



## PRODUCT DISCONTINUATION - 3M™ ESPE™ MDI Mini Dental Implants

September 1, 2016

3M discontinued the manufacture and sale of the 3M™ ESPE™ MDI Mini Dental Implant product line on September 1, 2016.

The following selected components are available for purchase to help support existing cases. Currently, 3M expects to maintain these components for 6 years. Please refer to the MDI Component Guide below.

MDI Component Guide		
Effective: 9/1/2016		
Item#	SKU	Description
MII-LA	70-2023-0283-5	MDI 2.9mm hybrid lab analog
2921	70-2023-0051-6	MDI 2.9mm o-ball impression coping
2920	70-2023-0050-8	MDI 2.9mm tapered abutment impression coping
LAOB	70-2023-0277-7	MDI collared standard o-ball analog
LASH	70-2023-0278-5	MDI collared standard square head analog
MH-1	70-2023-1047-3	Metal Housing
MH-2	70-2023-1048-1	Micro Metal Housing
0550-10	70-2023-0160-5	Standard MH-1 O-Ring (10 pack)
0351-10	70-2023-0154-8	Micro MH-2 O-Ring (10 pack)
S1010	70-2023-0323-9	Blockout Shims (25 pack)
2923	70-2023-0053-2	MDI tapered abutment immediate temporization cap
2924	70-2023-0054-0	MDI o-ball immediate temporization cap

3M values your business. We apologize for any inconvenience this may cause. If you have questions please contact our Customer Care Center at 1-800-634-2249.

**3M** Science.  
Applied to Life.™



3M™ ESPE™ MDI  
Mini Dental Implants

# Product Guide



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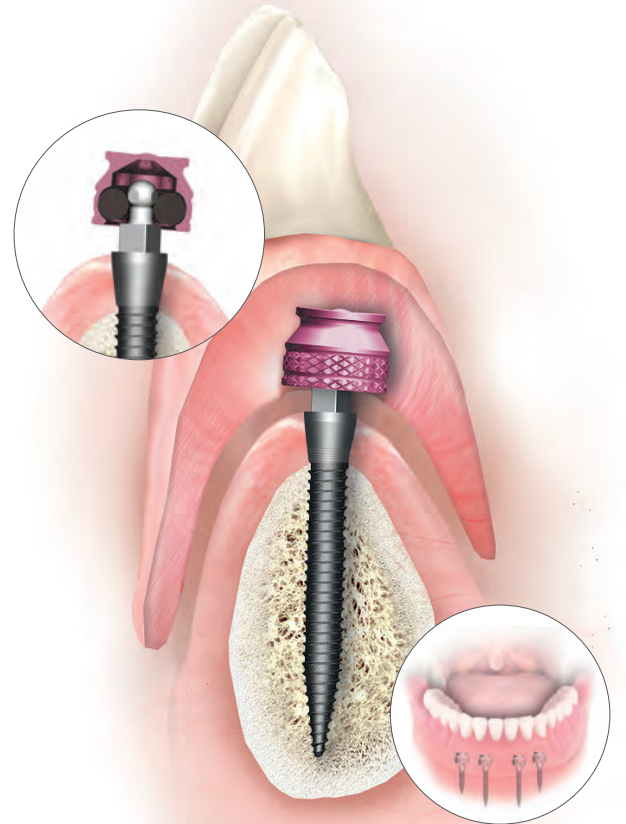
# Indications

For all MDI implants:

- Long-Term Full Denture Stabilization
- Long-Term Partial Denture Stabilization
- Long-Term Fixation of Bridges

In addition for MDI 2.9mm implant:

- Long-Term Fixation of Single Crowns



# 1.8mm Diameter Implants — standard thread

Selection of implants is based on bone quality, soft-tissue thickness and dental procedure.

## O-Ball Implants

1.8mm	10mm	13mm	15mm	18mm	
Collared O-Ball Implants	OB-10	OB-13	OB-15	OB-18	
Non-Collared O-Ball Implants	S1810OB	S1813OB	S1815OB	S1818OB	

## Square Head Implants

1.8mm	10mm	13mm	15mm	18mm	
Collared Square Head Implants	SH-10	SH-13	SH-15	SH-18	

## MDI Implant Selection Guide

Implant Type	Bone Density*				Soft-Tissue Depth		Minimum Buccolingual Width
	D1*	D2*	D3*	D4*	<2mm	≥2mm	Bone Width
1.8mm with Collar	✓	✓	NR	NR	NR	✓	≥4.8
1.8mm without Collar	✓	✓	NR	NR	✓	NR	≥4.8
2.1mm with Collar	✓	✓	NR	NR	NR	✓	≥5.1
2.1mm without Collar	✓	✓	NR	NR	✓	NR	≥5.1
2.4mm with Collar	NR	✓	✓	NR	NR	✓	≥5.4
2.4mm without Collar	NR	✓	✓	NR	✓	NR	≥5.4
2.9mm with Collar	NR	✓	✓	NR	NR	✓	≥5.9

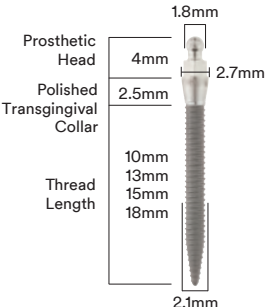








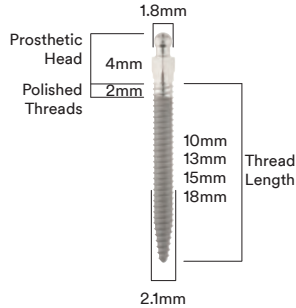
Usually, there is more dense bone in the mandible (D1/D2) compared to less bone density (D2/D3) in the maxilla. The appropriate implant diameter should be completely surrounded by a least 1.5mm of bone and the length should engage bone for the entire threaded portion of the implant.

\*D1 = Very Dense Bone; D2 = Porous; D3 = Porous; D4 = Very Soft Bone; NR = Not Recommended

# 2.1mm Diameter Implants — standard thread

Selection of implants is based on bone quality, soft-tissue thickness and dental procedure.

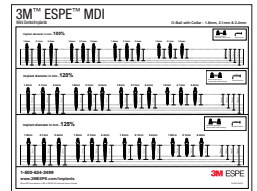
## O-Ball Implants

2.1mm	10mm	13mm	15mm	18mm	
Collared O-Ball Implants	IOB-10 	IOB-13 	IOB-15 	IOB-18 	
Non-Collared O-Ball Implants	S1810IOB 	S1813IOB 	S1815IOB 	S1818IOB 	

## MDI Radiographic Transparencies

- Radiographic Transparency for MDI Implants with Collar
- Radiographic Transparency for MDI Implants without Collar
- Radiographic Transparency for 2.9mm MDI Implants

3M Oral Care provides MDI radiographic transparencies at no charge. Ask your 3M Oral Care implant representative for details.



## MDI Implant Selection Guide

Implant Type	Bone Density*				Soft-Tissue Depth		Minimum Buccolingual Width
	D1*	D2*	D3*	D4*	<2mm	≥2mm	Bone Width
1.8mm with Collar	✓	✓	NR	NR	NR	✓	≥4.8
1.8mm without Collar	✓	✓	NR	NR	✓	NR	≥4.8
2.1mm with Collar	✓	✓	NR	NR	NR	✓	≥5.1
2.1mm without Collar	✓	✓	NR	NR	✓	NR	≥5.1
2.4mm with Collar	NR	✓	✓	NR	NR	✓	≥5.4
2.4mm without Collar	NR	✓	✓	NR	✓	NR	≥5.4
2.9mm with Collar	NR	✓	✓	NR	NR	✓	≥5.9

Usually, there is more dense bone in the mandible (D1/D2) compared to less bone density (D2/D3) in the maxilla. The appropriate implant diameter should be completely surrounded by a least 1.5mm of bone and the length should engage bone for the entire threaded portion of the implant.

\*D1 = Very Dense Bone; D2 = Porous; D3 = Porous; D4 = Very Soft Bone; NR = Not Recommended





# 2.4mm Diameter Implants — max thread

Selection of implants is based on bone quality, soft-tissue thickness and dental procedure.

## O-Ball Implants

2.4mm	10mm	13mm	15mm	18mm	
Collared O-Ball Implants	MOB-10	MOB-13	MOB-15	MOB-18	
Non-Collared O-Ball Implants	S1810MOB	S1813MOB	S1815MOB	S1818MOB	

## Square Head Implants

2.4mm	10mm	13mm	15mm	18mm	
Collared Square Head Implants	MSH-10 	MSH-13 	MSH-15 	MSH-18 	

## MDI Implant Selection Guide

Implant Type	Bone Density*				Soft-Tissue Depth		Minimum Buccolingual Width
	D1*	D2*	D3*	D4*	<2mm	≥2mm	Bone Width
1.8mm with Collar	✓	✓	NR	NR	NR	✓	≥4.8
1.8mm without Collar	✓	✓	NR	NR	✓	NR	≥4.8
2.1mm with Collar	✓	✓	NR	NR	NR	✓	≥5.1
2.1mm without Collar	✓	✓	NR	NR	✓	NR	≥5.1
2.4mm with Collar	NR	✓	✓	NR	NR	✓	≥5.4
2.4mm without Collar	NR	✓	✓	NR	✓	NR	≥5.4
2.9mm with Collar	NR	✓	✓	NR	NR	✓	≥5.9

Usually, there is more dense bone in the mandible (D1/D2) compared to less bone density (D2/D3) in the maxilla. The appropriate implant diameter should be completely surrounded by a least 1.5mm of bone and the length should engage bone for the entire threaded portion of the implant.

\*D1 = Very Dense Bone; D2 = Porous; D3 = Porous; D4 = Very Soft Bone; NR = Not Recommended



# 2.9mm Diameter Implants — max thread

Selection of implants is based on bone quality, soft-tissue thickness and dental procedure.

## O-Ball Implants

2.9mm	10mm	13mm	15mm	18mm	
O-Ball Implants	MII-OB10	MII-OB13	MII-OB15	MII-OB18	

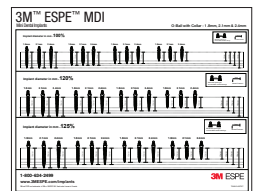
## Tapered Abutment Implants

2.9mm	10mm	13mm	15mm	18mm	
Tapered Abutment Implants	MII-T10	MII-T13	MII-T15	MII-T18	

### MDI Radiographic Transparencies

- Radiographic Transparency for MDI Implants with Collar
- Radiographic Transparency for MDI Implants without Collar
- Radiographic Transparency for 2.9mm MDI Implants

3M Oral Care provides MDI radiographic transparencies at no charge. Ask your 3M Oral Care implant representative for details.



### MDI Implant Selection Guide

Implant Type	Bone Density*				Soft-Tissue Depth		Minimum Buccolingual Width
	D1*	D2*	D3*	D4*	<2mm	≥2mm	Bone Width
1.8mm with Collar	✓	✓	NR	NR	NR	✓	≥4.8
1.8mm without Collar	✓	✓	NR	NR	✓	NR	≥4.8
2.1mm with Collar	✓	✓	NR	NR	NR	✓	≥5.1
2.1mm without Collar	✓	✓	NR	NR	✓	NR	≥5.1
2.4mm with Collar	NR	✓	✓	NR	NR	✓	≥5.4
2.4mm without Collar	NR	✓	✓	NR	✓	NR	≥5.4
2.9mm with Collar	NR	✓	✓	NR	NR	✓	≥5.9

Usually, there is more dense bone in the mandible (D1/D2) compared to less bone density (D2/D3) in the maxilla. The appropriate implant diameter should be completely surrounded by a least 1.5mm of bone and the length should engage bone for the entire threaded portion of the implant.

\*D1 = Very Dense Bone; D2 = Porous; D3 = Porous; D4 = Very Soft Bone; NR = Not Recommended

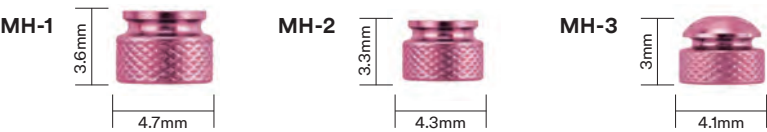


# Prosthetics

## Metal Housings

		Height	Diameter
MH-1	Metal Housing	3.6mm	4.7mm
MH-2	Micro Metal Housing	3.3mm	4.3mm
MH-3	O-Cap	3.0mm	4.1mm

Chung, K.-H., Chan, D., Gustafson, M. Retentive Characteristics of Narrow-Diameter Implant-Retained; Overdentures after Fatigue Loading. J. Dent. Res., 91 (Spec. Iss. A): 1433, 2012.



## O-Rings

### Replacement O-Ring for MH-1

0550-01	Standard MDI O-Ring
0550-10	Standard MDI O-Ring (10 pack)
0550-25	Standard MDI O-Ring (25 pack)



0550-01

### Replacement O-Ring for MH-2 and MH-3

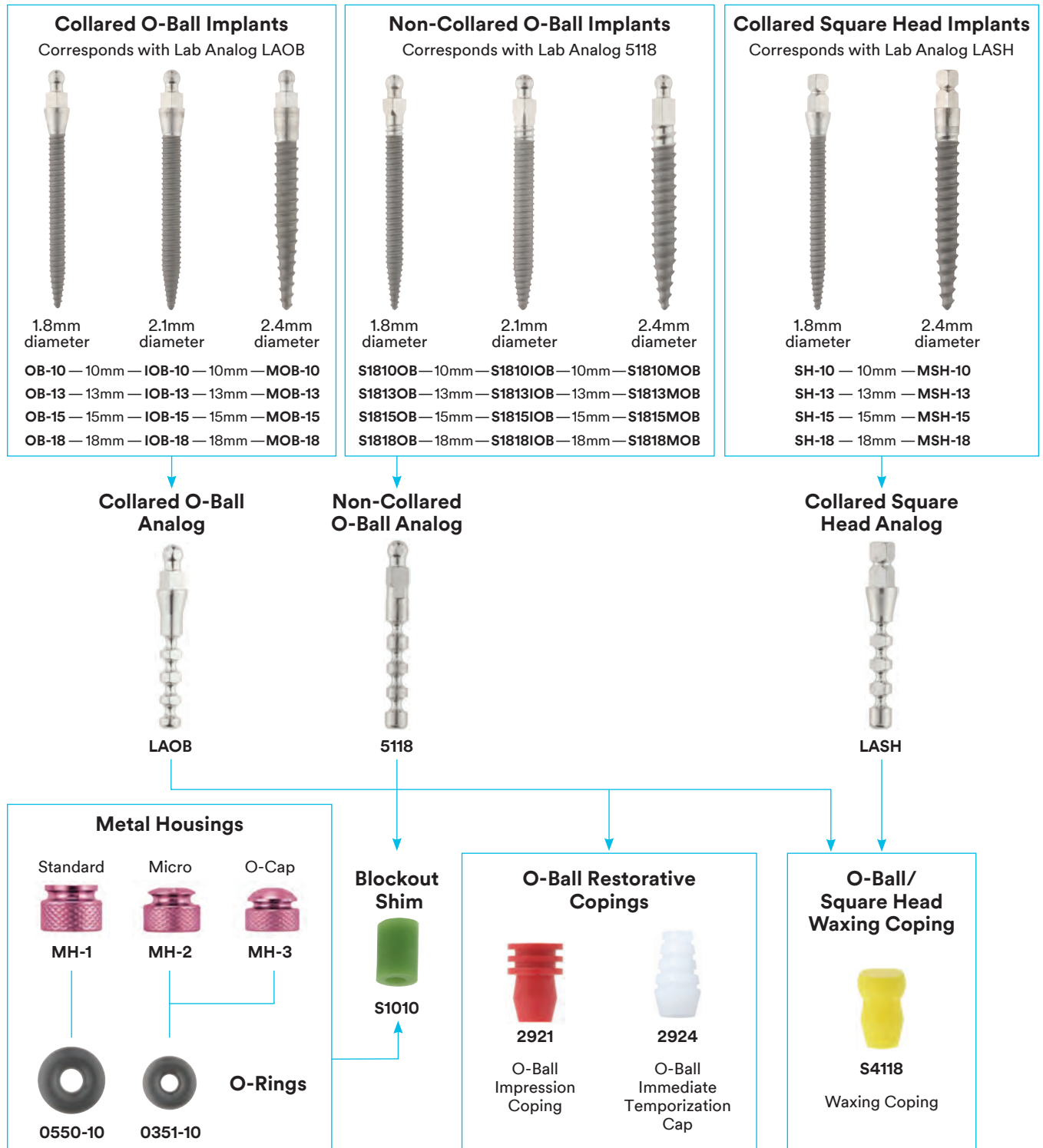
0351-01	Micro MDI O-Ring
0351-10	Micro MDI O-Ring (10 pack)
0351-25	Micro MDI O-Ring (25 pack)



0351-01

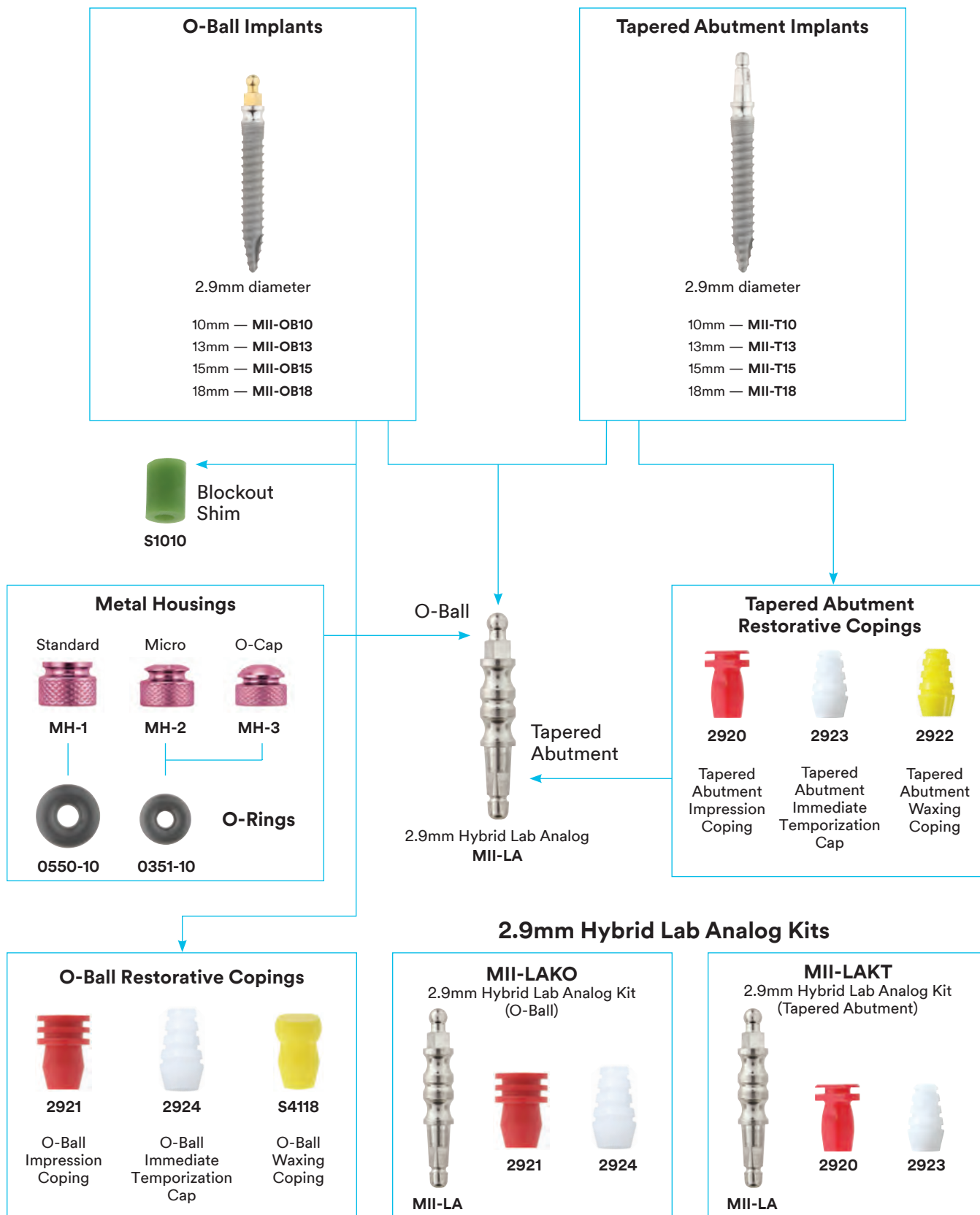
# Prosthetic Flow Chart

## 1.8mm, 2.1mm and 2.4mm Implants



# Prosthetic Flow Chart cont.

## 2.9mm Hybrid Implants



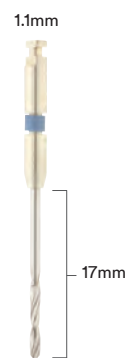
# Instruments and Drivers

## Site Preparation

1325	Ridge Mapping Caliper
S1011	1.1mm MDI Surgical Drill (sterile, single use)
2010	1.7mm MDI Standard Marking Pilot Drill



1325



S1011



2010

## Drivers, Wrenches, Ratchet Extension and Adapters

S9030	MDI Finger Driver
S9032	MDI Winged Thumb Wrench
8070	Graduated Torque Wrench
8071	4x4 Adapter for Graduated Torque Wrench
1030	Titanium Locking Pliers for Implants
8016	16mm Ratchet Wrench Extension
S7015	MDI Ratchet Adapter Long
S7011	MDI Ratchet Adapter Medium
S7007	MDI Ratchet Adapter Short



S9030



S9032



8070\*



8071

\*8070 comes with 8071 Adapter. 8071 is a replacement adapter.



1030



8016



S7015



S7011



S7007

# Surgical and Restorative Kit and Accessories

## Surgical and Prosthetic Kit

S1807	MDI Surgical Standard Kit	
Includes:	1.1mm MDI Surgical Drill (Qty. 3)	S1011
	Torque Wrench up to 70 Ncm	8070
	MDI Finger Driver	S9030
	MDI Winged Thumb Wrench	S9032
	MDI Ratched Adapter Short – 5mm	S7007
	Blockout Shims (Pack of 25)	S1010
	MDI Small Surgical Box	0121



## Patient Demonstration Models

SMDI-001	MDI Model Mandible – Clear Acrylic Base
SMDI-003	MDI Model Maxilla Base
SMDI-004	MDI Model Mandible – Pink Acrylic Base
SMDI-005	MDI Hybrid Model



## ACCESS Toothbrush

6008-12	ACCESS Toothbrush Bristle Density #1 Hard (Pack of 12)
6009-12	ACCESS Toothbrush Bristle Density #2 Soft (Pack of 12)



# Secure Denture Materials

## Secure Hard Pick-Up Kit

8720	Secure Hard Pick-Up Kit
Includes:	50ml safety cartridge of hard pick-up material
	10ml adhesive
	Accessories
8721	Secure Hard Refill (Pack of 2)



## Secure Soft Reline Kit

8120	Secure Soft Reline Kit
Includes:	50ml safety cartridge of soft reline material
	10ml glazing catalyst
	10ml glazing base
	10ml adhesive
	Accessories



## Secure Accessories

8366-10	Insertion Tips Type 1 (Pack of 10)
8448-10	Mixing Tips Type 8 (Pack of 10)
8449-12	Adhesive Brushes (Pack of 12)



## Blockout Shims

S1010	Blockout Shims (Pack of 25)
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Shims to block out Secure Hard Pick-Up under the metal housings. Trim to appropriate length.

# Implant Surgical Protocols

## Preoperative Planning

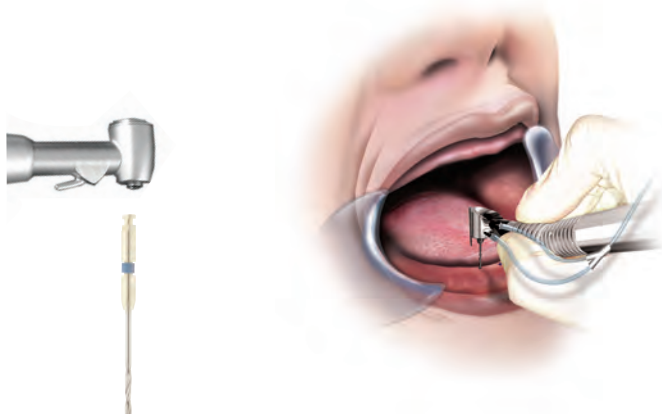
Careful case planning and appropriate patient selection criteria are necessary for a successful MDI treatment. This includes a preliminary medical and dental case history, a current health status of the patient, adequate bone density and volume, the ability of the patient to understand and implement appropriate oral hygiene. Bone height, bone width and anatomical structures can be revealed by x-ray. Bone width can also be mapped with ridge mapping calipers under local anesthesia. While most cases do not require a soft tissue flap, it is within the discretion of the clinician to determine whether a case requires a flap. It is recommended that clinicians who use MDIs are able to carry out flap surgery.

## Denture Stabilization in the Mandible

After patient selection and checkup, the number of required MDI implants is defined (**at least four**). Discuss the treatment with the patient in detail. Subsequently, the lower denture of the patient is made or modified and best implant positions are defined. Distance of MDI implants are at least 5mm apart. In the lower jaw the implants should be at least 7mm anterior to the mental foramen.

### 1. Site Preparation

- Entry points for each MDI implant are marked on the patient's tissue via bleeding points or a marker.
- The 1.1mm Pilot Drill is delicately placed over the entry point and lightly pumped up and down until the cortical plate is penetrated. No incision is necessary in most cases.
- The average depth is one-third to one-half the threaded length of the implant. Sterile irrigation is utilized throughout the drilling procedure.
- In extremely dense bone an extended penetration may be required.
- The pilot hole depth should never equal the length of the implant, as the tip of the drill is wider than the tip of the implant.
- Recommended motor RPM = 1200–1500



S1011

A 1.5mm Disposable Tissue Punch can be used to remove mobile mucosa.

### 2. Use of Finger Driver

- Open the MDI implant vial.\*
- Carry implant to the site using the vial cap that is attached to it. Do the first turns with the vial cap until resistance is met. Alternatively, use the Titanium Locking Pliers to grasp the body of the implant and separate it from the vial cap. Attach the Finger Driver to the head of the implant. (It has a friction grip o-ring and can be used as a carrier to the patient's mouth, as well as a surgical driver).
- After inserting the implant into the pilot opening through the attached gingiva, rotate clockwise while exerting downward pressure.
- The Finger Driver allows slight corrections of angulation in the beginning.
- With increasing resistance replace the Finger Driver by the Winged Thumb Wrench.
- Throughout the placement procedure, the implant should be advanced slowly into the bone to allow time for bone relaxation and minimize the thermal effect.



S9030 OB-13 IOB-13



\*All MDI Implants are delivered sterile.



### 3. Use of the Winged Thumb Wrench

Use the Winged Thumb Wrench to thread the implant into place.



S9032



### 4. Use of the Graduated Torque Wrench with Ratchet Adapter

- The Graduated Torque Wrench will then finalize the insertion process.
- Grasp the wrench (with the directional arrow facing clockwise) and engage the square neck of the Ratchet Adapter into the square opening of wrench.
- This final stage of MDI implant placement requires slow, carefully controlled ratchet turns.
- The ideal implant position allows the abutment head to protrude from the gingival soft tissue at its full length but with no neck or thread portions visible.
- Advance the implant with the Torque Wrench to a minimum of 35 Ncm to allow immediate load.
- If a resistance of at least 35 Ncm cannot be reached a temporary soft-loading without metal housings is recommended.
- Record torque reading for each implant.



S7007

8070



#### MDI Torque Recommendations

- Do not exceed 45 Ncm during implant placement.
- A minimum of 35 Ncm of resistance upon final insertion is recommended for immediate load.

**CAUTION IN DENSE BONE:** If torque exceeds 45 Ncm unscrew the implant and deepen the drill hole to 2/3 of implant length.

### 5. Final Implant Positioning

A minimum of four MDI implants is required to stabilize a full lower denture.

**IMPORTANT:** The decisive factors for a successful treatment are the primary stability of the implants and the compliance of the drilling and loading protocol.



Ideal Implant Position

# Implant Surgical Protocols cont.

## Denture Stabilization in the Maxilla

Please note that in the maxilla there are difficult anatomical conditions for the insertion of implants (anatomy of the alveolar ridge, bone density and soft tissue). Therefore, carefully consider whether the implants should be inserted transgingivally or under direct vision with a flap. The softer maxillary bone generally requires the use of implants with a more aggressive max thread (2.4mm and 2.9mm MDI implants). When placed in the upper jaw, the position of the sinus in relation to the bone needs to be assessed. **A minimum of six mini-implants** in the maxilla is recommended, which must be inserted at least 5mm apart in order to leave enough space for the metal housings.

### 1. Site Preparation

- Entry points for each MDI implant are marked on the patient's tissue via bleeding points or a marker.
- The 1.1mm Pilot Drill is delicately placed over the entry point and lightly pumped up and down until the cortical plate is penetrated. No incision is necessary in most cases.
- The average depth is one-third to one-half the threaded length of the implant. Sterile irrigation is utilized throughout the drilling procedure.
- The pilot hole depth should never equal the length of the implant, as the tip of the drill is wider than the tip of the implant.

**2.1 and 2.4mm diameter MDI implants** require use of the 1.1mm Pilot Drill (Item S1011).

**2.9mm diameter MDI implants** may require use of a disposable tissue punch followed by the 1.7mm Pilot Drill (Item 2010). Optionally, in dense bone a larger drill may be necessary to widen the drill channel.



S1011

2010

A 1.5mm Disposable Tissue Punch can be used to remove mobile mucosa.

### 2. Use of Finger Driver

- Open the MDI implant vial.\*
- Carry implant to the site using the vial cap that is attached to it. Do the first turns with the vial cap until resistance is met. Alternatively, use the Titanium Locking Pliers to grasp the body of the implant and separate it from the vial cap. Attach the Finger Driver to the head of the implant. (It has a friction grip o-ring and can be sued as a carrier to the patient's mouth, as well as a surgical driver).
- After inserting the implant into the pilot opening through the attached gingiva, rotate clockwise while exerting downward pressure.
- The Finger Driver allows slight corrections of angulation in the beginning.
- With increasing resistance replace the Finger Driver by the Winged Thumb Wrench.
- Throughout the placement procedure the implant should be advanced slowly into the bone to allow time for bone relaxation and minimize the thermal effect.



S9030

MOB-13

MII-OB13

\*All MDI Implants are delivered sterile.

### 3. Use of the Winged Thumb Wrench



S9032



### 4. Use of the Graduated Torque Wrench with the Ratchet Adapter

Connect the Graduated Torque Wrench and record torque reading for each implant. Confirm at least 35 Ncm of resistance.

If there is less than 35 Ncm of resistance — which might frequently be the case in maxillary bone, assess the situation, consider moving the implant, a larger implant and/or allow osseointegration.



S7007

8070



#### MDI Torque Recommendations

- Do not exceed 45 Ncm during implant placement.
- A minimum of 35 Ncm of resistance upon final insertion is recommended.

### 5. Final Implant Positioning

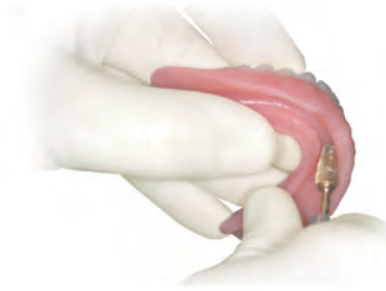
**A minimum of six MDI implants are required to stabilize a full maxillary denture.**

**IMPORTANT:** The decisive factors for a successful treatment are the primary stability of the implants and the compliance of the drilling and loading protocol.

# Direct Restorative Protocols

## Secure Hard Pick-Up Protocol

1. Relieve denture to accommodate implants and metal housings, creating individual holes or a trough.



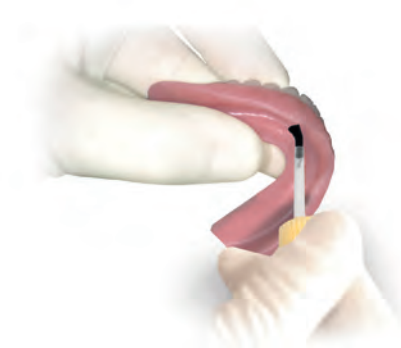
2. Trim Blockout Shims to appropriate length and place one shim on each implant to block out undercuts and prevent acrylic from locking onto the implants.



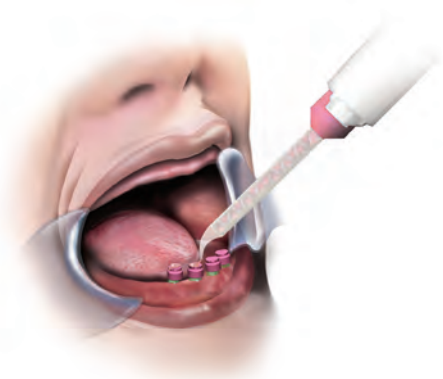
3. Place Metal Housings on each implant and check for passive fit over shims. Place denture in patient's mouth and check for passive fit over implants and housings.



4. Apply a thin layer of adhesive to the tissue-contact surface of the denture.



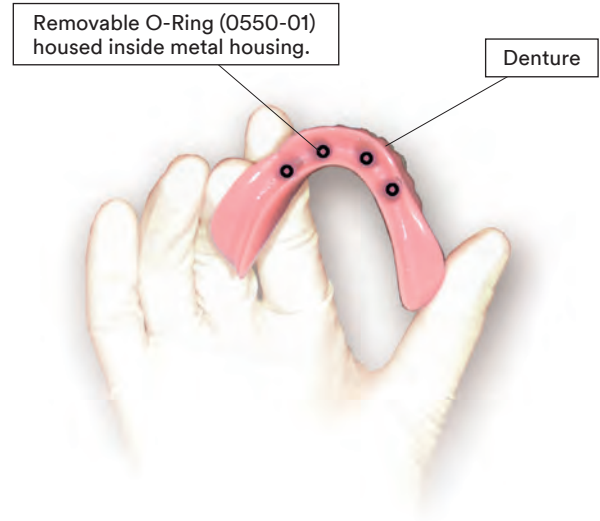
5. Extrude Secure Hard Pick-Up material directly onto Metal Housings and into the troughed denture.



6. Seat denture in patient's mouth and have patient apply normal bite pressure in centric occlusion and allow 7–9 minutes for Secure Hard Pick-Up material to set. It is advised to assist holding the patient's jaw closed.



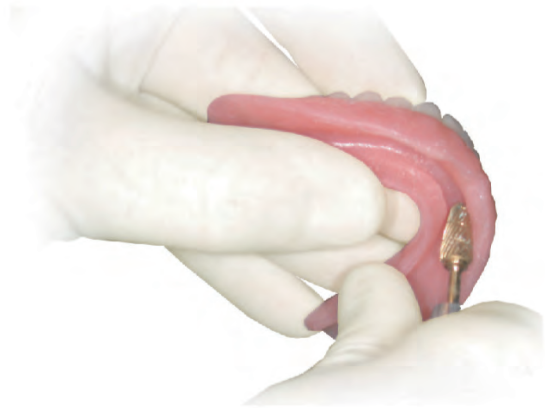
7. Remove denture and all blockout shims, trim and polish. Seat the final denture and inform the patient to keep the denture in place for the first 48 hours after placement to prevent tissue overgrowth.



## Secure Soft Reline Protocol

May be necessary on occasional case when implants are placed in softer bone in the mandible with no sufficient primary stability.

- Grind down denture base at least 1mm and relieve denture to accommodate the prosthetic heads of each implant.
- Roughen the tissue-contact surface of the denture with an acrylic bur and degrease the surface with isopropyl alcohol.
- Apply a thin coat of adhesive.
- Extrude Secure Soft Reline material onto the tissue-contact surface of the denture.
- Place the denture in the patient's mouth and ask patient to apply normal bite pressure in centric occlusion.
- Allow seven minutes for Secure Soft Reline material to set.
- Remove denture and trim excess material with fine scissors or a surgical blade.
- Mix equal drops of glazing base and catalyst.
- Use a brush to apply the mixture to the corresponding margins.



- DO NOT remove the palate of a maxillary denture during this stage.
- Ask the patient to keep the denture in place for the first 48 hours after placement to prevent tissue overgrowth.
- **Four to six months after soft load, the soft liner is replaced with a hard pick-up of the MDI Metal Housings (follow instructions for "Secure Hard Pick-Up Protocol") to increase the level of retention.**
- After osseointegration the palatal plate in maxillary denture can be progressively removed, if desired.

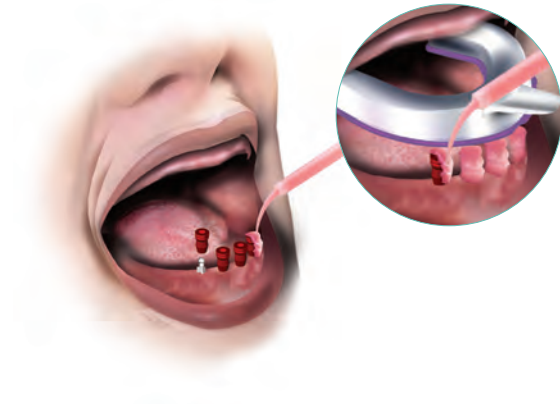


# Indirect Restorative Protocol

## 1. Seating the Copings

Snap the appropriate Impression Copings directly onto each appropriate MDI Implant.

**NOTE:** Soft tissue may prevent full engagement of the coping on implants seated too deeply into soft tissue. In such a case, it is recommended to take an impression of the O-Ball head of the implant without impression copings.



## 2. Seating the Impression

Standard crown and bridge impression techniques are used to pick up the impression copings.

3M™ ESPE™ Impregum™ Polyether Impression Material is recommended for implant impressions.



## 3. Removal of the Impression

Once the impression has fully set, carefully remove the tray from the patient's mouth and confirm all impression copings have been captured accurately in the impression.



## 4. Insertion of the Lab Analogs

This can be done in the clinic or at the dental laboratory.

Confirm the appropriate MDI Lab Analog will be inserted by reviewing the type of Implant used in the case. Insert a lab analog into each coping and fabricate a stone model.

**LAOB**  
MDI Collared  
O-Ball Analog



**5118**  
MDI Non-Collared  
O-Ball Analog



**LASH**  
MDI Collared  
Square Head Analog

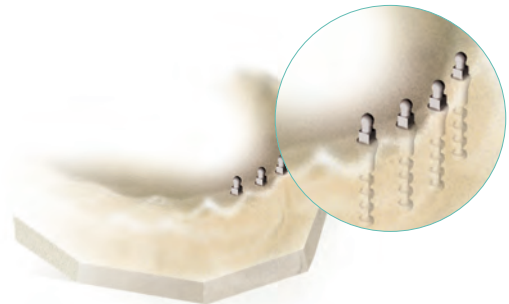


**MII-LA**  
MDI Hybrid  
Analog



## 5. Fabrication of the model

Use standard stone model fabrication techniques to form the model. Once the stone has set, carefully remove the impression from the model.





# 2.9mm Implant Protocols

## Surgical Protocol

The 3M™ ESPE™ MDI Mini dental implants 2.9mm system with max thread especially suitable for soft bone (D2 or D3 bone).

### 1. Site Preparation

- 1a.** Probe soft tissue at implant site and record tissue thickness.



- 1b.** Remove soft tissue at implant site using a 1.5mm tissue punch, if desired.



- 1c.** Create pilot hole using 1200–1500 rpm and sterile irrigation.



### Soft Bone Drilling Protocol (D3 Bone)

Entry divots are made with a small round bur, then the 1.7mm MDI drill is used to perforate the cortical plate.



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### Dense Bone Drilling Protocol (D2 Bone)

Entry divots are made with a small round bur. Pilot holes then made with the 1.7mm Pilot Drill should have a depth equal to approximately 1/2 the length of the planned implant plus the measurement of soft tissue thickness. Drill to a depth of 1/3 to 1/2 of the threaded portion of the selected implant. **DO NOT** drill more than halfway into a D2/D3 bone, because the spiral implant is self-tapping. Optionally, in dense bone a larger drill may be necessary to widen the drill channel. An endodontic stopper is helpful in marking appropriate depth.

## Implant Placement

**! Do not exceed 45 Ncm of torque during placement.**

### 2. Use of the Finger Driver

Insertion of the MDI implant begins with the vial cap or with the Finger Driver and continues with the Finger Driver until more torque is necessary.



### 3. Use of the Winged Thumb Wrench

Use the Winged Thumb Wrench to thread the implant into place.



### 4. Use of the Graduated Torque Wrench with the Ratchet Adapter

Insertion continues with the Ratchet Adapter connected to the Graduated Torque Wrench.

To verify initial stability is sufficient for each implant, verify and record initial stability and confirm at least 35 Ncm of resistance.



### 5. Final Implant Positioning

The final position is reached when all threads are fully integrated in the bone.



\*Adapter 8071 included with Graduated Torque Wrench 8070. Adapter also available separately.

# 2.9mm Implant Protocols cont.

## Impression and Temporization Protocol

### 1. Taking an Impression

A Pick-Up impression (transfer impression) is made using the retentive impression coping.



### 2. Forming the Temporary Restoration

Once adjacent teeth are lubricated with petroleum jelly, Tapered Abutment (2923) or O-Ball (2924) Immediate Temporization Caps are seated on the implants. 3M™ ESPE™ Protemp™ Plus Temporization Material\* is then extruded in the temporary crown impression or stint and placed in the patient's mouth for 1 minute and 40 seconds to 2 minutes and 50 seconds from the onset of mixing.



### 3. Finishing the Temporary Restoration

Refer to the temporary cement Instructions for Use.

# Implant Motors and Accessories

## Implant and Endodontic System

<b>AEU-6000</b>	Basic Implant Surgery System, Handpiece Sold Separately
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**AEU-6000**

## Implant and Oral Surgery System

<b>AEU-7000E-70V</b>	Implant Motor with Multi-Functional Foot Pedal
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**AEU-7000E-70V**

## Handpieces

<b>AHP-85P-I</b>	20:1 Reduction Contra Angle Handpiece (200–1500 rpm)
<b>AHP-85MB-CX</b>	High Torque Contra Angle Handpiece (200–1500 rpm)
<b>AHP-09</b>	AseptiSpray



**AHP-85P-I**



**AHP-85MB-CX**



**AHP-09**

# Terms and Conditions

3M Oral Care is committed to help redefine the evolving field of dentistry, with the goal of providing products and services that transform the way clinicians practice today.

## MDI Mini Dental Implant System

Great care is taken in the selection of materials, production methods, sterilization and packaging of 3M Oral Care implants and associated components. Strict inspection procedures have been established to ensure all 3M Oral Care implant products are in compliance with an array of regulatory standards.

3M Oral Care implant products are manufactured under a certified ISO 13485 quality system and FDA's Good Manufacturing Practices (GMP). In addition, they meet the stringent European Medical Device Directive and thus can carry the CE mark. 3M Oral Care implant products have been cleared by the Food and Drug Administration (FDA) to be marketed and sold in the United States. This demonstrates 3M Oral Care's commitment to quality and patient safety.

## Technical/Clinical Assistance

Please contact an authorized 3M Oral Care distributor or the company at [www.3M.com/dental](http://www.3M.com/dental)

- All prices are subject to change without notice
- All graphics are by way of illustration only (Not responsible for typographical errors)
- For more information online please visit [www.3M.com/dental](http://www.3M.com/dental)

## Ordering Information

Minimum Order: None.

Transportation: F.O.B. 3M Plant, Irvine, CA. Backordered products shipped F.O.B. freight prepaid and allowed.

Terms: Credit Card.

Prices: Subject to change without notice.

Shipping: There is no freight charge for ground transportation. Next day, 2 day or 3 day available at additional charge.

## Ordering Address:

3M Oral Care Customer Service  
3M Center, Bldg 275-2W  
St. Paul, MN 55144  
PO Box 19582  
Irvine, CA 92623-9582

Phone: 1-800-634-2249 x2

Fax: 1-800-986-9574

24 hour fax service available.

Website: [www.3M.com/Implants](http://www.3M.com/Implants)

## Quality

3M Oral Care implant products meet the rigid specifications of the medical device regulations. Many of the products and components are subject to 100% inspection during various stages of production. Any identified quality issue with a 3M Oral Care product should be immediately referred to 3M Oral Care customer care group at 1-800-634-2249 x1. Upon confirmation of the issue, customer will be sent a replacement directly or if a credit is warranted this will be made in the form of original payment.

## Packaging

MDI implants and sterile components utilize packaging configurations that have been validated to provide clean, sterile barriers for a duration of at least five years. Each sterile device includes a removable patient chart label for future referencing and simplified record keeping. Dental instrumentation and components are provided non-sterile unless otherwise noted.

## Commitment

Our commitment is to provide the dental profession with state of the art, cost effective dental implants and associated products, coupled with competent, reliable customer service. We stand ready to serve you at all times. Please visit our website at [www.3M.com/dental](http://www.3M.com/dental) to locate your 3M Oral Care office for more information.

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All returns must be authorized by a 3M Oral Care representative prior to returning product(s) for credit. All returns require a Return Merchandising Authorization (RMA). To obtain your return authorization call 1-800-634-2249 x1. Items must be returned and packaged in the original, unopened, and undamaged packaging with the RMA number clearly printed on the shipping label. Any package received without a valid RMA number clearly printed on the outside of the package will be refused and returned to sender.

3M Oral Care reserves the right to assess a handling fee on any overstock returns as follows: 1-90 Days — 15% handling fee (Unopened); 91+ Days — Will not be accepted.

## Disposition of Products

Any returnable items must be shipped back to 3M Oral Care to ensure compliance with pedigree product tracking.

## MDI Implant Products – Limited Warranty

3M Oral Care warrants to the purchaser that its dental implant products will be free from defects in material and manufacture for the period stated in the product literature for each product. If no period is stated, the warranty period is 1 year from the date of shipment. 3M ORAL CARE MAKES NO OTHER WARRANTIES INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. User is responsible for evaluating whether a product is appropriate for a particular use or application.

3M Oral Care's sole obligation and the buyer's sole remedy in the event of any claimed defect shall be, at 3M Oral Care's option, repair or replacement of the product, or refund of the purchase price. Written notice of claimed defect must be received by 3M Oral Care within reasonable time after discovery not to exceed one year from the date of delivery. Except where prohibited by law, 3M Oral Care shall not be liable for any loss or damage arising from its dental implant products, whether direct, indirect, special, consequential, regardless of the theory asserted, including warranty, contract, negligence or strict liability. 3M Oral Care neither assumes, nor authorizes any other person to assume on its behalf any additional liability or responsibility in connection with its dental implant products. Defects misuse, neglect, accident or failure to follow recommended procedures or instructions for use or by modification by the buyer or user voids any 3M Oral Care implant product warranty.

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