



The zero-waste implant

Why?

Packaging waste has a very deep impact on the environment, and the amount of waste generated by industries cannot be ignored. On that front, we felt it was our responsibility to take a stand and show that things can be done differently.

DESS has always been committed to environmental sustainability, which is why we have created:

The 1st zero-waste implant on the market.

How?

We recycle and re-use 100% of its packaging.

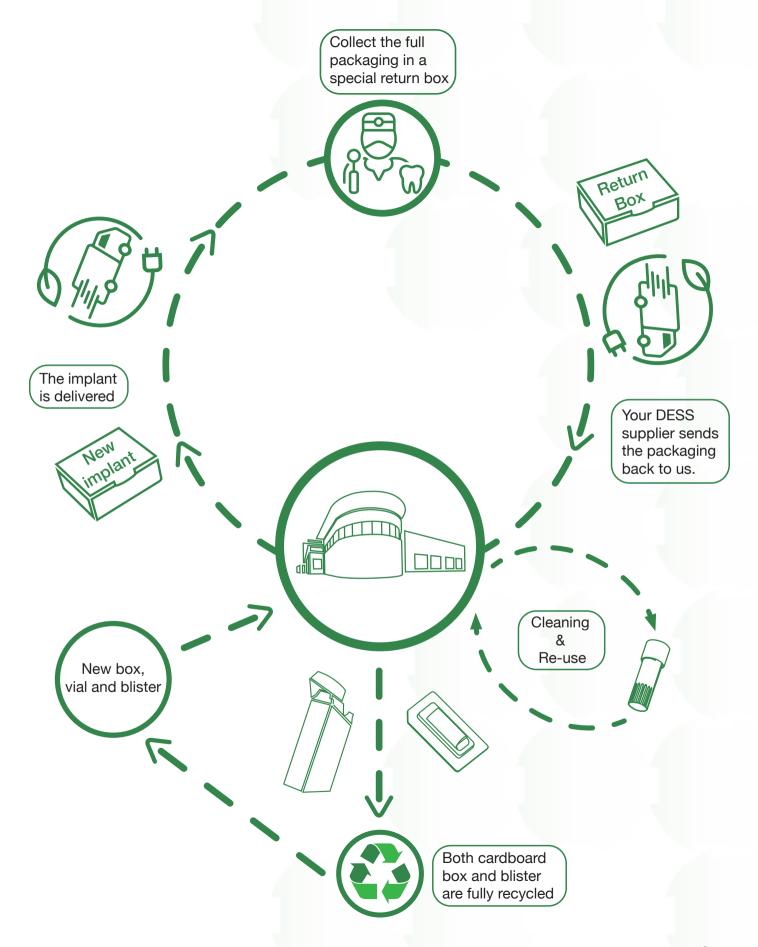
- 100% recycled cardboard box
- Widely recyclable PET blister
- · Reusable/recyclable titanium vial



We have come full circle:

creating a process that ensures full sustainability of the product's life cycle.

We assume the integral collection of the packaging, making sure no waste is generated.



What?

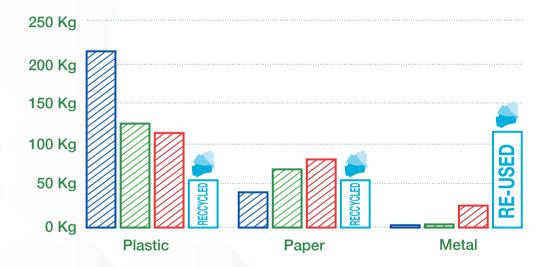
Comparing our packaging with that of the top implant brands, DESS has a much lighter consumption of paper and plastic.

We have reduced the use of paper and plastic in our packaging to the minimum. Instead, we have introduced our ground-breaking **titanium vial**. Why? Because a titanium vial can be sterilised and re-used, creating absolutely ZERO waste.

Moreover, we are the only ones with a waste collection process that assures full recycling, guaranteeing no waste is generated from our packaging.

Material used in packaging:

DESS vs. Implant leading brands x 10.000 implants



Packaging waste:

DESS vs. Implant leading brands x 10.000 implants

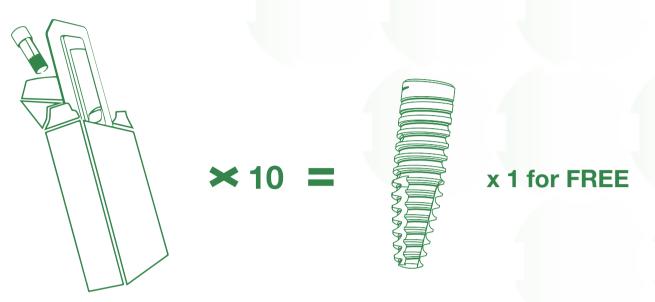


*DESS generates Zero Waste from its packaging.

Our gift to you

As a show of gratitude for helping us create the first sustainable implant on the market:

For every 10 packs you return - you get 1 FREE IMPLANT



With your commitment we have achieved the first eco-friendly implant on the market.

Help us recycle/reutilise the packaging and prevent it from damaging our planet.

How to proceed

Really simple! You can contribute to a greener future in just 3 steps! Each time you use a DESS Implant:

- 1. Repack the empty vial inside the blister.
- 2. Place them both inside the empty implant carboard box.
- 3. Gather as many units as you can and send them back to your supplier. Our distributor will provide you with a return box that fits 20/40 packs.

Our carriers have different CO_2 emissions neutralization initiatives, but in order to minimise transportation impact, please, don't send half-empty boxes!



CONICAL BLT

- Introduction	7
- CONICAL BLT in detail	8
- The Science Behind it: OST	10
- Fatigue Testing	12
- Clean Report & Certifications	13
- The Connection	14
- Product Overview	15
- Surgical Kit	16
- Implants & Tools	18
- Drilling Protocols	20
- Implant Driver	22
- Packaging	24
- Warranty	25
- Digital Workflow	26
- Prosthetics	28
- Recommendations	36

Since the first root-form dental implant was fitted back in 1965, we've seen a great evolution in the sector. External or internal connections, cylindrical or tapered shapes, sub or supra crestal applications, different surface treatments, etc.

Over the years, companies have found a formula to differentiate and create value around their system; this differentiation has been backed by their corresponding research studies. Thousands of studies about the different shapes, connections and surface treatments have been published, thus helping the industry reach new heights of dental care.

Here at DESS®, we started our journey with a different approach. We became experts in connections and created value around the prosthesis with our own solutions. AURUMBase® our angulated screw channel solution at 25° with 360° rotation and a short chimney (which produces the best aesthetic results) or the ELLIPTIBase® (great for narrow interdental spaces) are some of the finest examples of our approach.

Since our inception, we've always seen the implant as an anchor that is required to attach the prosthetic teeth to the jaw. Without down-playing the key role of the implant, we have focused on the part of the process we believed had more value and presented more challenges. Now, more than 40 years after Professor P-I Dr. P Brånemark introduced the first two-stage threaded titanium root-form implant, the industry is focusing on the prosthesis and digitalisation, thus proving the validity of our approach.

The PureSwitch concept upon which all our products are conceived is based on a seamless transition without compromise, and a great example of the intrinsic philosophy we apply in the development of all our products.

I proudly introduce the DESS® Implant range.



CONICAL BLT



Cross Connection engages the prosthetic component for easy alignment.

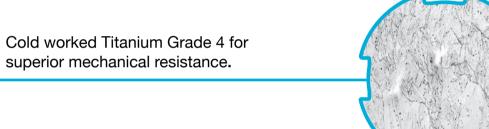




sseointegration Surface Technology

Double treatment (acid etch & sandblasting) assures optimal bone growth.

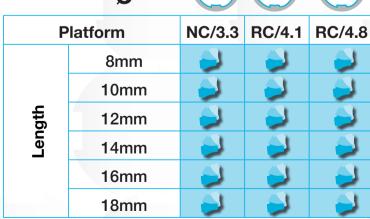
Complies with SLA standards.





Tapered apical and self-cutting design ideal for soft bone or very soft bone where primary stability is key.

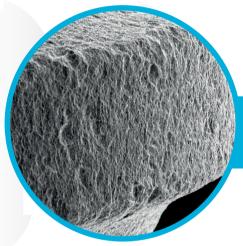




The Science behind: OST®

Our Osseointegration Surface Technology is achieved by using two different processes, which when combined present a double range roughness composed of large "holes" due to sandblasting and microroughness due to acid etching.

- Sandblasting by alumina particles.
- Double acid etching.

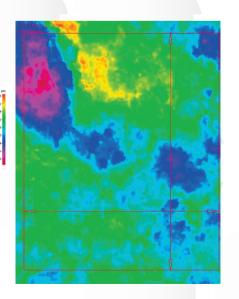


x 250

Homogeneous treatment w holes due to sandblasting.

Surface roughness by Stereo SEM:

The following parameters as defined by ISO25178 are calculated: Sa: average height of selected area; Sdr: developed interfacial area ratio; Sz: maximum height of the selected area. The following acceptance limits apply:

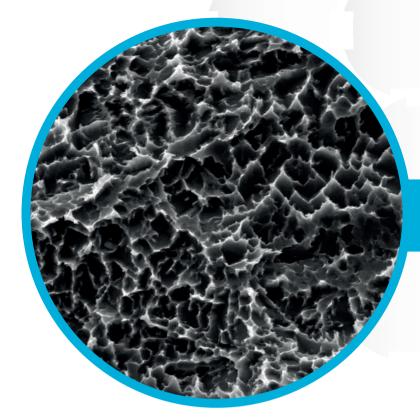


Sa	Sdr	Sz
≥ 1.10 µm	≥ 30%	> 8 µm

Results: the three-dimensional height image obtained by SEM analysis of treated DESS®. implants are shown below. The analysed 60 x 90 micrometres area is shown by the red rectangle.

Conclusion:

Quantitative evaluation of surface roughness by Stereo SEM shows that treated DESS implants comply with the defined values for SLA treatment.

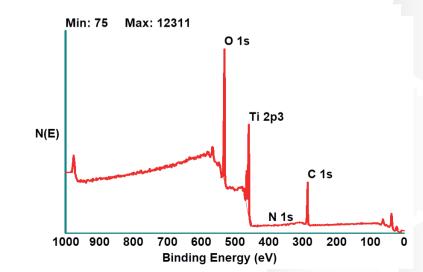


x 5000
Microroughness due to acid etching inside the holes.

Optimal surface topography for osseointegration.

Analysis of surface chemistry by XPS:

Manufactured in cold-worked titanium grade 4, the surface composition analysis shows the following results:



	CONICAL BLT DESS®	STANDARD*
0	46.4%	>40%
Ti	19.5%	>17%
N	0.4%	<3%
С	33.7%	<40%

* As defined by QP1_2018

Fatigue Testing:

Fatigue testing is performed by applying cyclic loading to a structure. The test is used to generate fatigue life and crack grow data, identifying critical locations or demonstrate the safety of the structure that may be susceptible to fatigue.

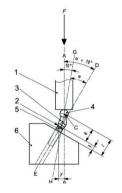
The objective of a fatigue test is to replicate the masticatory forces that occur during the act of chewing. DESS Implant Fatigue testing comprises two different tests, static and dynamic tests.



DESS Fatigue Testing Lab.

According to the ISO standard 14801, dynamic tests were carried out at different load values, starting with 50% of Fc (determined from the average of the values obtained in the static test). The applied load was gradually decreased, and the experiments were repeated until the minimum load does not fail at 5x10° cycles in 3 tests.

With more than 30 million cycles, the results obtained show the DESS CONICAL BLT implant is valid for the intended use as no samples failed at 200N or lowe loads.



DESS® Fatigue Testing Machine (Zoom)

Cleaning Report: TOC

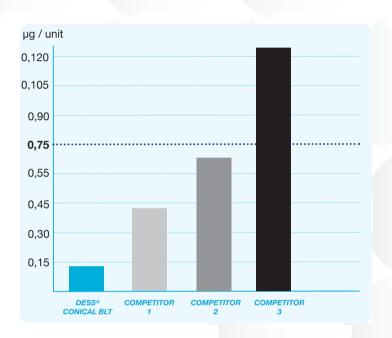
The Total Organic Carbon (TOC) is used to evaluate the cleanliness of medical devices. According to the method: QIMA-0160 with the Technique: Oxidability / Conductimetry. We conducted the test with 20 samples from each implant.

Acceptable value 0.75 µg / unit

Titanium Vial:

A titanium vial guarantees the purity of the materials, we avoid cross contamination generated by the plastic vial. This allow us to achieve an extremely low value on the Total Organic Carbon report.

The DESS manufacturing and cleaning process added to the titanim vial ensures an outstanding result way below the acceptance limits.



Certifications:

Our implants are manufactured under the rigorous processes outlined in the **ISO 13485:2016** for design, development and manufacturing of dental implants. Added to the standard quality management system established in the **ISO 9001:2015.**

All DESS products have the **CE** marking and the products have been certified under the **510(k) FDA Nr. K212538**

Our company quality management system complies with MDSAP requirements.





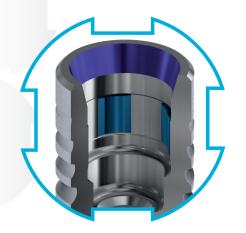




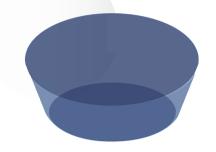


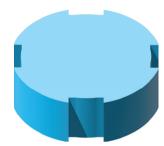
The Connection:

Dual Function, internal conical connection, at 15° with four internal grooves that improve stability, reducing the chances of screw loosening.









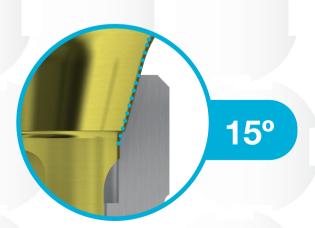
The Collar:

Through having a rough surface to the top of the implant and the micro-gap shifted inward, maximised crestal bone preservation is achieved.

Transmucosal or submucosal healing combined with the use of a healing abutment results in a less invasive and faster treatment, thus avoiding a secondary surgical intervention.

The conical connection seals the connection better against leakage when compared to flat connections.¹

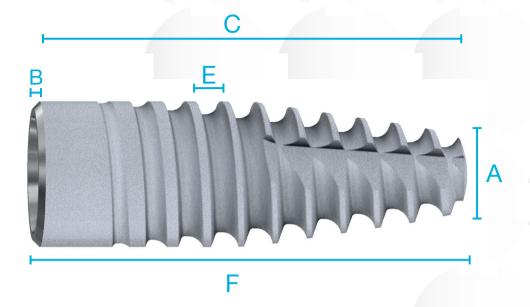






DESS implant and prosthetic set.

Product Overview



Implant Specifications

Platform		A Tip Diameter	B Collar Height	C Thread Height	E Thread Pitch	F Total Length
	3.3 x 8mm	2.05	0.15	7.7	0.8	8
	3.3 x 10mm	1.82	0.15	8.9	8.0	10
NC	3.3 x 12mm	1.82	0.15	11.6	8.0	12
3.3	3.3 x 14mm	1.92	0.15	13.1	0.8	14
	3.3 x 16mm	1.81	0.15	15.5	0.8	16
	3.3 x 18mm	1.82	0.15	17	8.0	18
	4.1 x 8mm	2.55	0.15	7.7	0.8	8
	4.1 x 10mm	3.00	0.15	8.9	0.8	10
RC	4.1 x 12mm	3.00	0.15	11.6	0.8	12
4.1	4.1 x 14mm	2.71	0.15	13.1	0.8	14
	4.1 x 16mm	2.71	0.15	15.5	0.8	16
	4.1 x 18mm	2.44	0.15	17	8.0	18
	4.8 x 8mm	3.76	0.15	7.85	0.8	8
	4.8 x 10mm	2.37	0.15	9.4	8.0	10
RC	4.8 x 12mm	2.89	0.15	11.6	0.8	12
4.8	4.8 x 14mm	3.25	0.15	13.4	8.0	14
	4.8 x 16mm	3.04	0.15	15.3	8.0	16
	4.8 x 18mm	2.86	0.15	17.3	8.0	18

CONICAL BLTSurgical Kit

The DESS® Conical BLT surgical kit is designed to be simple and easy to use. It can be customised to the different protocols arranging the drills as per the case needs. Drill bits are available in 4 different lengths: 25mm, 29mm, 33mm and 41mm.

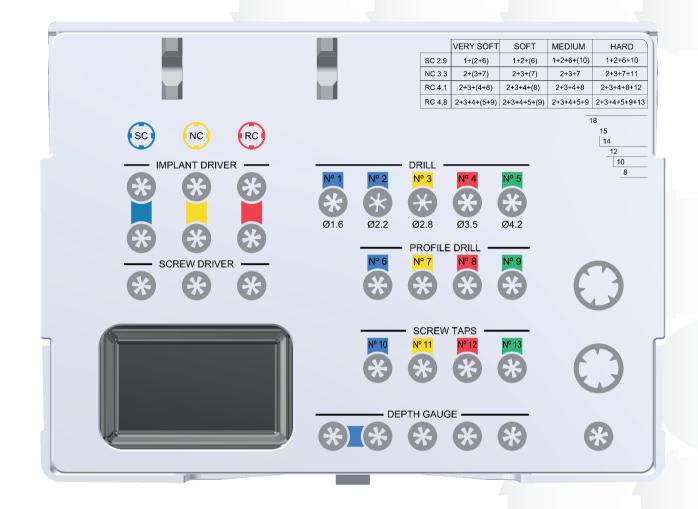
Choose from the different available drills and mount your customised kit.

If you already have a kit for this type of connection, there is no need to acquire the DESS surgical kit, our implants are 100% compatible with the kits of the brand of reference². It would only be necessary to buy the DESS implant drivers for each platform as they are not oncluded in the implant vial.

With flush silicone inserts that are easily wiped clean and manufactured in autoclavable material, the DESS surgical kit is easy to keep clean and sterilised.

²Please contact your supplier to find out more.







IMPLANTS & TOOLS



IMPLANTS		NC/3.3	RC/4.1	RC/4.8
	8mm	IBL0330080	IBL0410080	IBL0480080
	10mm	IBL0330100	IBL0410100	IBL0480100
	12mm	IBL0330120	IBL0410120	IBL0480120
	14mm	IBL0330140	IBL0410140	IBL0480140
	16mm	IBL0330160	IBL0410160	IBL0480160
	18mm	IBL0330180	IBL0410180	IBL0480180

NP

RP

RP

	DRILLS		25mm	29mm	33mm	41mm
3 3 3		ø 1.6mm			TDRBL11633	TDRBL11641
5 L41 .5 L33		ø 2.2mm		TDRBL22229	TDRBL22233	TDRBL22241
1880 SQ (ø 2.8mm		TDRBL32829	TDRBL32833	TDRBL32841
	PROFILE	ø 2.9mm	TDRBL42925*		TDRBL42933*	
	PROFILE	ø 3.3mm	TDRBL43325*		TDRBL43333*	
		ø 3.5mm		TDRBL33529	TDRBL33533	TDRBL33541
	PROFILE	ø 4.1mm	TDRBL44125*		TDRBL44133*	
V		ø 4.2mm		TDRBL34229	TDRBL34233	TDRBL34241
	PROFILE	ø 4.8mm	TDRBL44825*		TDRBL44833*	

*Profile Drills

SCREW TAPS



25mm

TTPBL53325 TTPBL54125 TTPBL54825



TORQUE WRENCH TOOL



DTSTTW

SPECIAL TOOLS



DTSTCA DTSTTR

SCREW DRIVERS





COVER SCREW

20.441/2 20.442/2 20.442/2

Drilling Protocols*

Drills are made of stainless steel with a diamond-like carbon coating (DLC). They are used with external irrigation and are available in three lengths:

- 25mm
- 29mm
- 33mm
- 41mm

Please check the Instructions for use when determining the drilling protocol, according to bone quality.

Use an in-and-out motion and drill the bone for 1-2 seconds.

Move the drill up without stopping the handpiece motor. This will allow the irrigation to flush away debris.

Proceed until the desired depth reference line is reached.

Screw taps are available for dense bone situations to avoid excessive torque during implant insertion.



Never exceed the insertion torque of 35 Ncm for implant placement.

Caution: The use of excessive torque may cause damage to the implant, fracture or necrosis in the bone bed.

*Contact your local supplier for more information.

Implant	Type of Bone	Drill Diameter			
Diameter		ø2.2	ø2.8	ø3.3 Profile	ø3.3 тар
	Very Hard Type I	0	0	0	0
	Hard Type II	0	0		
3.3	Soft Type III	0	0		-
	Very Soft Type IV	0		-	-
	RPM Max	800	600	300	15

0	Recommended steps for the surgical process
	For widening of cortex only, not drilling the full depth

Implant	Type of Bone		Drill Diameter			
Diameter		ø2.2	ø2.8	ø3.5	Ø4.1 Profile	ø4.1 тар
	Very Hard Type I	0	0	0	0	0
	Hard Type II	0	0	0	0	-
4.1	Soft Type III	0	0	0		-
	Very Soft Type IV	0	0			-
	RPM Max	800	600	500	300	15

Implant Type of Bone Drill Diameter							
Diameter		ø2.2	ø2.8	ø3.5	ø4.2	Ø4.8 Profile	ø4.8 тар
	Very Hard Type I	0	0	0	0	0	0
	Hard Type II	0	0	0	0	0	
4.8	Soft Type III	0	0	0	0		
	Very Soft Type IV	0	0	0			-
	RPM Max	800	600	500	400	300	15

IMPLANT DRIVER

The DESS CONICAL BLT transporter cam be used manually, with a torque wrench, or a contra angle.



DTSTTR

The Ø 7mm torque wrench adapter can be used to securely position the implant manually, then use the recommended torque to place the implant.

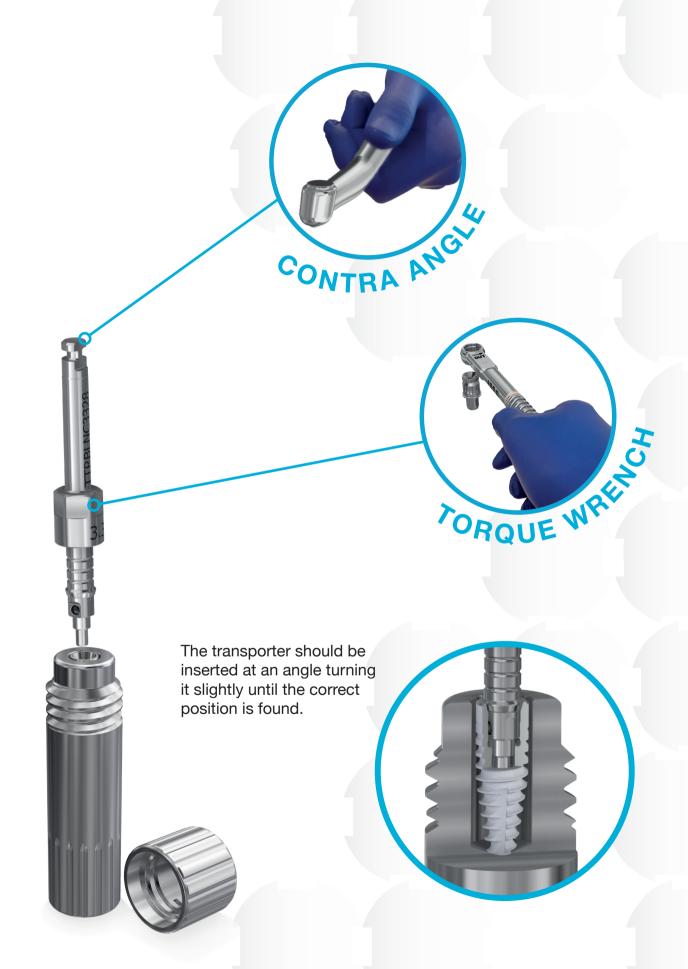




DTSTCA

The Ø 7mm torque wrench adapter can be used to securely position the implant manually, then use the recommended torque to place the implant.





Packaging:



See instructions for use



Do not reuse



Do not resterilize



MR conditional



Caution



Keep away from sunlight



UDI



Lot



Reference



Eco conscious:

No paper instructions, download Instructions for use by scanning the QR code in the box or from www.dessdental.com





Do not use if the container is damaged



Expiration date



Sterilised by irradiation



Single sterile barrier system with protective packaging outside



Manufacturer



MDD CE certification & notified body

Lifetime Warranty

DESS Dental provides patient safety and customer confidence

Lifetime warranty on all DESS implants.

Our Lifetime warranty also applies to all DESS components and 3rd party implants.

What is the DESS warranty?

- ·Lifetime replacement warranty for all our implants.
- •Lifetime replacement warranty for all components including the abutment screw manufactured.

What is the 3rd party implant warranty?

- •Guarantee DESS implant systems and third-party implants used in combination with our components excluding immediate restorations. In case of implant failure, we guarantee reimbursement of prosthetic components and the implant.
- •The third-party warranty will apply if the manufacturer of the implant used limits or refuses its guarantee on the implant because it was used in combination with a DESS abutment.

Important: We do not provide a third-party implant warranty when the warranty, period of the original implant has been exceeded.

To apply for the warranty, you have to comply with the recommendations and instructions of our product IFUs.



How do we ensure that our products are Lifetime?

•Rigorous quality controls under the most exhaustive certifications:









- •100% visual check of all our products.
- •Exhaustive fatigue testing.

If you want to know more about what is not covered by DESS® Lifetime Warranty and the claim procedure, please check our website:



Digital Workflow:

DESS digital integration offers CAD libraries for EXOCAD, 3Shape and Dental Wings including Exoplan and 3Shape implant studio.

Download the libraries for free at:





Desktop Scan abutment:

Developed with EXOCAD and made in TECAPEEK, the DESS Ball Desktop scan abutment was designed to achieve a precise image range of optical scanners.



Manufactured in Titanium Grade V ELI with a ZrN coating, DESS intraoral scan abutment allows for Rx control. The lack of a screw hole produces a better and more precise image.





Scan abutment on Ti-base:

Available free to download and 3D print or to purchase in packs of 5 the scan abutments on Ti-base offer great flexibility.

Digital Analogue:

Our digital analogue includes a Hex 1.27 screw to attach to the model. Different screws are available separately in packs of 5 (Unigrip®, Torx®, etc.)

Our digital analogues come in two different finishes:

- •Anodized, made of Titanium Grade V ELI and colour coded
- •Non-anodized, made of Stainless steel.

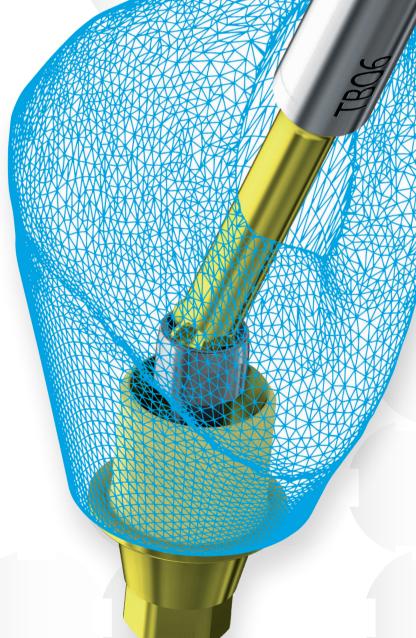


Premilled Blanks:

With a total millable length of 20mm and a gingival transition of only 0.3mm the DESS blanks offer a wide range of possibilities, allowing you to create the best custom abutments.

Available in Titanium 10mm and 14mm diameter and in Cobalt Chrome on 14mm diameter.





Prosthetics:





	NP	RP	NP/RP
HEALING ABUTMENT	NC/3.3	RC/4.1-4.8	NC/RC
GH 3,0mm	20.041/3	20.042/3	
GH 4,0mm	20.041/4	20.042/4	
GH 5,0mm	20.041/5	20.042/5	



SCAN ABUTMENTS

ADOTHIERTO				
		50.043	50.044	
On abutment SRA				50.098
1		52.043	52.044	
On abutment SRA				52.098
•	10 Packs.	53.100-P10	53.100-P10	
•	10 Packs. 🔘	53.200-P10	53.200-P10	
		52.xxx inc	cludes manual too	ol DTPEIPEEK.



TRANSFER

17.046 17.047

Transfers include two screws (for open and closed trays).



		NP	RP	NP/RP
	DIGITAL ANALOGUE	NC/3.3	RC/4.1-4.8	NC/RC
	Retention screw Hex 1,27 mm*	14.043/D	14.044/D	
	OF SRA			14.098/D
Platform Colour (Coded			

ANALOGUE

			14.043	14.044	
	10 Paci	s.	14.043-P10	14.044-P10	
	OF SRA				14.098
Platform Colour Cod	ed				





DESSLoc®

GH 1,0mm		88.042/1
GH 2,0mm	88.041/2	88.042/2
GH 3,0mm	88.041/3	88.042/3
GH 4,0mm	88.041/4	88.042/4

24.098 25.098





				NP	F	RP	NP/RP
MULTI-UNI ABUTMEN				NC/3.	.3 RC/4	.1-4.8	NC/RC
	GH 1,5mm	0°	0	40.043	/1 40.0)44/1	
	GH 2,5mm	0°	0	40.043	/2 40.0)44/2	
	GH 3,5mm	0°	0	40.043	/3 40.0	044/3	
	GH 4,5mm	0°	0		40.0)44/4	
	GH 2,5mm	17°	0	41.743	/2 41.7	744/2	
	GH 3,5mm	17°	0	41.743	/3 41.7	744/3	
	GH 2,5mm	30°	0	43.043	/3 43.0)44/3	
	GH 3,5mm	30°	0	43.043	/4 43.0)44/4	
				MULTI	4.8 -UNIT PLATF	ORM	



	GH 1,2mm	0	15.043	15.044	
	GH 2,0mm	0	15.043/2	15.044/2	
	GH 3,0mm	0	15.343	15.344	
	GH 1,2mm	0	16.043	16.044	
	GH 2,0mm	0	16.043/2	16.044/2	
	GH 3,0mm	0	16.343	16.344	
N SRA		0			15.098
		0			16.098



	II-BASE CASTABLES				
	5 Packs.	0	32.001-P5	32.001-P5	
	5 Packs.	0	33.001-P5	33.001-P5	
ON SRA	5 Packs.	0			32.098-P5
	5 Packs.	0			33.098-P5





0





ELLIPTIBase®

A corner	\(\)	56.043
B flat		57.043

59.043/3

59.044/3

Libraries available for EXOCAD & 3Shape.



Torx® Screw AURUMBase® & ELLIPTIBase®

GH 3,0mm

Includes screw, same as standard screw.

(replacement screw)	19.443	19.443	
Recommended torque	35 Ncm	35 Ncm	

	Torx® BALL SCREWDRIVER	20mm	24mm	30mm	35mm
TBO6	L=24	DT20TB06	DT24TB06	DT30TB06	DT35TB06





		NP	RP	NP/RP
ABUTMENTS		NC/3.3	RC/4.1-4.8	NC/RC
	0°	13.043	13.044	
	15°	22.043	22.044	



T
400

		NP	RP	NP/RP
CoCr BASE		NC/3.3	RC/4.1-4.8	NC/RC
	0	30.043	30.044	
	0	31.043	31.044	
On abutment SRA	0			30.098
				31 098



SCREW TORX®

	19.032	19.033	19.037
10 Packs.	19.032-P10	19.033-P10	19.037-P10
TIN	19.632	19.633	19.637
Recommended torque	35 Ncm	35 Ncm	35 Ncm
On abutment SRA			19.098
10 Packs.			19.098-P10
TIN			19.698
Recommended torque			15 Ncm





CASTABLE

	0	28.043 28.044
10 Packs.		11.043-P10 11.044-P10
	0	29.043 29.044
10 Packs.		12.043-P10 12.044-P10



PRE-MILLED BLANK

Ø 10mm	Ti	61.043	61.044
Ø 14mm	Ti	62.043	62.044
Ø 14mm	CoCr	71.043	71.044



Recommendations:

The following charts only contain recommendations. Clinical conditions and the assessment of the patient by the doctor should always be the main criteria for choosing the size of an implant.

Upper Right Quadrant	URQ	1	UR
Upper Right 3rd Molar	1	8	18
Upper Right 2nd Molar	2	7	17
Upper Right 1st Molar	3	6	16
Upper Right 2nd Pre-Molar	4	5	15
Upper Right 1st Pre-Molar	5	4	14
Upper Right Canine	6	3	13
Upper Right Lateral Incisor	7	2	12
Upper Right Central Incisor	8	1	11

Lower Right Quadrant	LRQ	4	LR
Lower Right Central Incisor	25	1	41
Lower Right Lateral Incisor	26	2	42
Lower Right Canine	27	3	43
Lower Right 1st Pre-Molar	28	4	44
Lower Right 2nd Pre-Molar	29	5	45
Lower Right 1st Molar	30	6	46
Lower Right 2nd Molar	31	7	47
Lower Right 3rd Molar	32	8	48





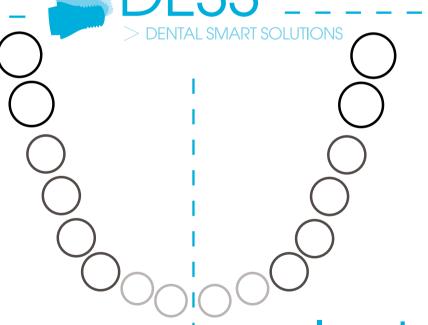


UNIVERSAL

PALMER

FDI

Upper Left Quadrant	ULQ	2	UL
Upper Left Central Incisor	9	1	21
Upper Left Lateral Incisor	10	2	22
Upper Left Canine	11	3	23
Upper Left 1st Pre-Molar	12	4	24
Upper Left 2nd Pre-Molar	13	5	25
Upper Left 1st Molar	14	6	26
Upper Left 2nd Molar	15	7	27
Upper Left 3rd Molar	16	8	28

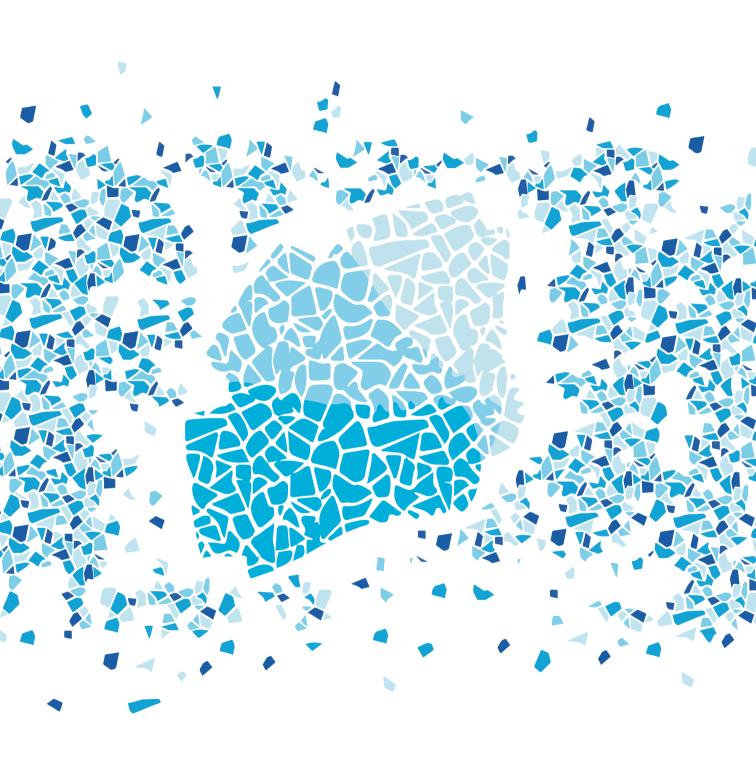


Lower Left Quadrant	LLQ	3	LL
Lower Left 3rd Molar	17	8	38
Lower Left 2nd Molar	18	7	37
Lower Left 1st Molar	19	6	36
Lower Left 2nd Pre-Molar	20	5	35
Lower Left 1st Pre-Molar	21	4	34
Lower Left Canine	22	3	33
Lower Left Lateral Incisor	23	2	32
Lower Left Central Incisor	24	1	31

Important:

Immediate loading is only recommended when adequate primary stability is achieved. 3.3 diameter implants are indicated for use in reduced interdental spaces, where there is insufficient alveolar bone for a larger diameter implant. The use of 3.3 diameter implants in posterior rehabilitation is not recommended. Larger diameter implants are indicated for both upper and lower jaw restorations for functional and aesthetic restorations in partially or fully edentulous patients.





www.dessdental.com