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

Why choose Infinitas?
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.
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.
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.

**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 | Included in Non Sterile Kit Infinitas mini implants. Non Sterile (x5) |
| DB10-0009 - DB10-0016 | Included in Sterile Kit Infinitas mini implants. Sterile (x5) |

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 |

DB10-0063 STERILE contains 5 sterile implants

DB10-0064 NON STERILE contains 5 non sterile implants

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:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.5</td>
<td>6</td>
<td>Short</td>
<td>DB10-0001</td>
<td>DB10-0009</td>
<td>Anterior maxilla - perpendicular insertions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mandible - perpendicular insertions</td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td>9</td>
<td>Short</td>
<td>DB10-0002</td>
<td>DB10-0010</td>
<td>Anterior maxilla - oblique insertions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Posterior maxilla buccal alveolus</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mandible - oblique insertions</td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td>9</td>
<td>Long</td>
<td>DB10-0004</td>
<td>DB10-0012</td>
<td>Maxilla - palatal alveolus</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>6</td>
<td>Long</td>
<td>DB10-0007</td>
<td>DB10-0015</td>
<td>Mid-palate</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>9</td>
<td>Long</td>
<td>DB10-0008</td>
<td>DB10-0016</td>
<td>Edentulous areas</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Temporary restorative abutment</td>
</tr>
</tbody>
</table>

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

Not shown in diagram as used in Endentulous areas
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.

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 Baseplate)

Guidance Kit Contains:
(Product description and order information for individual components.)

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

(Image above shows Infinitas Guidance Kit: DB10-0049S)
Use patient X-rays to determine site and angle of insertion.

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.

**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).
### Placement Protocol

1. **Local anaesthetic application (blanch mucosa)**

2. **Chlorhexidine mouthwash for 60 seconds**

3. **Soft tissue punch (thick/loose mucosa only)**

4. **Cortical Bone Punch (posterior mandible/mid-palate/palatal alveolus only)**

5. **Mini implant insertion**
   - Slow stabilised hand insertion. If resistance is high, pause for 10-20 seconds after each full turn. With hand piece insertion keep the speed below 100rpm.

   - **IMPLANT FIRM ON INSERTION**
     - Option 1 - choose another site for insertion.
     - Option 2 - use 2mm diameter implant (if space available) or 9mm length.
     - Option 3 - insert elsewhere or wait minimum 8 weeks to insert at same site.

6. **Chlorhexidine mouthwash for 30 seconds**

7. **Take a periapical radiograph if desired to check for mini implant-root proximity**

8. **Mini implant loading**
   - Always load lightly at insertion visit (esp. if low torque experienced), e.g. powerchain.
   - Use normal type of traction after 4-6 weeks eg NiTi coil spring.

9. **Patient instructions**
   - Chlorhexidine mouthwash daily for 5 days / Analgesia prn / Brush gently around mini implant head twice daily (but NOT with an electric toothbrush) / DO NOT manipulate with tongue or fingers / Return if mobility or pain arises (after 1st 24 hours)

   - Complete written notes with following details - length / body diameter / neck length of mini implant / area of insertion / records taken / any comments on insertion & clinical stability / type of traction or force levels used / patient instructions.
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 a 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.

<table>
<thead>
<tr>
<th>Force</th>
<th>9mm</th>
<th>12mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light</td>
<td>DB41-0150</td>
<td>DB41-0151</td>
</tr>
<tr>
<td>Medium</td>
<td>DB41-0200</td>
<td>DB41-0201</td>
</tr>
</tbody>
</table>

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
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 Infinitas 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.
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 Infinitas 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.
**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 and on the Infinitas Educational CD.