



MILO implants

MILO® Implant System

The MILO® Implant System is engineered for the anatomical and physiological demands of long-term denture stabilization or the permanent rehabilitation of single or multiple incisors. The simplified surgical protocol is similar to that of a miniature implant, however, MILO® has the added advantages of increased bone surface interface, improved load transfer capabilities and greater yield strength.



The Blossom cutting design allows for the MILO implants to continually cut through bone with efficiency and minimal force. This minimizes trauma to the tissue, and evenly distributes the cutting force along the full body of the implant. This design functions to lower insertion torque while increasing implant stability and evenly dispersing bone chips along the threads of the implant.² This dispersion helps generate an autologous micro-graft at the implant site, which can promote faster osseointegration.³



The bio-active structure of the Ossean surface is developed by impregnating calcium phosphate into the implant surface, developing a fractal structure that mirrors its design at all levels of magnification.^{4,5,6} This surface can facilitate fibril attachment, platelet deposition and osteoblast development.⁷ These functions can favorably alter the genetic expression of localized cells and induce faster healing of the implants.¹



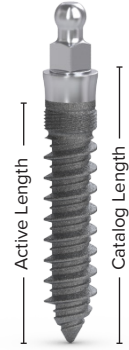


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MILO® IMPLANTS

3.0mmØ MILO® Implants



MLW3015Z

Length	Product Description	Ref. No.
10mm	MILO Ø3.0mm Implant, 10mm	MLW3010Z
11.5mm	MILO Ø3.0mm Implant, 11.5mm	MLW3011Z
13mm	MILO Ø3.0mm Implant, 13mm	MLW3013Z
15mm	MILO Ø3.0mm Implant, 15mm	MLW3015Z

* Active Length is 2mm shorter than Catalog Length

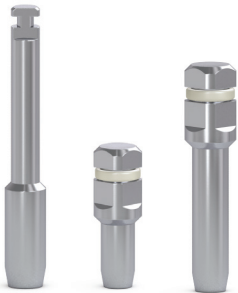
SURGICAL COMPONENTS

MILO® Surgical Drills



Product Description	Ref. No.
Locator Drill	LDZ
Pilot Twist Drill Ø1.5 x 15mm	D1515Z
Pilot Twist Drill Ø2.0mm x 15mm	D2015Z
Tri-Spade Drill Ø2.5 x 15mm	D25Z

Mini Drive-Lock Ratchet and Contra-Angle



Product Description	Ref. No.
Mini Drive-Lock Contra Angle Driver	MDLCADZ
MDL/MILO Ratchet Driver	MDLRDZ
Mini Drive-Lock Ratchet Driver, Long	MDLRDLZ

Individual Components



Product Description	Ref. No.
Ratchet	R-4MM



Product Description	Ref. No.
Hand Wrench	HW-4MM



Product Description	Ref. No.
Rotary Tissue Punch Contra-Angle Ø3mm	RPCA3Z

PROSTHETIC SYSTEMS

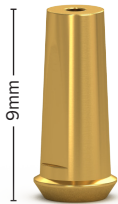
Healing Cap



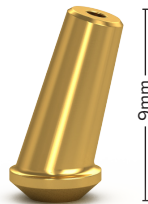
Product Description	Ref. No.
MILO Healing Cap	MLHCZ

MILO® Cement-Over™ Abutments

Cement-Over™ Abutments, available in Straight, 15° Angled, Wide, Plastic Castable, and Orthodontic configurations, provide the clinician with an unsurpassed range of prosthetic options. Cement-Over™ Abutments* can be prepared extra-orally and simply fit over the O-Ball Assembly. Once cemented in place with resin cement, abutment and implant form one unit; resistant and strong as a one-piece. An Analog and Impression Coping complement the system.



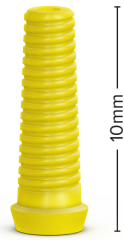
MLSAZ



MLAA15Z



WCAZ



MLPAZ

MILO Cement-Over™ Abutments

Product Description	Ref. No.
Cementable Abutment	MLSAZ
15° Cementable Abutment	MLAA15Z

Wide Cementable Abutment	WCAZ
Castable Abutment	MLPAZ



Ti Core Abutments

Product Description	Ref. No.
Ti Core for MILO® Implants	MLTICOZ

Metal Housing with O-Ring

Height: 3.2mm
Width: 3.8mm



MDLMMHZ

Height: 3.6mm
Width: 4.7mm



MDLMHZ

Product Description

MDL/MILO Micro Metal Housing w/ O-Ring
MDL/MILO Metal Housing w/ O-Ring

Ref. No.

MDLMMHZ
MDLMHZ

O-Ring Replacements

Outer \varnothing : 3.8mm
Inner \varnothing : 1.8mm



MDLMOR10Z

Outer \varnothing : 4.7mm
Inner \varnothing : 1.8mm



MDLORZ

Product Description

MDL/MILO Micro O-Ring Replacement
(10 pieces)
MDL/MILO Replacement O-Ring (1 piece)

Ref. No.

MDLMOR10Z
MDLORZ

Impression Coping



Product Description

MILO Impression Coping

Ref. No.

MLTZ

Laboratory Analog



Product Description

MILO Laboratory Analog

Ref. No.

MLAZ

Surgical & Restorative Protocols

This surgical manual serves as a reference for using the MILO implants and surgical instruments. It is intended solely to provide instructions on the use of Intra-Lock products. It is not intended to describe the methods or procedures for diagnosis, treatment planning, or placement of implants, nor does it replace clinical training or a clinician's best judgment regarding the needs of each patient. Intra-Lock strongly recommends appropriate training as a prerequisite for the placement of implants and associated treatment.

The procedures illustrated and described within this manual reflect idealized patient presentations with adequate bone and soft tissue to accommodate implant placement. No attempt has been made to cover the wide range of actual patient conditions that may adversely affect surgical and prosthetic outcomes. **Clinician judgment as related to any specific case must always supersede any recommendations made in this or any Intra-Lock literature.**

Before beginning any implant surgical procedure with Intra-Lock implants:



- Read and understand the Instructions for Use that accompany the products.
- Clean and sterilize the instruments per Instructions for Use.
- Become thoroughly familiar with all instruments and their uses.
- Design a surgical treatment plan to satisfy the prosthetic requirements of the case

Indications

MILO implants are indicated for long-term maxillary and mandibular tissue-supported denture stabilization. They are also indicated for the rehabilitation of single maxillary lateral incisors and mandibular lateral and central incisors. Multiple implants should be used and may be restored after a period of time or placed in immediate function.

Surgical Protocol

- 1) A tissue punch (RPCA3Z) may be used to create access through the gingiva to the selected implant site. When thin, porous or irregularly contoured bone is encountered, or when gingival manipulation or grafting is necessary, a full thickness mucoperiosteal flap is indicated.
- 2) Initiate the osteotomy using a 1.5mm twist drill (D1515Z) at a drill speed of 1000 to 2000 RPM, initiating alignment and creating a precise initial site for the MILO implant. Copious sterile saline irrigation is recommended. Drilling is accomplished by using a delicate up-and-down pumping action. Laser etched depth marks on the drill correspond to the length of the selected MILO implant[®].
Note: Multiple MILO implants must be placed with a minimum of 3mm edge-to-edge spacing between each implant.
- 3) Widen the osteotomy using vertical introduction of the 2.0mm drill (D2015Z) at a drill speed of 500 to 1000 RPM. Copious sterile saline irrigation is recommended. Drilling is accomplished by using a delicate up-and-down pumping action. When placing in dense bone, the 2.5mm drill (D25Z) can be used as an optional final drill, with the same technique as the 2.0mm drill. Laser etched depth marks on the drill correspond to the length of the selected MILO implant[®].
- 4) Attach the implant driver (MDLCADZ) to a slow speed, high torque handpiece. The MILO implant is removed from the sterile packaging and transferred directly to the surgical site via the implant driver. The implant driver is engineered to slip over the o-ball assembly, firmly engaging the implant for direct delivery and initial seating.
- 5) Using a slow speed, high torque handpiece, being inserting the MILO implant at a speed of 15 RPM or less. The use of an electric motor with a torque-limiting feature set to 35 Ncm is recommended. A torque wrench and ratchet driver (MDLRDZ) can also be used to determine the torque resistance of the MILO implant.
- 6) Once 35 Ncm of torque is achieved, finish seating the MILO implant with the torque wrench or a ratchet (R-4MM). Small incremental turns with a pause between each turn takes advantage of the viscoelastic nature of bone. The MILO implant is fully seated when the shoulder of the collar is flush with the gingiva.

Overdenture Stabilization Restorative Protocol

- 1) For chairside pickup of the MILO denture housing cap, transfer the position of the implant o-ball connections to the tissue bearing surface of the denture by marking the o-balls with a soft lead pencil or capturing their impression with a strip of soft silicone or wax inside the denture.
- 2) Using a resin bur, relieve the opening around the o-ball impressions or lead markings in the denture.
- 3) Try the denture in the patient's mouth and verify that the appliance is seated passively while in maximum intercuspation. The o-balls should not touch any part of the denture. Have the patient close into maximum intercuspation and observe that the denture is stable and properly equilibrated at this point.
- 4) Snap a housing assembly (MDLMHZ) over each implant o-ball connection. Try the denture in the patient's mouth again and ensure that the appliance is seated passively while in maximum intercuspation.
- 5) Remove the housing assembly and punch holes in a rubber dam at each implant site. Place the rubber dam over each implant o-ball connection, leaving on the o-ball heads exposed. Lubricate the o-ball heads to prevent any acrylic lock-on.
- 6) Snap a housing assembly over each o-ball in preparation for the final seating.
- 7) Clean, wash and dry the denture. Fill the abutment recesses with self-cure resin. Paint a small amount of this material over each housing assembly. As soon as the acrylic in the denture becomes resistant to flow, seat the denture. Keep light bilateral pressure on the occlusal surface of the denture and have the patient close gently into maximum intercuspation.
- 8) Allow the acrylic to fully polymerize. After the acrylic has set, remove the denture and the rubber dam. Trim flash and fill any minor voids or discrepancies. Ensure that there are no sharp edges on the tissue-bearing surface of the denture.

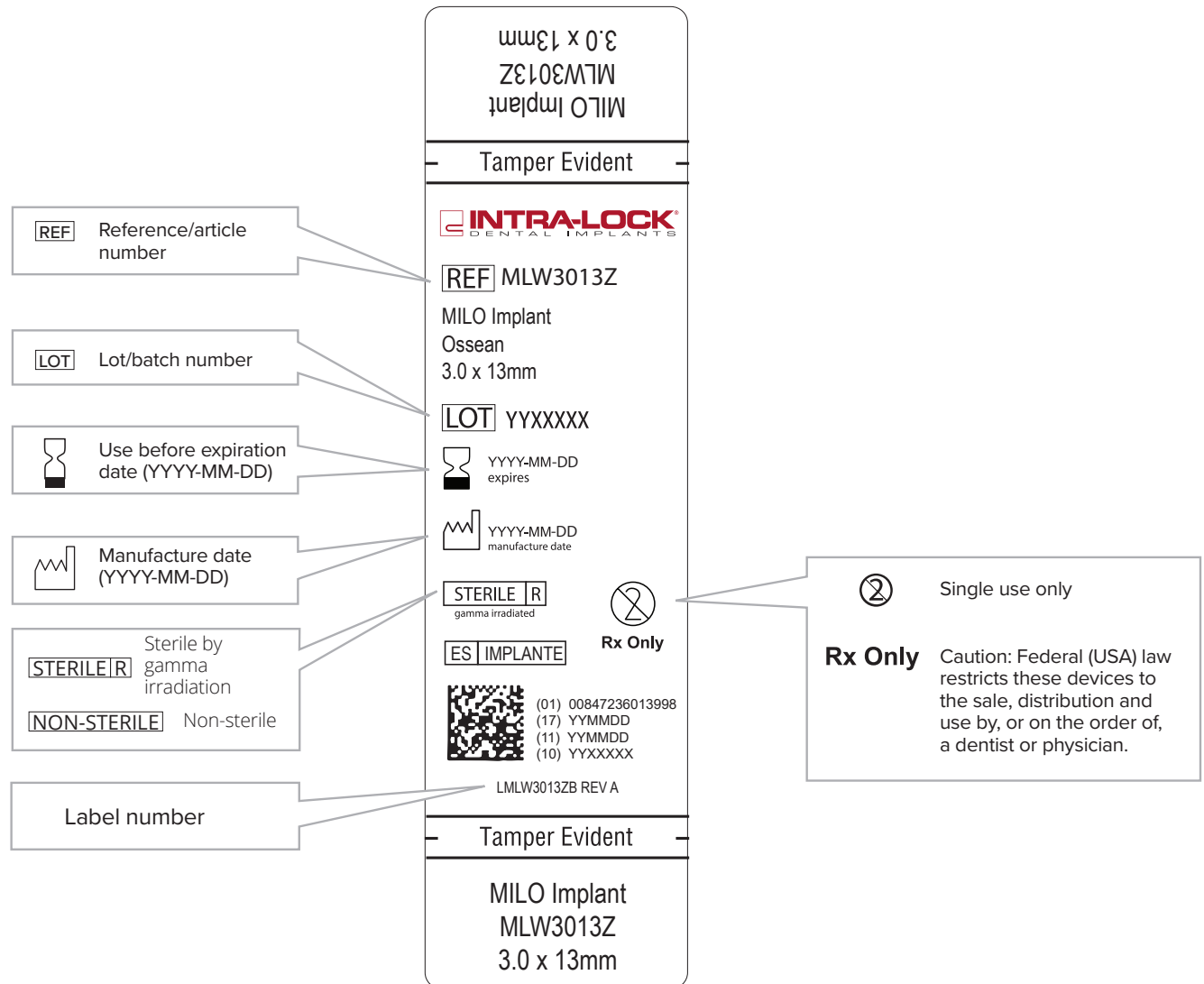
Cement-Over Abutment Restorative Protocol

- 1) Place a MILO impression coping (MLTZ) over each implant o-ball connection.
- 2) Load an impression tray, preferably with a monophasic impression material. The impression tray is placed in the mouth over the impression copings for the amount of time recommended by the impression material manufacturer.
- 3) When removing the impression tray, the impression copings will be picked up in the impression material. Insert the MILO analogs (MLAZ) into the captured impression copings.
- 4) Pour a working model either in the dental office or laboratory. Using the model, prepare and index the appropriate MILO Cement-Over abutment.
- 5) Upon delivery of the prosthesis, the abutments are cemented over their respective implant o-ball connections with resin cement (e.g. 3M RelyX Unicem 2 Automix Self-adhesive Resin Cement). Use only resin cement for this step. The prosthesis is then placed and the fit, occlusion and esthetics are confirmed by clinical and radiographic examinations. Upon satisfaction of all parameters, cement the prosthesis into place with temporary cement. A metal reinforced bridge is recommended for rigidity.

ICON LEGEND

Symbol Descriptions for Product Labeling

The example labeling below is to demonstrate content and symbology, and may differ on individual product labeling.



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