

 **infinitas**<sup>TM</sup>  
mini implant system

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**infinitas-***miniimplant.com*

# Why choose *Infinitas*?

*The simple yet comprehensive orthodontic mini implant system for an infinite number of anchorage applications.*

*Infinitas mini implant system from DB Orthodontics.*

DB Orthodontics' aim is to provide the Orthodontic profession with the most user friendly mini implant system.

We have strived for absolute perfection from the design stage to the manufacturing of the Infinitas mini implant system.

We are continually developing the system, working with leading Orthodontic experts to ensure that we meet the highest standards expected by today's Orthodontic profession.

In essence, the Infinitas mini implant system has been designed by an Orthodontist, for Orthodontists, so that precise, reliable bone anchorage can be achieved using as simple a clinical process as possible.

The Infinitas mini implant system has been designed with Dr Richard Cousley who is a Consultant Orthodontist working in the UK hospital service and private practice. He has published papers and lectured widely on the technical aspects of bone anchorage, and developed the Infinitas mini implant system to overcome some of the limitations of existing mini implants, especially in terms of their lack of insertion precision and overly complex inventories.

A combination of clinical and computerised trials have proven that the Infinitas mini implant system is reliable and provides comfort to both patient and clinician.

- **European patent number 07732310.3**
- **US patent pending**
- **FDA cleared for sale**
- **CE Marked**



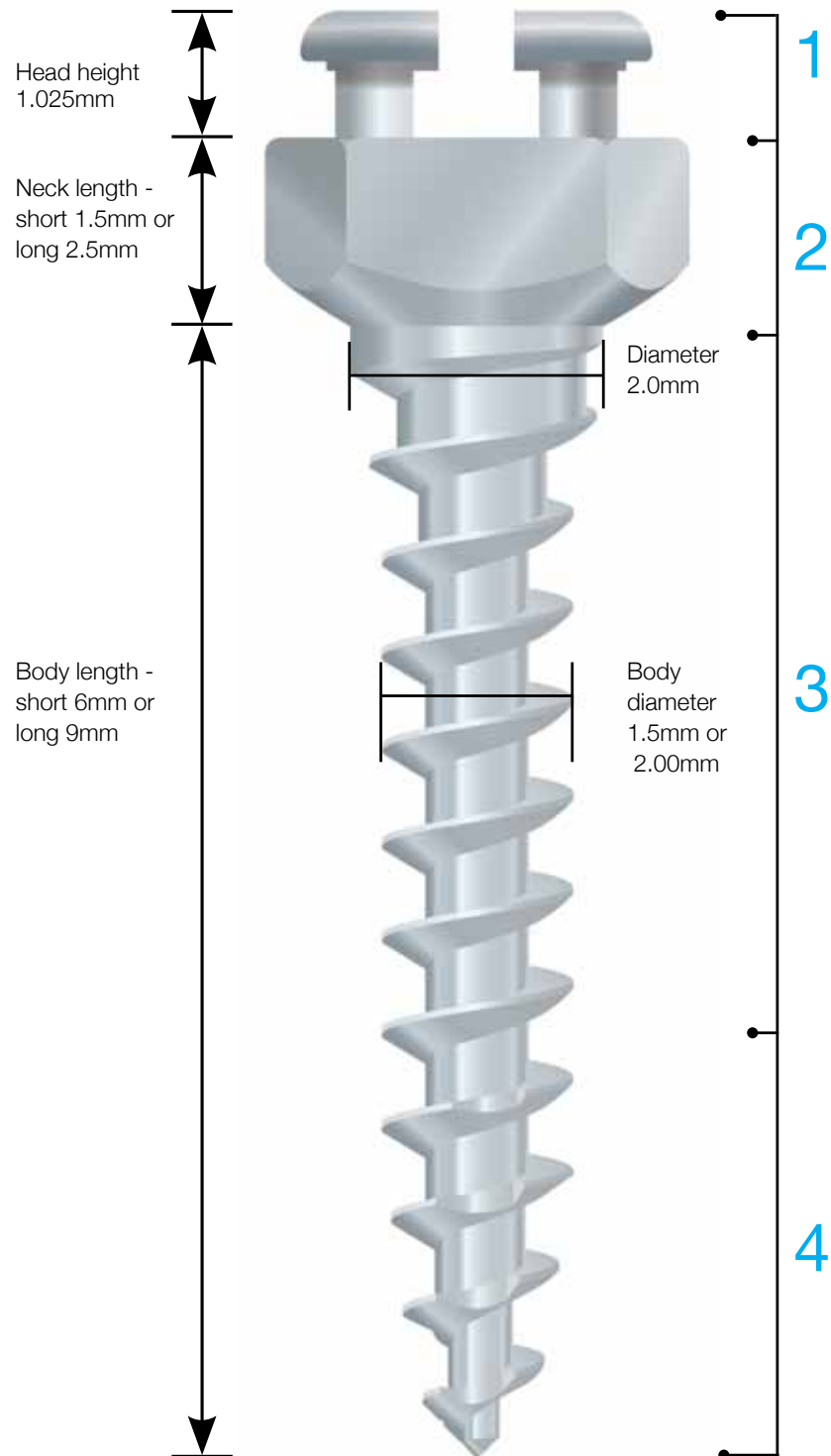
*Dr Richard Cousley*

# Features of the system

When deciding which mini implant system to purchase there are a number of considerations a clinician will take: How easily will auxiliaries such as closing coil springs or elastomeric chain attach to the head? How comfortable will it be for the patient? How easily will it integrate with my current treatment mechanics? Will I need to drill a pilot hole or will the mini implants self-drill?

With this in mind we have designed all components of the Infinitas mini implant system to meet all of the indications for use as we aim to exceed the expectations of the clinician.

The contents of this literature will explain all of the features of this sophisticated and intelligently designed system which have already made it the system of choice for many Orthodontists.



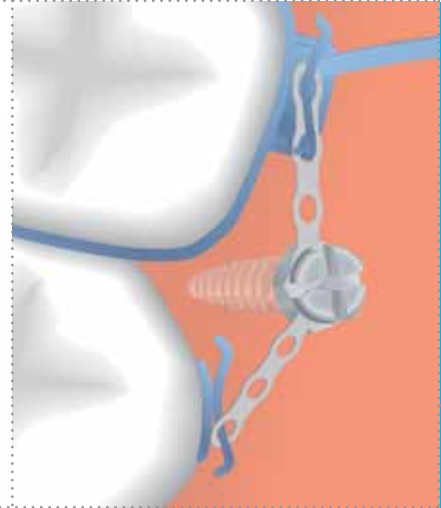
(Image shown 1.5mm ø 9mm shortneck Infinitas mini implant)

# 1 Unique head design for universal applications

(patent pending)

The head of the Infinitas mini implant is designed for easy and direct attachment of all forms of traction. Auxiliaries, such as closing coil springs and elastomeric chain and .021x.025 rectangular wire are held securely on one traction level, in the undercut of this sophisticated low profile head design.

In particular there is no need for custom made closing coil springs.

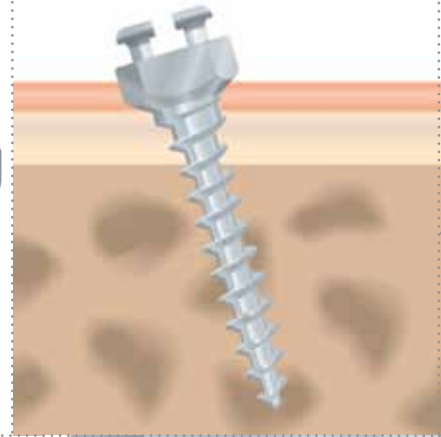
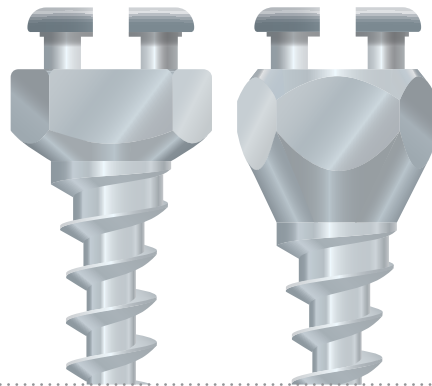


# 2 Transmucosal neck design

i) Angled transmucosal neck ensuring patient comfort when inserted at any insertion angle.

ii) Two neck heights:

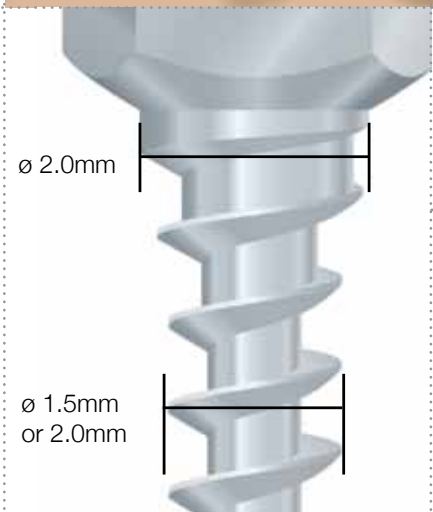
- Short neck for areas of thin mucosa.
- Long neck for areas of thick mucosa.



# 3 Unique body design

i) The unique Infinitas cutting thread continues to the transmucosal neck and therefore through the cortical bone maximising contact and increasing mini implant stability.

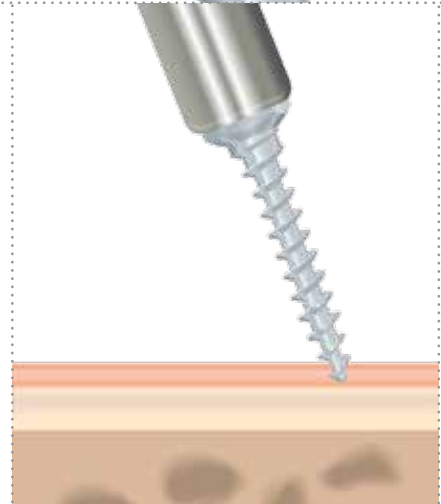
ii) The unique tapered design of the 1.5mm diameter mini implant ensures that the coronal end of the body has a diameter of 2mm for optimum engagement of the cortical bone, whilst still permitting easy interproximal placement.



# 4 Self drilling insertion technique

All Infinitas mini implants are self drilling, assuring easy insertion and maximum stability. Their self drilling thread avoids the need to pre-drill a full pilot hole.

During placement in dense cortical bone excessive torque is avoided with the use of the unique Infinitas bone punch. Details on page 5.



# A simple approach

The introduction of bone anchorage to Orthodontics has provided the clinician with an increasing number of innovative treatment possibilities.

It is our belief that such innovations should make orthodontic daily practice easier and in order to do this should integrate with minimal effort into both the practice and treatment; Infinitas has been designed to do just this.

Having only one multi-purpose head design simplifies the choice for the clinician and allows you to keep a low inventory. The use of the ergonomically designed standard handle, which houses the Screwdriver, Mucotome and Cortical bone punch inserts, makes the system cost effective for re-equipping and more comfortable for the clinician. The Guidance system, a simple lab technique explained overleaf, gives confidence for difficult access insertions or inexperienced clinicians as the 4mm insertion cylinder guides each of the inserts securely.

## Standard Handle

### DB10-0020

The ergonomic design of the standard handle allows greater stability when placing Infinitas mini implants. The handle is used to hold each standard insert using a simple latch grip method.



Each standard insert fits into the standard handle



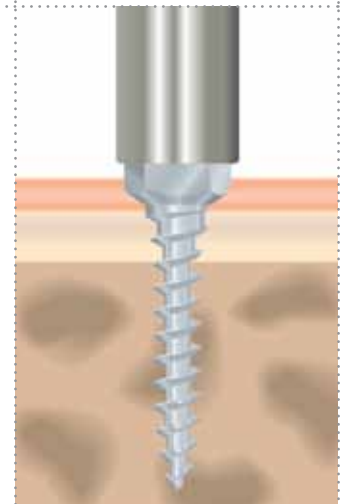
## Screwdriver Insert

Infinitas mini implants are self drilling and in many clinical situations can be placed directly through the mucosa using the Infinitas screwdriver. The pentagonal fit of the screwdriver securely holds the head of the mini implant during insertion.

Available as standard size to fit into the standard handle or mini insert for use in a contra-angle speed reducing handpiece.

Standard **DB10-0021**

Mini **DB10-0026**



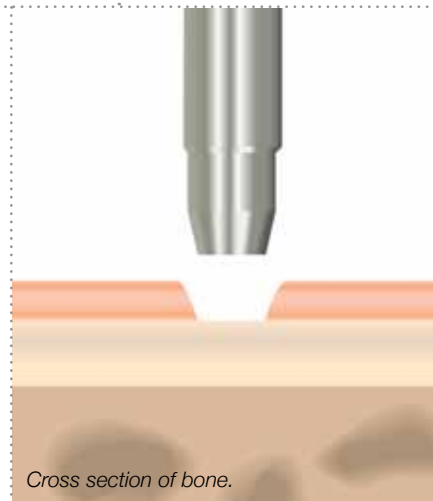
## Mucotome

The mucotome tissue punch is only required when the Infinitas mini implant will penetrate thick or mobile mucosa. By rotating the punch against the tissue a circle will cleanly be removed.

Available as standard size to fit into the standard handle or mini insert for use in a contra-angle speed reducing handpiece

Standard **DB10-0022**

Mini **DB10-0027**



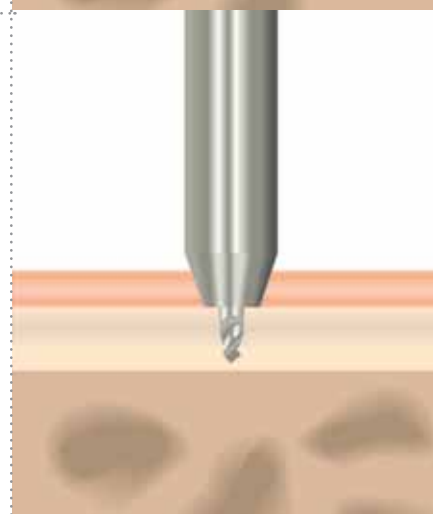
## Cortical Bone Punch

It is beneficial to use the cortical bone punch but especially in areas of dense cortical bone e.g. the posterior mandible, the mid-palate, and the palatal alveolus. Perforation of the cortical bone using the 2mm long diamond hard tip reduces insertion torque and prevents slipping of the mini implant tip when being placed at an oblique angle.

Available as standard size to fit into the standard handle or mini insert for use in a contra-angle speed reducing handpiece

Standard **DB10-0023**

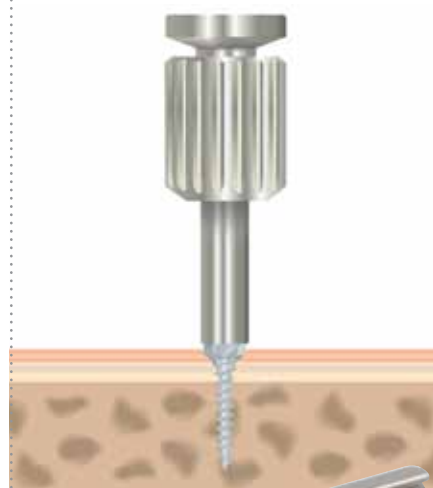
Mini **DB10-0028**



## Mini Screwdriver

**DB10-0025**

The mini manual screwdriver allows the clinician to make minor adjustments to mini implants whilst in full control of the insertion torque.



## Sterilisation Tray

**DB10-0029**

The aluminium sterilisation tray is fully autoclavable and has been designed to securely house each of the inserts to ensure they will not be damaged in transit.

The tray also has an area for non sterile implants to be placed to avoid damage to the thread during sterilisation.





# clinical kits

## Introductory Kits

Contents:



DB10-0020	Infinitas standard handle (each)	
DB10-0021	Infinitas screwdriver standard insert (each)	
DB10-0022	Infinitas mucotome standard insert (each)	
DB10-0023	Infinitas cortical punch standard insert (each)	
DB10-0029	Infinitas surgical aluminium tray (each)	
DB10-0001 - DB10-0008	<b>Included in Non Sterile Kit</b> Infinitas mini implants. Non Sterile (x5)	
DB10-0009 - DB10-0016	<b>Included in Sterile Kit</b> Infinitas mini implants. Sterile (x5)	

### DB10-0063





**STERILE** contains 5 sterile implants

### DB10-0064

**NON STERILE** contains 5 non sterile implants

## Complete Kits

Contents as Introductory Kit plus the following:

DB10-0025	Infinitas mini screwdriver (manual)	
DB10-0026	Infinitas screwdriver mini insert	
DB10-0027	Infinitas mucotome mini insert	
DB10-0028	Infinitas cortical punch mini insert	

### DB10-0060

**STERILE** contains 5 sterile implants






### DB10-0065

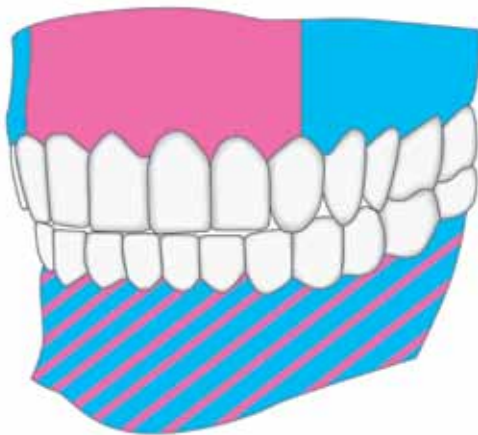
**NON STERILE** contains 5 non sterile implants



# mini implant selection

The Infinitas System can be used to provide bone anchorage in virtually any maxillary/mandibular interproximal site and in the hard palate, although the most frequently utilised insertion site is buccal and mesial to the maxillary first molar. The insertion site is determined by individual anchorage demands and anatomical factors (e.g. bone quantity, root and sinus positions). The exact insertion site is selected by studying each patient's dental model and radiographs (OPT and/or periapical views) together. General guidelines for usage are:

Colour Coded	Diam.	Body Length	Neck Length	Non-Sterile Code	Sterile Code	Typical Insertion Sites
	1.5	6	Short	DB10-0001	DB10-0009	Anterior maxilla - perpendicular insertions Mandible - perpendicular insertions
	1.5	9	Short	DB10-0002	DB10-0010	Anterior maxilla - oblique insertions Posterior maxilla buccal alveolus Mandible - oblique insertions
	1.5	9	Long	DB10-0004	DB10-0012	Maxilla - palatal alveolus
	2.0	6	Long	DB10-0007	DB10-0015	Mid-palate
	2.0	9	Long	DB10-0008	DB10-0016	Edentulous areas Temporary restorative abutment



DB10-0001/9 and DB10-0002/10 may be used in this area



Not shown in diagram as used in Edentulous areas

# Infinitas guidance kit



**Infinitas is the only truly complete system** featuring mini implants combined with highly specialised instruments and a unique 3D guidance system. The stent contains a guide cylinder which accurately guides all instrumentation to the prescribed position. Patented stent components, available in the Infinitas Guidance Kit, simplify the production of a 3D stent and ensure effortless and accurate mini implant insertion in any location.

(Image above shows Infinitas Guidance Kit DB10-0049S)

## The infinitas Stent Guidance System:

- >>Provides a reproducible 3D insertion.
- >>Provides stable insertion point (no slippage of implant tip on bone) during oblique insertion and especially helpful in difficult to access sites e.g. palate.
- >>Reduces perforation risks.
- >>Inspires confidence in implant novices and difficult access insertions.
- >>Prescribes insertion details for other clinicians.
- >>Reduces surgery time & stress!

## Infinitas Guidance Kit










**DB10-0049R** (Round Baseplates)

**DB10-0049S** (Square Baseplates)



## Guidance Kit Contains:

(Product description and order information for individual components.)

DB10-0030	Infinitas stent analogue (packet of 5)	
DB10-0031	Infinitas stent abutment (packet of 5)	
DB10-0032	Infinitas stent guide cylinder (packet of 5)	
DB10-0035	Analogue C/A drill for plaster model (1 each)	
DB10-0036	Analogue S/T drill for plaster model (1 each)	
DB10-0037	Analogue lab drill for plaster model (1 each)	
DB10-0038	Analogue screwdriver (1 each)	
DB10-0040R or DB10-0040S	Infinitas baseplate 1.5mm - Round (packet of 5) Infinitas baseplate 1.5mm - Square (packet of 5)	
DB10-0045	Infinitas plastic guidance kit box	

# step-by step

## Key Components



### Analogue

A metal alloy duplicate of the Infinitas mini implant.



### Abutment

A precision fit soft metal alloy extension of the analogue head.



### Guidance Cylinder

A poly carbonate tube with an internal diameter of 4mm, providing a precision fit for all Infinitas clinical instruments (standard and mini).



Use patient X-rays to determine site and angle of insertion.



Use patient model to mark insertion site.



Drill pilot hole for analogue at pre-planned angle.



Place the Infinitas analogue screw in the patient model using analogue screwdriver.



Position abutment onto analogue.



Place guide cylinder over abutment.



Model placed in pressure/vacuum forming machine with guide cylinder in vertical position.



Formed thermoforming baseplate over the model and assembled guidance components.



Remove baseplate from the model. (NB. Cold cure acrylic can be used to reduce flexing of the guidance cylinder to the Infinitas baseplate if required.)

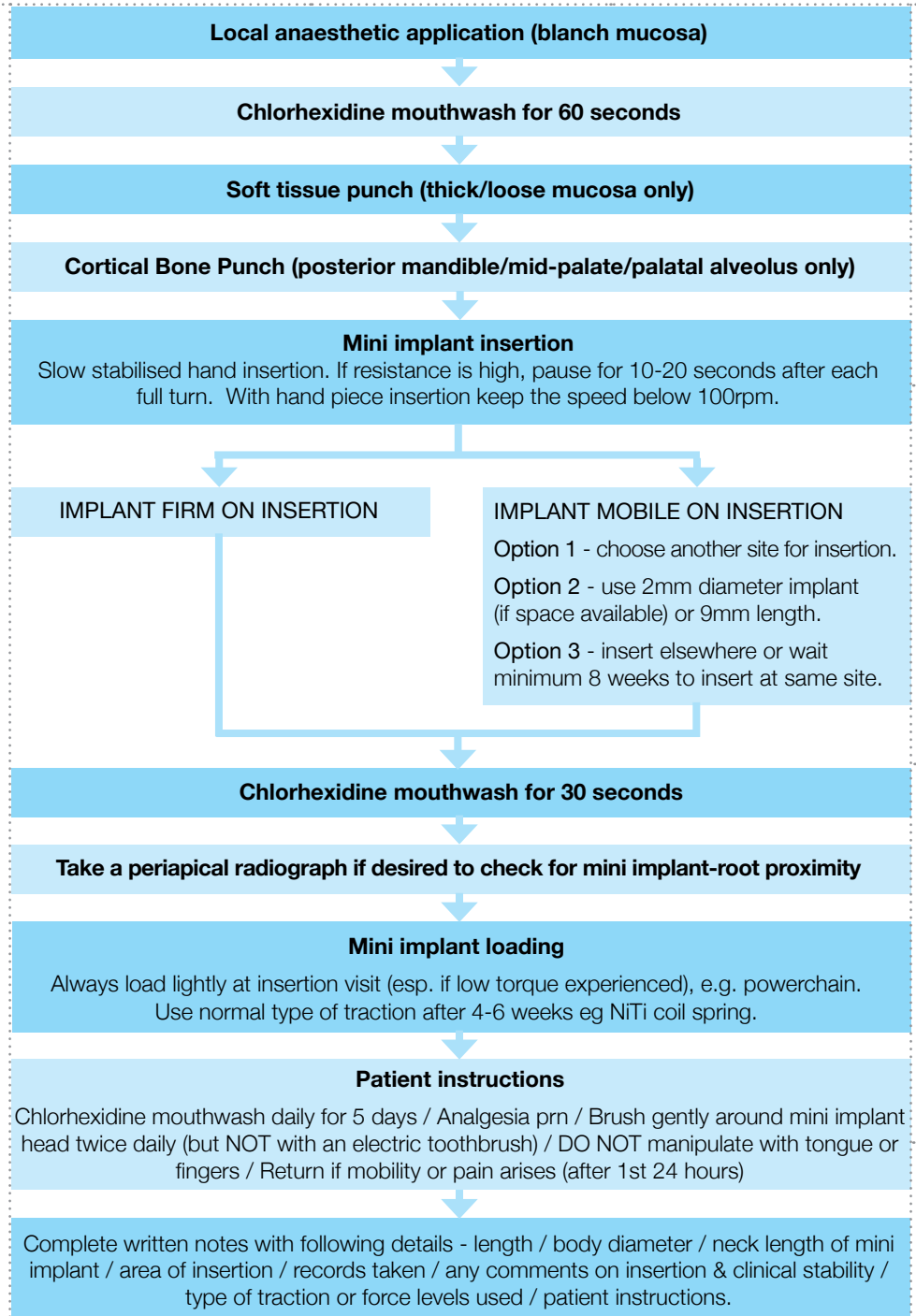


Trimmed baseplate to form stent with both superficial end and fitting surface of guide cylinder relieved.



The guidance system enables you to fabricate wire attachments in advance of the clinical stage.

# Placement protocol



# Accessories



## Mini implant Educational Model

Clear soft model demonstrating incisor retraction with the use of mini implants, NiTi spring and split hook, model also includes stent.

**DB10-0071**



## Crimpable Split Hooks

These split hooks and stops allow for easy and precise placement without having to remove the archwire Crimp tubes create strong, non-sliding lock with the archwire and remain firmly in place during treatment. Sold in packs of 10.

Left - **DB22-0480**

Right - **DB22-0481**



## Infinitas Spiral Hooks

Excellent for use with Infinitas mini implants. Can attach auxiliary attachments at 3 different levels. Fits archwires up to .022" x .028"

Sold in packs of 10.

Left - **DB22-0487**

Right - **DB22-0488**



## Clear Chain

High elasticity and excellent rebound medical grade polyurethane. Sold on 15ft reel.

Closed	DB03-0011
Open	DB03-0013
Open long	DB03-0015



## NiTi Preformed Springs

Nickel Titanium Preformed Springs close or open spaces at a level which is unapproachable with stainless steel springs. Sold in packs of 10.

Force	9mm	12mm
Light	DB41-0150	DB41-0151
Medium	DB41-0200	DB41-0201



## Clear E-Link Modules

Excellent for traction (space closure / intrusion). Provide continuous gentle forces. Sold in packages of 100 modules.

Assorted	DB03-0031
4.3mm	DB03-0032
6.0mm	DB03-0033
8.5mm	DB03-0034
11.5mm	DB03-0035



# Clinical Cases

## *Incisor Retraction*

### **Indications:**

- Increased overjet and/or anterior crowding.
- Normal or increased overbite.

### **Case Details:**

- Adult with a Class II div 1 malocclusion (including full unit Class II molar relationships).
- Treated by extraction of U4s, fixed appliances and bilateral Inffinitas anchorage (following alignment and levelling).

### **Key Points:**

- Buccal mini implants (1.5mm diameter, 9mm length, short neck) inserted in U5-6 areas bilaterally.
- Powerarms (on a 19x25 steel archwire) to assist bodily incisor retraction and limit intrusive effects on maxillary molars.



## Indirect Molar Distalisation

### Indications:

- Class II molar relationship and/or anterior crowding.

### Case Details:

- 13 year old patient with space loss in the upper buccal segments and asymmetric Class II molars.
- Treated by the Infinitas distaliser and fixed appliances.

### Key Points:

- 2 mini implants (2mm diameter, 6mm length, long neck) inserted lateral to the mid-palatal suture
- No anchorage loss since the distaliser excludes anterior tooth contacts.
- Avoids palatal tissue irritation since there's no Nance button.
- Distaliser is used for anchorage reinforcement once Class I molars achieved.





# Clinical Cases

## *Molar Protraction*

### **Indications:**

- Decreased overjet and/or dental spacing (tooth loss or hypodontia).

### **Case Details:**

- Adult Class III patient requiring orthodontic decompensation and a mandibular setback osteotomy, but complicated by poor prognosis of LR6.
- Treated by LR6 extraction, fixed appliances and Inffinitas anterior anchorage (2 mini implants used to overcome resistance to space closure caused by alveolar necking).
- Traction applied to both the LR8 hook and a free-sliding powerarm (distal to LR7, on a 19x25 steel archwire).

### **Key Points:**

- Buccal mini implants (1.5mm diameter, 9mm length, short neck) inserted LR3-4 and LR4-5 (1st case), and UL3-4 (2nd case).
- Powerarms reduce mesial tipping of the molars and archwire binding.



## Anterior Open Bite Correction - Molar Intrusion

### Indications:

- Anterior openbite with an increased mandibular plane angle.
- Normal or reduced upper incisor display.
- Class I or mild-moderate skeletal II relationship.

### Case Details:

- Adult with a Class II division malocclusion (9mm overjet, 7mm AOB), Class II facial profile and all 1st premolars absent.
- Declined bimaxillary surgery. Treated by extraction of U8s, fixed appliances, Infinitas palatal anchorage and intrusion TPA.

### Key Points:

- Rigid intrusion TPA fabricated with 5mm clearance off mid-palate.
- Control incisor extrusion with a curve of Spee added to the upper archwire.
- Ideally over-correct to create posterior openbites before TPA removal, +/- add further traction from mini implants to bonded palatal attachments on U6s.
- Expect mandibular auto-rotation and chin advancement.



# Clinical Cases

## Indirect Anchorage

### Indications:

- Space closure involving molar protraction.
- Mini implants limited to apical sites due to lack of alveolar bone volume more coronally (where teeth have been absent).
- Powerarm usage limited by shallow labial / buccal sulcus depth.

### Case Details:

- Adult with a Class II division 2 malocclusion, 4 missing teeth, and severe centreline discrepancies.
- Treated by fixed appliances, and Infinitas direct and indirect anchorage.

### Key Points:

- LL4 space re-opened during correction of the lower incisor inclination and centreline displacement to the left side.
- Buccal mini implants (1.5mm diameter, 9mm length, short neck) inserted UL5-6, and LL2-3.
- Indirect anchorage involved a 19x25 steel auxiliary wire through the mini implant head's vertical cross-slot (secured with composite resin) and a cross-tube on the main archwire. Horizontal traction was applied from this auxiliary wire to protract the left molars.





## *Inter-maxillary Traction*

### **Indications:**

- Transverse / vertical side-effects from inter-maxillary elastics would be contra-indicated.
- Inadequate root length and/or periodontal support for elastic traction.

### **Case Details:**

- 15 year old boy with a Class II division 2 malocclusion, absent LR4 and significant lower centreline displacement to the right side.
- Treated by extraction of UR4, fixed appliances and Infinitas anchorage for both intra-arch and inter-maxillary traction.
- Initial fixed appliance treatment involved re-opening the lower right premolar space during centreline and overbite correction.
- Anchorage was required for lower right molar protraction and subsequent use of class III traction (whilst maintaining the lower centreline).

### **Key Points:**

- Mandibular cortex perforated using the Infinitas bone punch.
- Buccal mini implant (1.5mm diameter, 9mm length, short neck) inserted LR2-3.



**More cases are available to view online at [www.infinitas-miniimplant.co.uk](http://www.infinitas-miniimplant.co.uk) and on the Infinitas Educational CD.**



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