INMAS DRDO INDIGENOUS TITANIUM DENTAL IMPLANT





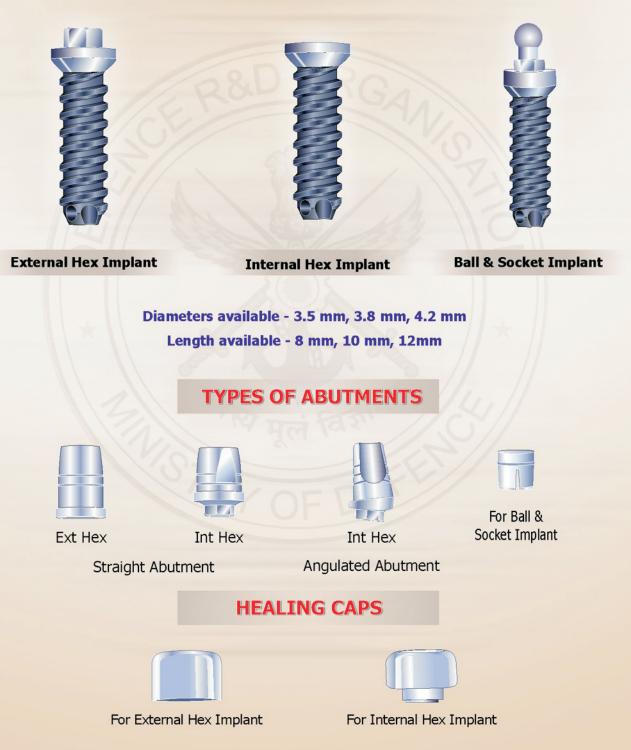


INDIDENTTM Medical Devices (Tech Holder- DRDO Dental Implants)

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INDIGENOUS DENTAL IMPLANTS INMAS - DRDO

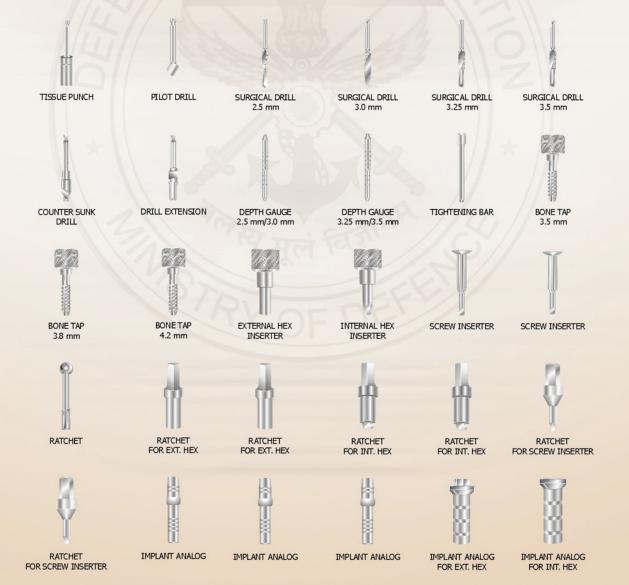
Indident Dental Implant System



Indident Surgical Kit



Components of Surgical Kit



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The Indident Dental Implant Surgical kit

- 1. Tissue Punch: Used to expose the bone for implant insertion. The component is motor driven and removes the gingiva to expose the underlying bone.
- 2. Pilot Drill: Used to mark the site for Implant Insertion.
- Surgical Twist Drills: The sizes available are 2.5mm, 3.0 mm, 3.25mm, 3.5mm and 3.75mm dia. These drills are marked along their length at 8mm 10mm and 12mm to ascertain the depth of drilling.
- 4. Depth Gauge: To obtain parallel preparation and to guide the implant drilling site this instrument can be inserted in the implant site to guide the direction of drilling preparation. It also helps in measuring the depth of the surgical preparation for implant placement. The markings done are at 8mm and then at every 2mm upto 12 mm.
- 5. Bone Tap: Bone tap is used to thread the internal wall of the bone to ensure proper of the bone tap exactly imitates the threads of implant screws. The bone taps are available corresponding to implant diameter.
- 6. Implant Inserters: Used for final insertion of the Implant in its proper position. The inserters engages the hex of the implant (in case of Ball & Socket implants) & inner portion of the implant (in case of internal hex implant) and after proper engagement the implant is slowly inserted into the bone with gentle force till the implant neck reaches the crest of alveolar bone.
- 7. Screw Inserters: For placing the abutment screw/Gingival Former in the implant
- 8. Ratchet with attachments: To facilitate the easy insertion of the Implant
- 9. Prosthetic Components: Implant Analogs are available to fabricate different prosthesis like crown, bridge or removable prosthesis.

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Indident Implant system

The Indident Implant system designed and developed offers a combination of simplicity and reliability.

- DRDO Dental Implants are Transmucosal single stage Implants.
- These implants are surface treated, packed under Laminar flow and sterilized by Gamma irradiation and are available in sealed blister pack.
- The Implants are of screw type, cylindrical in nature with little taper at the apex to facilitate easy insertion.

Pre Operative Planning

Bone morphology dictates the feasibility, design, and surgical approach to implant placement. In addition to dense healthy bone, the mucosa must also be capable of uncompromised healing. Selection of proper implant size can contribute to the long-term success of the treatment. The anticipated position of the implants will help in the design of the prosthesis restoration during pre operative planning.

- The bucco-lingual bone dimension of the alveolar ridge can be measured directly by caliper and probe, panoramic radiographs using calibrated tracing or stents or by linear or computer assisted tomography. At least 1-2 mm. of bone should remain both bucally and lingually to the most superior part of implant.
- There must be adequate bone to withstand the surgery of placement and the stress of implant function. 1-2 mm mm. thick bone must be present all around the implant and anything less may result in perforation.
- 3mm of space is generally recommended between an implant and an adjacent tooth. Achieving overall contact with bone promotes initial immobilization and stability and helps in better osseo integration.
- Radiographs must be carefully measured to avoid any unintentional invasion of maxillary sinus and the floor of the nose keeping an account of enlargement of these radiographs. The impingement of mandibular canal and the perforation of the inferior border of mandible must be avoided in given clinical condition.
- As far as possible at least 2 mm. of bone should remain below the implant body after complete insertion.



THE SURGICAL PROCEDURE













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Edentulous site

Pilot Drilling

Final Drilling Depth Estimation Bone Tapping

Implant with Carrier Insertion of Implant Implant in Position

PROSTHETIC PROCEDURE

Single Tooth - Custom made screw retained crown









Metal Casting





Single Tooth - Jacket crown over Pre-fabricated abutment



Implant with abutment



Customisation of Implant

abutment





Wax Pattern





Ceramic crown

Implant Retained Fixed Prosthesis Denture





Over Denture – Ball & Socket Implants



Two Ball & Socket Implants in Position









Over Denture in Position

























Implant Sockets in Position

Denture in Position





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Surgical Procedure: This includes the following steps:

1. Flap Design, Incision & Elevation :

The flap design for placement of an implant is always crestal in incision bisecting the existing keratinized tissue. Vertical incisions may be needed in one or both ends. Facial & lingual flaps in posterior areas should be carefully thinned before total reflection so that the thickness of the soft tissue does not cover the head of the implant.

2. Preparation of Implant Site:

The implant site is first prepared using a round bur to establish exactly the site where implant is to be placed. A pilot drill is used to prepare the shoulder level & a depth gauge with depth marking is then used to the final sink depth. The recipient site is drilled with increasing diameter drills & depth is reached. A tapping instrument is used to tap the implant bed before the implant is screwed in. Tapping is necessary if the bone is dense.

Implant Dia	Drill Dia				
3.5mm	2.5mm	3.0 mm			
3.8mm	2.5mm	3.0mm	3.25mm		
4.2mm	2.5mm	3.0mm	3.25mm	3.5mm	3.75mm (Optional)

- 3. Placement of the implant:
 - Open the sterile Blister Pack containing the Implant
 - Remove the Implant from the glass container holding it by Implant carrier. Take care not to touch the sand blasted surface of the implant.
 - With firm finger pressure insert the implant as far as it goes into the osteotomy site.
 - Remove the implant using slight finger pressure at the top of implant carrier.
 - Insert the implant into the prepared site using inserter with ratchet until neck of the implant rests at the crest of the bone.

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