

ANGLEBASE® ANGLED
SCREW CHANNEL SOLUTION



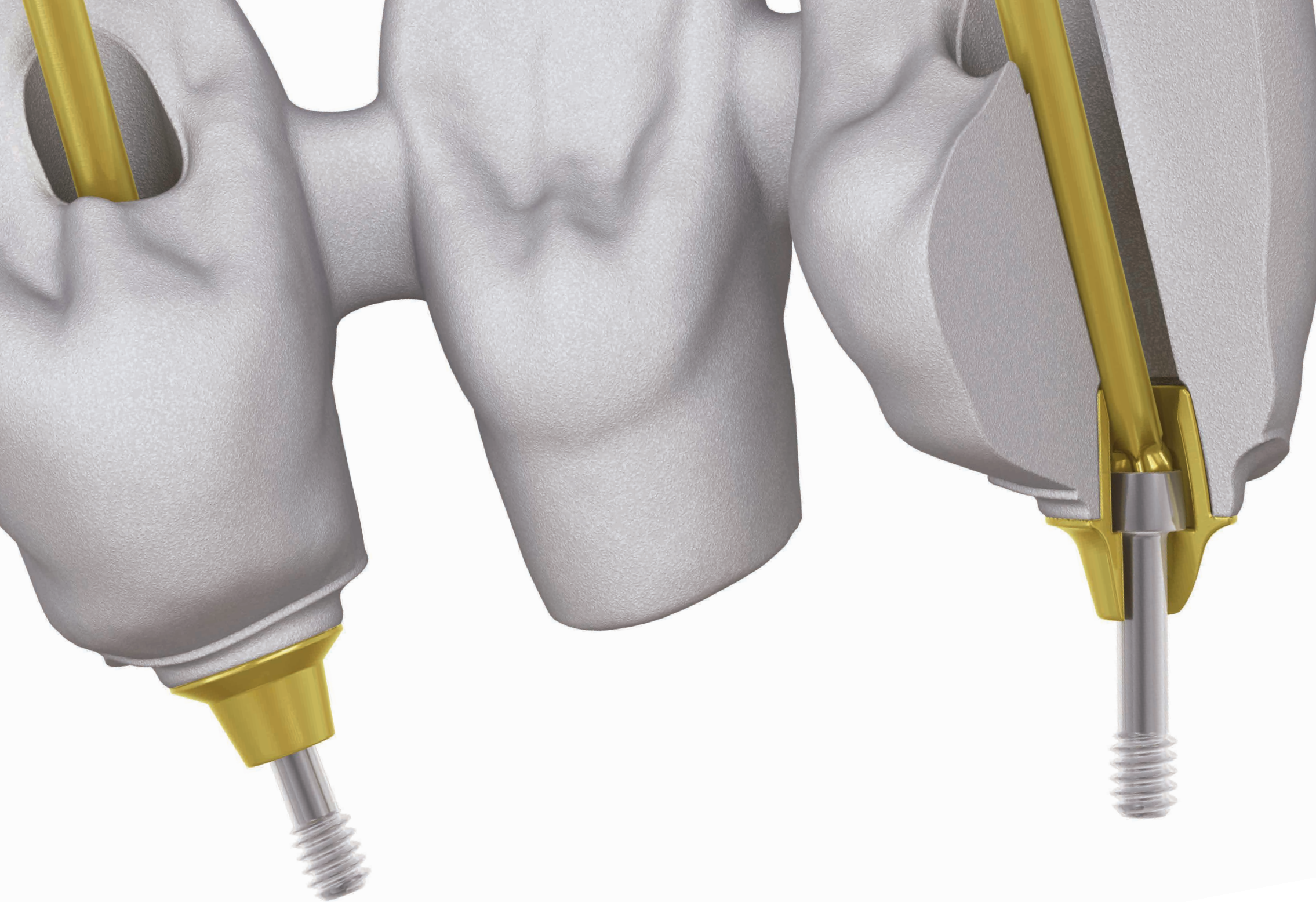


DESS ANGLEBASE® SOLUTION

FOR ANGULATED SCREW
CHANNEL ACCESS

MADE IN TITANIUM GRADE V ELI
WITH AN ANODIZED GOLD
HUE SURFACE

AVAILABLE FOR MOST PLATFORMS
WITH ENGAGING AND NON-ENGAGING
VERSIONS



There are numerous clinical situations where the long-axis of the implant results in an unfavorable location of the prosthetic screw access hole. One solution might be to sacrifice the retrievability and cement over the access hole or compromise the esthetic results.

Now DESS introduce the ANGLEBase® system that will allow for an angular adjustment of up to 25°. The specially designed Torx®-based screw and driver concept will retain the ability to use full recommended torque even at full angulation.

The ANGLEBase® is made of titanium grade V ELI and has a gold-anodized surface finishing that will further optimize the appearance especially in the esthetic zone. The shaft surface also features the patented and well proven SelectGrip® for optimal cement retention.

To facilitate prosthetic work using traditional casting procedures ANGLEBase® pre-formed castable caps can be used. They are delivered in multi-packs of 5 pieces, in a straight version as well as pre-angled with 10° and 20°. They are designed to optimize the placement and tightening of the ANGLEBase® screw with the special driver.

To optimize the possible angulation of the access hole the shaft of the ANGLEBase® has been reduced to only 3mm, but with a bonding area of more than 33mm², bigger than other higher but sliced solutions.

During the development we conducted both de-bonding and static Fatigue tests comparing the results not only to the standard DESS TI-Base but also to competitors' components. A dynamic fatigue test was also conducted and passed the required 5 million load cycles.

Clinical Challenge

CASE 1



Implant placed in 24 position with a buccal angulation. The long axis of the implant is clearly visible with impression coping in place creating an aesthetic problem

CASE 2



Implants in 14 and 12 position for a four-unit bridge with free-hanging 11. The long axis of implant in 12 extends to the approximal space between 12 and 11, thus weakening the critical framework strength.

Solution

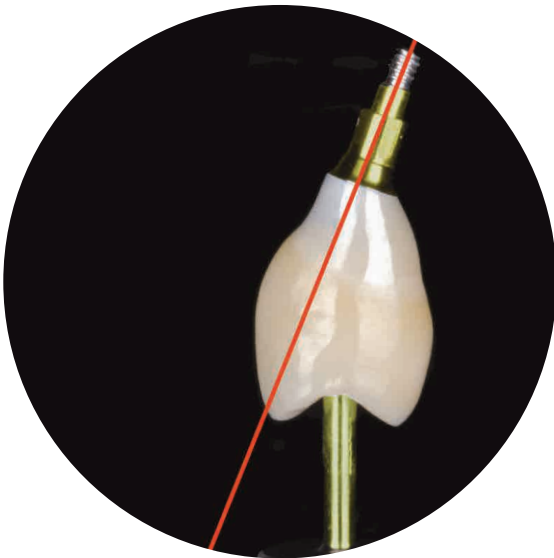
DESS
ANGLEBASE®



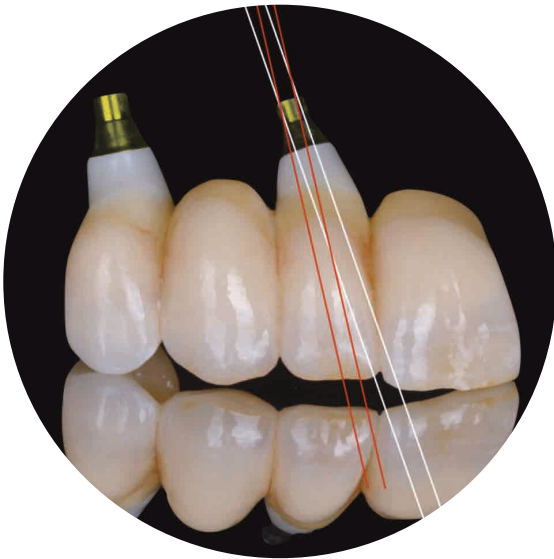
DESS
ANGLEBASE®

Clinical cases courtesy of Dr. Robert Oretti, Newbury, UK

Result



DESS ANGLEBase® allows for an angular correction of the screw canal. It now exits nicely in the central occlusal surface.



Using the DESS ANGLEBase® allows for a 360° freedom of arranging the canal exit. In this case the CAD designer moved the exit both distally and lingually giving more material and strength to the framework.



ANGLEBase®

Features & benefits

Emergence hole design is reduced in the CAD libraries with up to 30% to further improve the flexibility and esthetic outcome.

ANGLEBase® is integrated in the official DESS CAD libraries for Exocad®, 3Shape® and DentalWings®

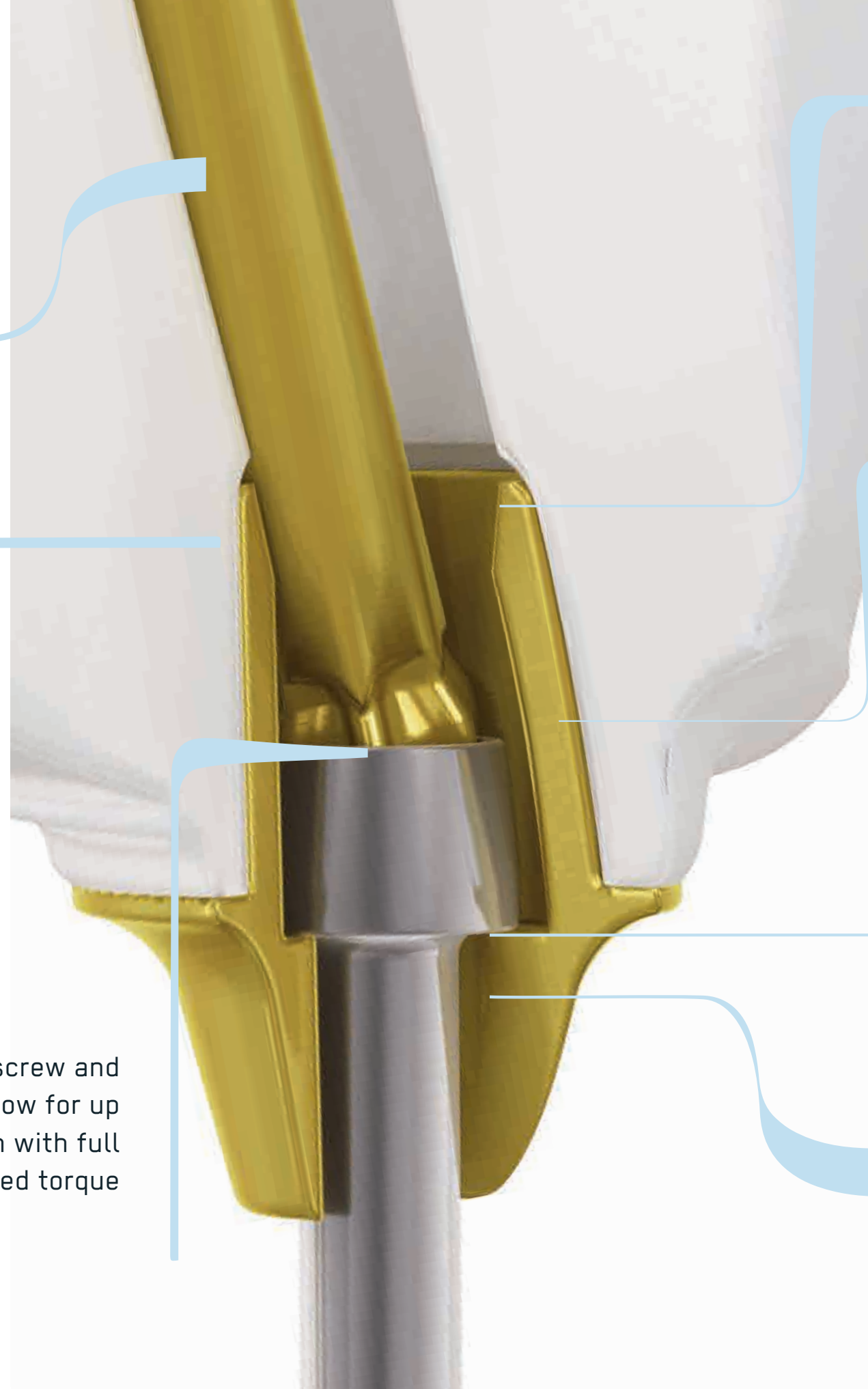
Torx® based screw and driver concept allow for up to 25° angulation with full recommended torque

Interior of cylinder is bevelled at an angle to optimize the driver angulation and allow for a 360° freedom in positioning of the screw canal

Cement shaft with patented SelectGrip® surface for optimal crown retention

Made of Titanium Grade V ELI with a gold anodize surface finish.

Both engaging, non-engaging, and on top of multiunit versions available



ANGLEBase[®]

Castables

Delivered in multi-packs of 5 pieces.

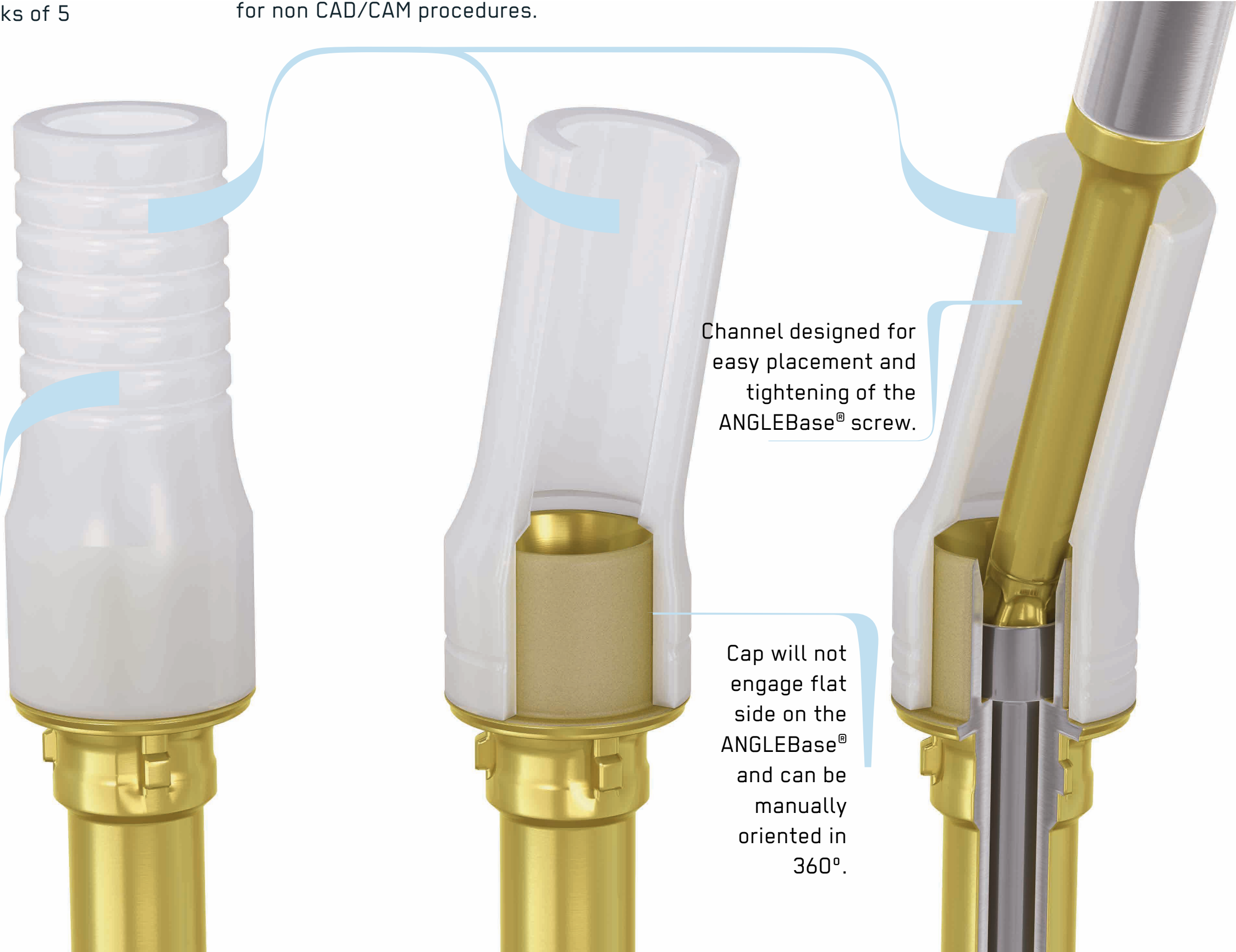
Unique, pre-formed castable caps in Straight, 10° and 20° angles for non CAD/CAM procedures.

Recommend cement using 3M relyx, Ivoclar Multilink or GC LinkAce.

Made of POM that burn out during the casting process.

Channel designed for easy placement and tightening of the ANGLEBase[®] screw.

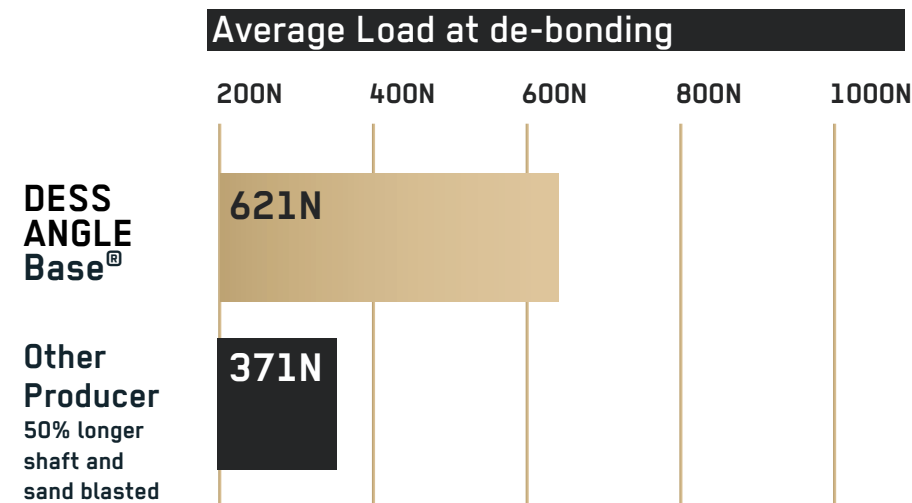
Cap will not engage flat side on the ANGLEBase[®] and can be manually oriented in 360°.



Technical Solutions

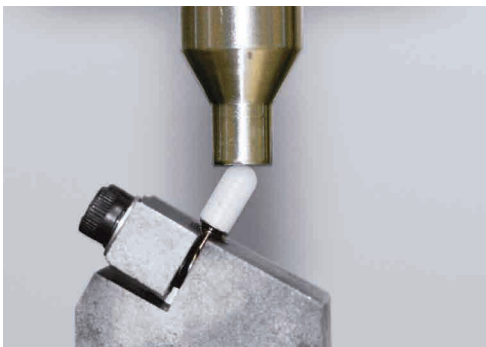
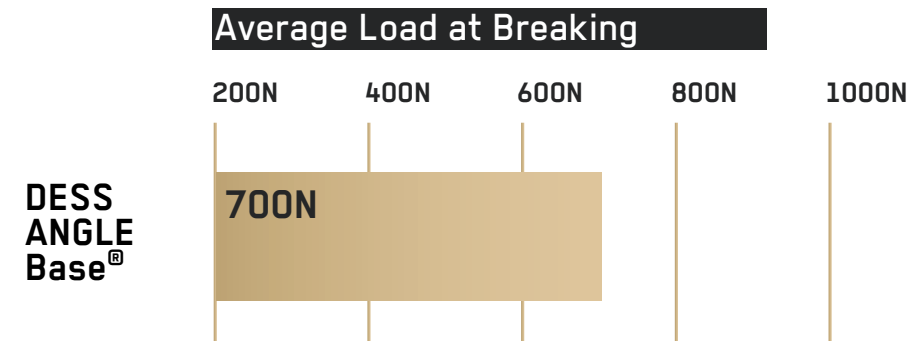
Bond and Fatigue strenght

Bonding retention



DESS ANGLEBase® has comparable bonding retention to DESS Ti-Base and clearly superior to a competitor brand with a 50% longer cement shaft once sandblasted.

Static Fatigue Test



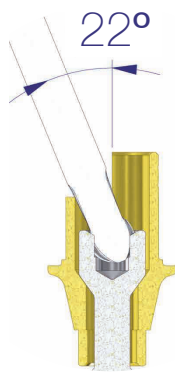
No significant difference in static fatigue strength between DESS ANGLEBase® and DESS Ti Base in standard ISO 13485 test using Zirconia caps despite ANGLEBase® having a 33% shorter shaft.

Technical Solutions

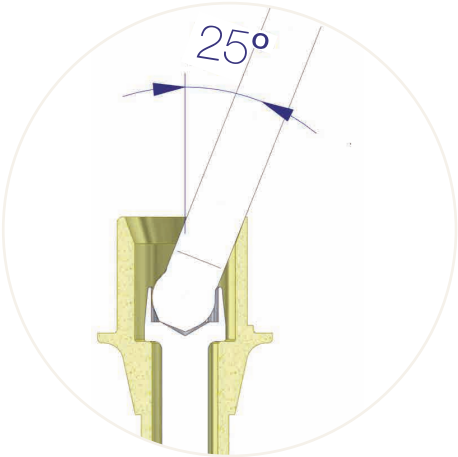
Angular freedom

The inner surface is bevelled in phased in order to optimize the angulation without using a cut opening in the cylinder. This results in several clinical benefits;

1. 360° freedom in placing the canal
2. Higher fatigue strength in the component
3. Maximize the cement retention area that together with the patented SelectGrip® surface will give optimal bonding strength.



Competitors' design

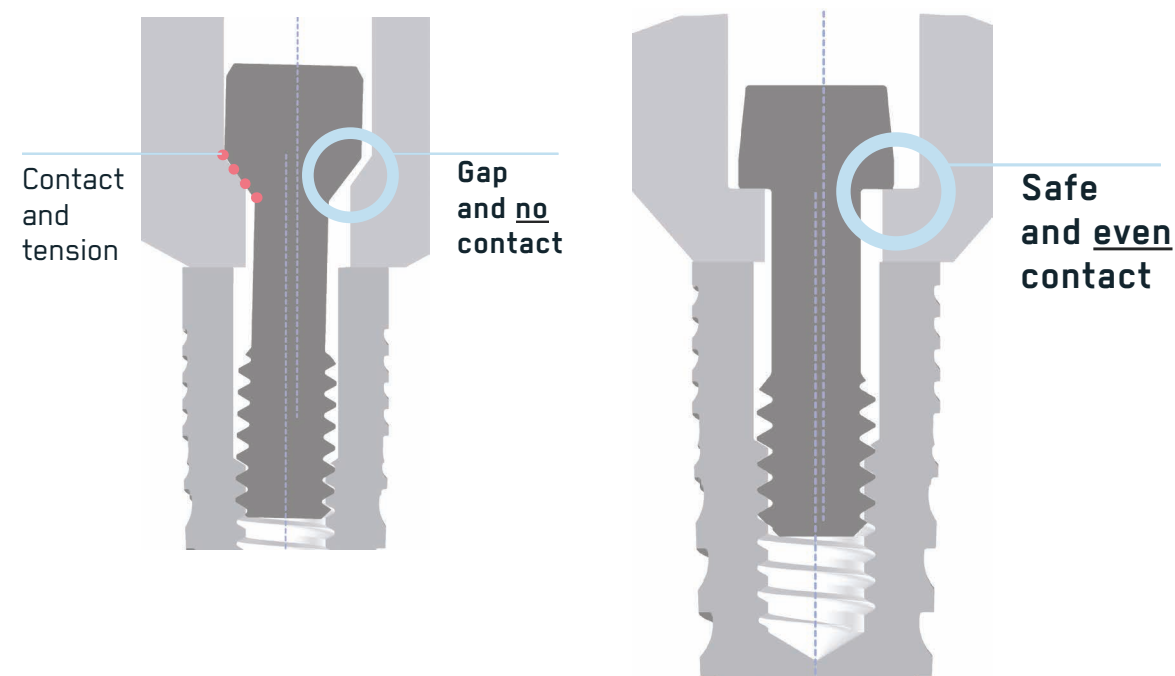


ANGLEBase®

Graphic illustration comparing DESS ANGLEBase® solution and the common design of competitors' where part of the cylinder is cut open to allow the angulation of the screwdriver. This design does not increase the possible tilt while it introduces other possible mechanical disadvantages.

Technical Solutions **Torx®**

ANGLEBase® Screw system



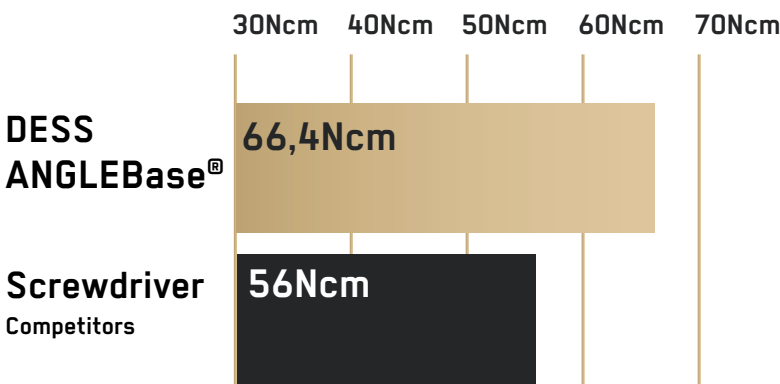
All ANGLEBase® screws have a flat seat to minimize tension when there is a slight misalignment between screw retained structures and implants. A flat design is more forgiving and transfers the torque to an optimal preload of the screw. A conical screw requires a perfect alignment and centering between the screw and seat.

Technical Solutions

Torx® ball ANGLEBase® Driver and screw system



Average Breaking Torque for Drivers



All ANGLEBase® screws feature the standard ISO 10.664 Torx®06 screw head and can be used in straight operations with any standard Torx®06 driver. The ANGLEBase® TBO6 drivers follow strictly the Torx® ball system design parameters. Torx® has set the global standard in reliability. This will assure optimal fastening torque even at maximum angle of the driver.

All ANGLEBase® screw and screwdrivers are compatible with other systems on the market accomplishing ISO 10.664.





External Hex USA

3I® OSSEOTITE®

	platform	NP/3,4	RP/4,1	WP/5,0
non-engaging	reference	36.011	36.012	36.013
engaging	reference	37.011	37.012	37.013
screw	reference	19.402	19.402	19.402



Active Hex

NOBEL ACTIVE™ &
NOBEL REPLACE® CC

	platform	NP/3,5	RP/4,3-5,0	
non-engaging	reference	36.041	36.042	
engaging	reference	37.041	37.042	
screw	reference	19.441	19.442	



Internal Hex USA

ZIMMER
SCREW-
VENT®

	platform	NP/3,5	RP/4,5	WP/5,7
non-engaging	reference	36.017	36.018	36.019
engaging	reference	37.017	37.018	37.019
screw	reference	19.417	19.417	19.417



Octagon

STRAUMANN®
SOFT TISSUE
LEVEL SYNOCTA®

	platform		RN/4,8	WN/6,5
non-engaging	reference		36.046	36.047
engaging	reference		37.009	37.045
screw	reference		19.446	19.446



Conical BL

STRAUMANN®
BONE LEVEL®

	platform	NC	RC	
non-engaging	reference	36.043	36.044	
engaging	reference	37.043	37.044	
screw	reference	19.443	19.443	



Trilobe

NOBEL REPLACE®
SELECT™

	platform	NP/3,5	RP/4,3	WP/5,0
non-engaging	reference	36.004	36.005	36.006
engaging	reference	37.004	37.005	37.006
screw	reference	19.404	19.405	19.405



Conic EVO

DENTSPLY
ASTRA EV®

	platform	3,6	4,2	4,8
non-engaging	reference	36.059	36.060	36.061
engaging	reference	37.059	37.060	37.061
screw	reference	19.441	19.460	19.461



Internal Hex Conic

ASTRA TECH™
OSSEOSPEED™
AQUA & LILAC

	platform	RP/3,5-4,0 Aqua	WP/4,5-5,0 Lilac
non-engaging	reference	36.024	36.025
engaging	reference	37.024	37.025
screw	reference	19.441	19.425



External Hex Universal

NOBEL
BRANEMARK®

	platform	NP/3,5	RP/4,1	
non-engaging	reference	36.001	36.002	
engaging	reference	37.001	37.002	
screw	reference	19.401	19.402	



Internal Hex
“Click”

3I® CERTAIN®

	platform	NP/3,45	RP/4,1	WP/5,0
non-engaging	reference	36.014	36.015	36.016
engaging	reference	37.014	37.015	37.016
screw	reference	19.438	19.438	19.438



Internal Hex FD

DENTSPLY
FRIADENT® XIVE®

	platform	NP/3,4	RP/3,8	WP/4,5
non-engaging	reference	36.038	36.039	36.040
engaging	reference	37.038	37.039	37.040
screw	reference	19.438	19.438	19.438

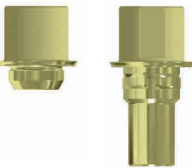


Conic OSS

OSSTEM®

	platform	Mini	Standar
non-engaging	reference	36.072	36.073
engaging	reference	37.072	37.073
screw	reference	19.444	19.461

ANGLEBase®



Internal Cam

CAMLOG®

	platform	3.8	4.3
non-engaging	reference	36.065	36.066
engaging	reference	37.065	37.066
screw	reference	19.444	19.444



Conic Anyr

MEGAGEN ANYRIDGE®

	platform		
non-engaging	reference	36.057	
engaging	reference	37.057	
screw	reference	19.460	



Internal Hex MI

MIS® SEVEN

	platform	NP/3,4	RP/4,1	WP/5,0
non-engaging	reference	36.011	36.012	36.013
engaging	reference	37.011	37.012	37.013
screw	reference	19.402	19.402	19.402



Conic IC

MEDENTIS ICX®

	platform	
non-engaging	reference	36.080
engaging	reference	37.080
screw	reference	19.444



Multiunit

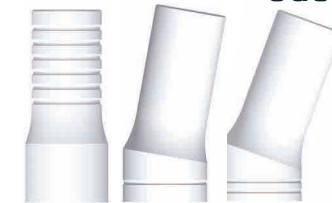
MULTI-UNIT®

	platform	RP/4,8	WP/6,5
non-engaging	reference	36.007	36.054
screw	reference	19.306	19.331

Screwdriver TORX® BALL 06



platform	35mm	24mm	20mm
reference	DT35TB06	DT24TB06	DT20TB06



Castable

castable 0°	reference	33.100
castable 10°	reference	33.101
castable 20°	reference	33.102

Castables are not compatible with multi-unit or octagon connections

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