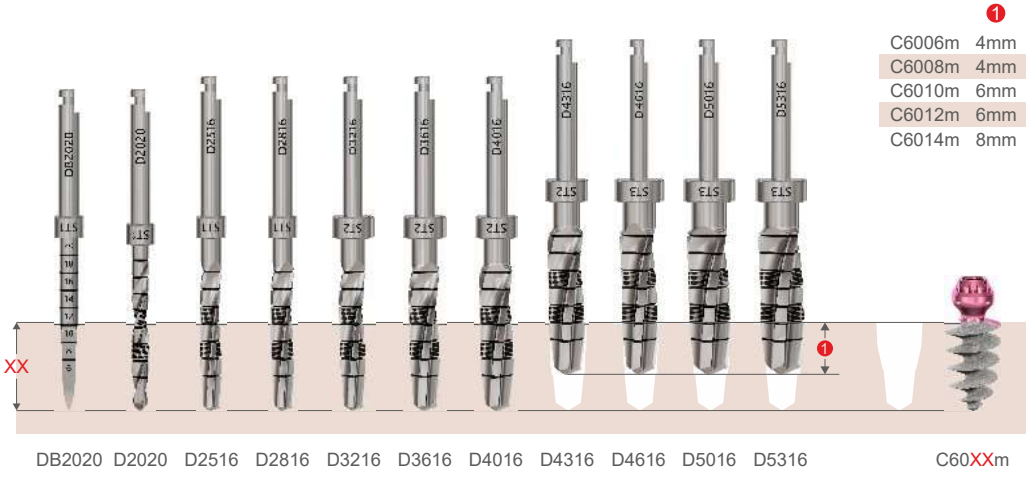


C6006m	4mm
C6008m	4mm
C6010m	6mm
C6012m	6mm
C6014m	8mm

D2-D3 BONE

C6006m	4mm
C6008m	4mm
C6010m	6mm
C6012m	6mm
C6014m	8mm

D1 BONE



C6006m	4mm
C6008m	4mm
C6010m	6mm
C6012m	6mm
C6014m	8mm

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