

Choice of Aadva® Implants

The choice of appropriate Implant Type, Diameter and Length must always follow the current state of science and clinical treatment protocols as well as the most actual recommendations of the respective Implantological Professional Societies.

Within the range of correct medical indications the following Aadva Implant types can be selected according to their characteristics:

Standard (cylindrical) Implants are recommended for most treatment needs. They are recommended predominantly in harder bone qualities as their shape works less compressive than Tapered Implants. Shape and adjusted drill sequence lead to excellent primary stability and moderate insertion torques.

Tapered Implants are recommended in case of softer bone as due to the pronounced conical shape they provide a stronger compressive effect and thus guarantee a good primary stability, even in soft bone. They should not be used in very hard bone as in that case the pronounced compression effect might be unwanted and result in increased torque during insertion.

Short Implants are recommended in case of low bone height where augmentative procedures are not desired and reduced prosthetic load is foreseen.

Equipment: Use a surgical motor meeting the following specifications:

- Speed range: 25 to 1000 rpm
- Torque control of 10 Ncm to 50 Ncm at low speeds

Drill Sequence Standard Implant

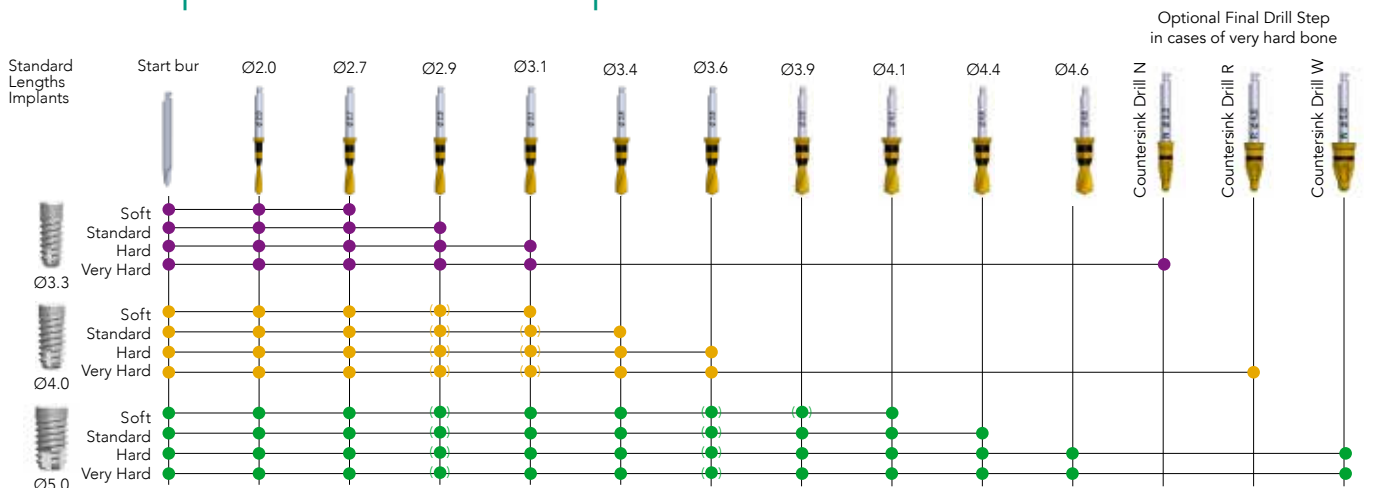


Figure 1: Drill sequence Standard Implant

Alternatively Countersink Drills can already be used after 2 mm Twist Drill. In that case take care that cortical area of drill hole shall not accidentally get widened by following drills touching hole margins!

Important Note: Countersink Drills can be used optionally with Drill Stoppers. In that case use 'Tapered Implant Drill Stoppers 12mm'; they will limit countersink drilling depth to average cortical bone thickness.

Legend: ● = mandatory use
 ● = optional use (depending on individual treatment preferences in respective bone quality)

Procedures for drilling into soft bone

- In case of soft bone, form a hole with a smaller diameter drill.

Procedures for drilling into hard bone

- In case of very hard bone, use the countersink after the final drill in order to release eventual tensions from the cortical bone.
- If the surgical motor stops at 50 Ncm while placing the implant, operate the motor in reverse to remove the implant and use one size larger twist drill to form the hole and place the implant again.

Procedures for drilling into very hard bone

- In case of very hard bone, use the drill tap after the countersink and before final placement of the implant.
- Additional use of bone taps is advised when the pronounced bone compression effect in very hard bone is not desired.

- ⚠ Continuing to place implants at a torque exceeding 50 Ncm may not only cause the implant driver to break, but may also cause the implant to become deformed, possibly impacting the fitting of the abutment. Furthermore, it significantly increases the risk of bone tissue damage with negative impact on osseointegration.

Drill Sequence Tapered Implant

Table 1. Drilling sequence GC Aadva Tapered Implant – Narrow (Ø3.3)

	Tapered Narrow (Ø3.3)					
Soft bone	Start	Twist Ø2.0 to implant length	TP drill to implant length	Countersink (optional)	Implant insertion	
Standard bone	Start	Twist Ø2.0 to implant length	TP drill to implant length	Countersink	Implant insertion	
Hard bone	Start	Twist Ø2.0 to implant length	TP drill to implant length	Countersink	Tap (recommended with L10-14)	Implant insertion

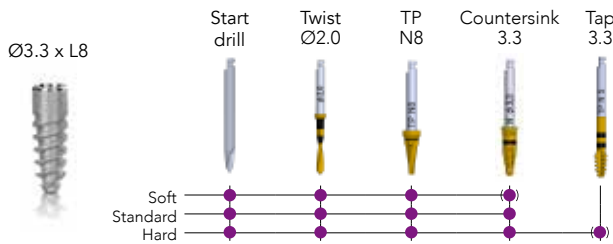


Figure 2: Narrow Tapered 8 mm Implant drilling protocol

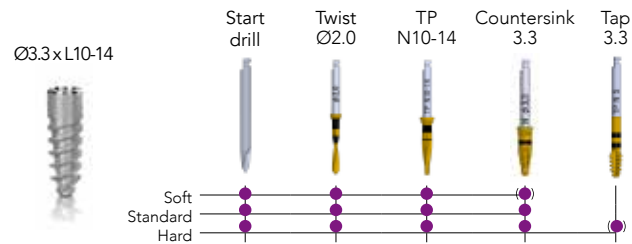


Figure 3: Narrow Tapered 10-14 mm Implant drilling protocol

Table 2. Drilling sequence GC Aadva Tapered Implant – Regular (Ø4.0)

	Tapered Regular (Ø4.0)						
Soft bone	Start	Twist Ø2.0 to implant length	TP drill to implant length	Countersink (optional)	Implant insertion		
Standard bone	Start	Twist Ø2.0 to implant length	Twist Ø2.7 to 2 mm less than implant length	TP drill to implant length	Countersink	Implant insertion	
Hard bone	Start	Twist Ø2.0 to implant length	Twist Ø2.7 to 2 mm less than implant length	TP drill to implant length	Countersink	Tap	Implant insertion

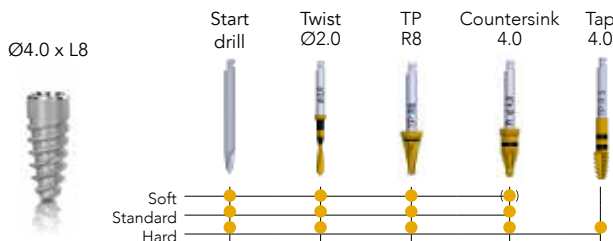


Figure 4: Regular Tapered 8 mm Implant drilling protocol

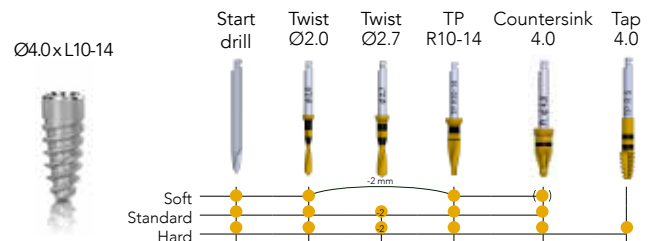


Figure 5: Regular Tapered 10-14 mm Implant drilling protocol

Table 3. Drilling sequence GC Aadva Tapered Implant – Wide (Ø5.0)

	Tapered Wide (Ø5.0)						
Soft bone	Start	Twist Ø2.0 to implant length	Twist Ø2.7 to implant length	TP drill to implant length	Countersink	Implant insertion	
Standard bone	Start	Twist Ø2.0 to implant length	Twist Ø2.7 to implant length	TP drill to implant length	Countersink	Tap (optional)	Implant insertion
Hard bone	Start	Twist Ø2.0 to implant length	Twist Ø2.7 to implant length	TP drill to implant length	Countersink	Tap	Implant insertion

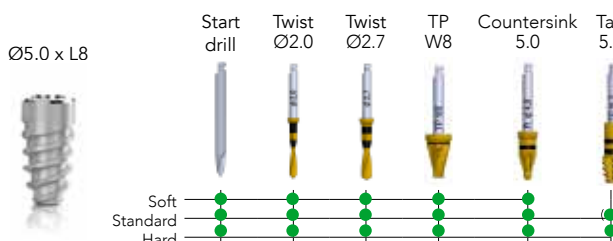


Figure 6: Wide Tapered 8 mm Implant drilling protocol

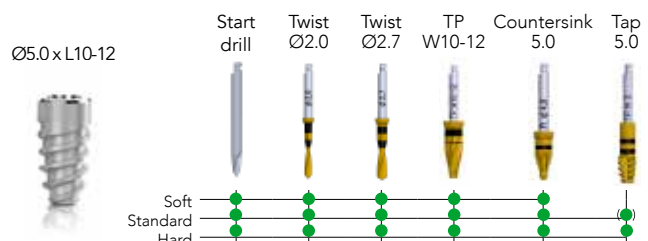


Figure 7: Wide Tapered 10-12 mm Implant drilling protocol

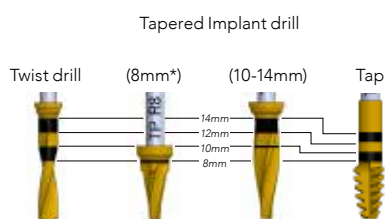
Drill Sequence Tapered Implant - extra information

Alternatively Countersink Drills can be used after 2 mm Twist Drill. In that case take care that the cortical area of the drill hole shall not accidentally get widened by following drills touching hole margins!

Important Note: Countersink Drills can be used optionally with Drill Stoppers. In that case use Tapered Implant Drill Stoppers 12 mm; they will limit countersink drilling depth to average cortical bone thickness.

***Warning:** When drilling to the depth of 10 mm and 12 mm, Tapered Implant Drills must always be used with Tapered Implant Drill Stoppers 10 mm or 12 mm. Use Tapered Implant Drills and stoppers between 500-700 rpm.

- In case of hard cortical bone structure, use Countersink Drills N, R or W, according to the implant diameter, as described above. However, if overall bone structure is very dense and hard, Tapered Implant in general is not recommended.
- ⚠ Continuing to place implants at a torque exceeding 50 Ncm may not only cause the implant driver to break, but may also cause the implant to become deformed, possibly impacting the fitting of the abutment. Furthermore, it significantly increases the risk of bone tissue damage with negative impact on osseointegration.
- ⚠ GC Aadva Tapered Implants are indicated for use in standard and soft bone. If used in the hard bone, the protocol should be modified to decrease stress and strain to the recipient bed and not exceed the 50 Ncm threshold. The use of bone taps is advised in hard bone. The Tapered line is not indicated for use in regions exhibiting very hard bone.
- ⚠ Additional caution should be taken regarding the laser marking on the TP 10-14 drills - the first marking corresponds with the 10 mm implant length, whereas in other drills the first marking denotes the 8 mm implant length.



Drill Sequence Short Implant

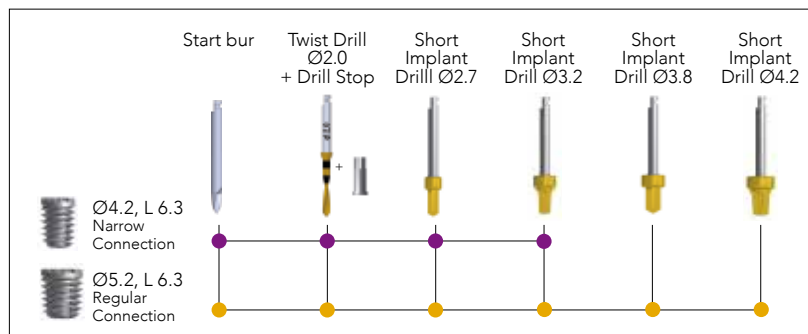


Figure 8 : Drill Sequence Short Implant

- ⚠ When planning the prosthetic restoration and loading the implant, always take into consideration that a short implant cannot, even if perfectly osseointegrated, withstand the same forces as longer implants. Avoid overloading a short implant by inappropriate superconstruction. Ensure lateral support for restorations on short implants at all times. Never use with terminal single crown in the arch. Always follow the current state of science and clinical treatment guidelines as well as the recent recommendations of the respective Implantological Professional Societies.
- ⚠ In cases of very pronounced cortical bone compartment, the standard protocol may cause swiveling and difficult insertion of GC Aadvä Short Implants. This can be avoided by adding a drilling end-step to each protocol in which a respective twist drill is inserted to an approximate depth of 3 mm, often corresponding to the cortical compartment size. For the Ø4.2 mm Aadvä Short Implant the end-step is with a Ø3.6 mm twist drill, submerged for approx. 3 mm to facilitate initial insertion of the implant. For the Ø5.2 mm Aadvä Short Implant the end step is with a Ø4.6 mm twist drill, submerged for approx. 3 mm (see table). The polished part of the implant (0.5 mm) is indicated for supracrestal positioning.

Dedicated Drill Sequence Short Implant for very pronounced Cortical Bone Compartment

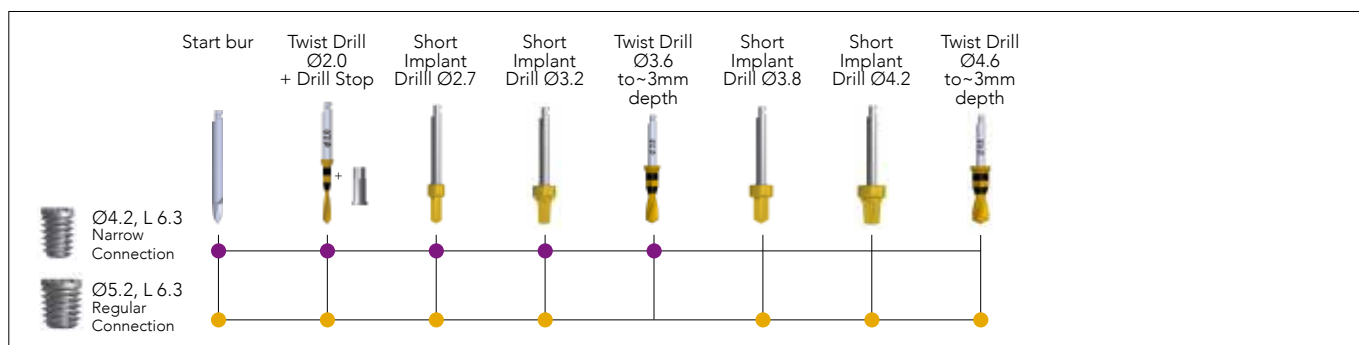


Figure 9 : Dedicated Drill Sequence Short Implant for very pronounced Cortical Bone Compartment

Tap for Standard and Tapered Implant – Line Up

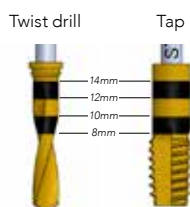
Standard						Tapered					
Narrow		Regular		Wide		Narrow		Regular		Wide	
Short 810372	Long 810373	Short 810374	Long 810375	Short 810376	Long 810380	Short 810381	Long 810382	Short 810383	Long 810384	Short 810385	Long 810386

Advice for use of Drill Taps

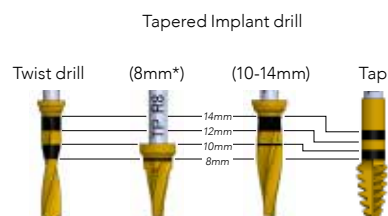
- Use with sufficient cooling by saline during tapping and at speeds of 25 rpm or less.
- Use at the end in a drill sequence.
- Use with attention to tilt.
- Increase handpiece setting torque gradually (MAX: 50 Ncm)
- If Tap has not reached the desired depth with 50 Ncm repeat forward/reverse tapping.
- After desired depth is reached, tap is removed by reverse rotation under saline irrigation. Tap retrieval should be done in a straight line to prevent damage to bone screw channels.

Tap for Standard and Tapered Implant - Position of laser marking

- For Standard Implant



- For Tapered Implant



* Except for 8 mm line, position of laser marking of Tapered Implant Tap is different from Twist Drill and Tapered Implant Drill in order to enable the appropriate insertion torque of implant. Therefore, except for 8 mm, the tapping depth is shallower than the implant length.

Notes

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