

# Magnetic Mallet



Handpiece crown remover version

## Instructions for use

**DON'T GO ON WORKING WITH THE CROWN REMOVER HANDPIECE BEFORE HAVING CAREFULLY READ THIS MANUAL FOR USE AND SCRUPOLOUSLY ADHERE TO THE CAUTIONS CONTAINED IN THIS MANUAL.**

# TABLE OF CONTENTS

<b>0.0. RELEVANT INFORMATION FOR THE USER</b>	3
<b>1.0. DEVICE ILLUSTRATIONS</b>	5
1.1. Handpiece parts	5
<b>2.0. INTENDED USE</b>	6
2.0. Standard supply	7
<b>3.0. INSTRUCTIONS FOR USE</b>	7
3.1. Crown remover hook insertion on the handpiece CROWN REMOVER function	7
3.2. Release of the crown remover hook	7
<b>4.0. STERILIZATION INSTRUCTIONS</b>	9
<b>5.0. MAINTENANCE AND REPAIRS</b>	10
<b>6.0. DISPOSAL OF WASTE</b>	10
6.1. Responsibility	10
6.2. Warranty	10
6.3. Technical Literature	11

## **ATTENTION:**

This operating manual was made to help you to properly use the Magnetic Mallet CROWN REMOVER handpiece.

All the useful details for a proper use of this device are contained in this manual. You should read it very carefully and store it in its slipcase in a dry and clean place in order to gather any useful information in the future.

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## 0.0. RELEVANT INFORMATION FOR THE USER

The removal of definitive cast crowns is always challenging. In fact breaking the retention cement used to fix crowns and bridges to the abutment always implies a very careful assessment of the patient and of the status of the teeth by the clinician.

With the permanent cements the crown retention, having to last for a long time, is always very effective. That's why a mechanical action to get the loosening of the crown is always traumatic, even if it's carried out by means of effective and targeted mechanicals. In fact none of the available systems are universally applicable.

This entails that it's always mandatory for the clinician to previously assess the alveolar root firmness which could vary from one abutment to the other one in relation with a variation going from about 10 Newton to hundreds of Newton. Furthermore the intrinsic difficulty in decementation must take into consideration the shaping of the abutment and the tilt angle degrees. Inadequate tooth preparation could bring to a failure in treatment.

In fact if the tilt angle degree goes from 3° to 6° the operation will be easier, while if the abutment shaping didn't take care about the tilt angle degree the operation will be harder.

This is the reason why the clinician assessment is always tough and subtle and mandatory to determine if the crown should be removed by a mechanical pulse or if it's better to consider to section the crown. Anyhow in this kind of operation some complication always arise and the practitioner should always consider that this kind of operation can easily cause the abutment fracture or removal.

If the need is to remove a crown from a metal implant the surgeon should always remember that this one is normally small-sized in comparison with an abutment and that it has a mechanically predetermined tilt angle. This means that removing a crown from a metal implant is easier and more convenient.

Provided that the screw in the meantime didn't cause perimplantitis.

The only effective system to get a crown removal is to convey a pulse/force right on the crown with an acceleration equivalent or even higher than some hundreds "g" (whereas "g" is 9,8 m/s<sup>2</sup>), being able to run out in some millions of seconds. This is what you can obtain using our **Magnetic Mallet** with the crown-remover handpiece and in this way the practitioner shall be able to enjoy the maximum in this technique.

The designers of the **Magnetic Mallet** in the crown remover version went by studies about dynamics referring to firmness, mass and quality of the retention cements normally used in crown retention. Thanks to those studies they obtained a device allowing to get the plastic deformation and the breaking of the retention

cement with the consequent loosening of the crown or of the bridge. The **Magnetic Mallet** crown remover handpiece develops a mechanical and adjustable pulse in 4 different levels which is able to keep the timing of the pulse unchanged, increasing or decreasing the force in the extraction direction. This will induce the destruction of the retention cement.

It follows that the **Magnetic Mallet** in the crown remover version, properly used and with a prior careful clinic assessment by the clinician, according to the laboratory tests is a great and effective help in the crown removal technique.

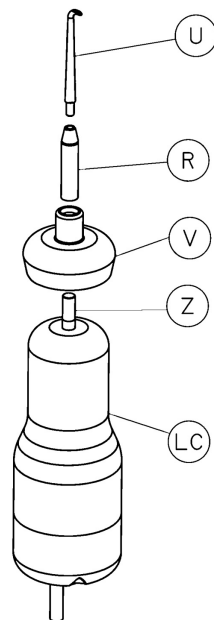
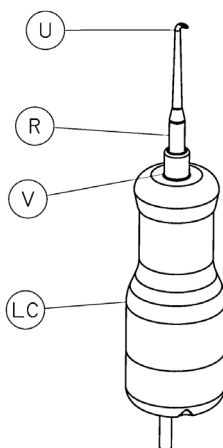
Therefore, in the event that the clinician determines the feasibility of the surgery, the **Magnetic Mallet** in crown remover version will allow the surgeon to use a more effective device in comparison with the manual technique and the automatic devices of the state of the art.

Furthermore it's nice to consider that the manual technique based on sliding hammers can be always considered traumatic irrespective of the ability of the practitioner.

In order to understand why it's nice to consider that in the manual practice with the sliding hammer the force is applied in thousands of seconds while with **Magnetic Mallet** this timing is of millions of seconds.

In addition you should take into consideration the "g" acceleration; with the sliding hammer this acceleration is about some "g" and with the **Magnetic Mallet** about some thousands of "g".

## 1.0. HANDPIECE ILLUSTRATIONS



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### **Crown Remover Handpiece (only on request)**

#### **1.1. CROWN REMOVER HANDPIECE PIECES**

- R. Nipple
- U. Crown Remover hook
- V. Silicone cap for the Crown Remover handpiece
- Z. Rod thread
- LC. Crown Remover function handpiece

## 2.0. INTENDED USE – CROWN REMOVER HANDPIECE

Medical device for dentistry to be used in crown or bridge removal from abutments or implants.

The action of the adjustable force allows to break the retentions cement used to fix the crown or the bridge getting its consequent loosening and removal.



The **Magnetic Mallet** in the **CROWN REMOVER** function should be equipped with hooks produced by **ASA DENTAL only** and sold by **Meta Ergonomica** too.

### **MODELLO/PART NUMBER**

**ASA DENTAL** PART NUMBER 2306 – 2307 – 2308

For your own safety you should not use the device in other areas of applicability.



**Attention:** For your own safety you should not carry out alterations on the device.

Take note that the hook action is mainly determined by its impact on the prosthesis and incidentally by the extraction strength exerted by the surgeon.

In order to familiarize yourself with the device, in the first stage you should always start from the lighter force (nr.1).

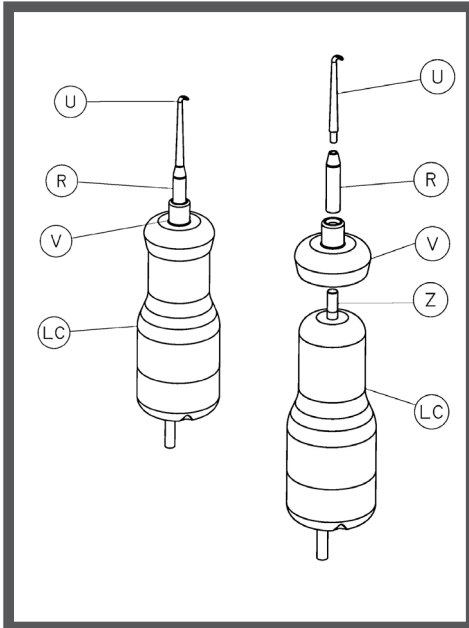
It's also advisable to keep the crown remover hook between your fingers selecting the different levels of the forces.

In this way you shall be able to assess the corresponding pulse.

## 2.1. STANDARD SUPPLY:

- 1 Handpiece with joint – crown remover function
- 3 Hooks
- 2 Silicone protective caps
- 1 Spare joint

## 3.0. INSTRUCTIONS FOR USE



### 3.1 CROWN REMOVER HOOK INSERTION ON THE HANDPIECE CROWN REMOVER FUNCTION

1. Screw the joint (R) on the thread (Z) of the handpiece (LC)
2. Push the silicone protective cap (V) on the joint (R) all the way to the bottom such it adheres
3. Choose the proper hook (U) and couple it to the handpiece inserting it in the joint (R) you've assembled to the handpiece (LC)
4. Screw the crown remover hook (U) tightening it.
5. Ensure the crown remover hook is tightly fastened then press the footswitch (L) or the manual control (E).

### 3.2 RELEASE OF THE CROWN REMOVER HOOK

1. Unscrew the crown remover hook (U).
2. Pull out the crown remover hook
3. Pull out the silicone protective cap (V).
4. Unscrew the joint (R)

**Take not that the hook action is mainly determined by its impact on the prosthesis and incidentally by the extraction strength exerted by the surgeon.**



**Nota:** It's up to the surgeon to determine the more suitable force to be applied by the hook to the prosthesis in order to achieve the desired result. The surgeon should always provide an axial pull (the axial pull is related to the abutment position) in order to avoid breaking.



**PRECAUTIONS:** The removal of prosthesis always presents a risk of damage to the prosthesis itself as well as the patients' hard, soft and anchorage tissues.

**Take appropriate measures to prevent swelling and/or aspiration of loosen parts and substances during treatment.**

**Crown and bridges that are cemented into place with a special genre of cements cannot be possible or at increase risk.**

**The practice performed with the Magnetic Mallet and its CROWN-REMOVER handpiece is very gentle. Nevertheless the stability of the root should be carefully verified in case of advanced periodontitis in order to prevent extraction of the root.**

**Pay close attention in determining whenever the Magnetic Mallet is suitable for the treatment you have to perform.**

**IT'S UP TO THE SURGEON TO OPERATE WITH GREAT CARE. SPECIAL ATTENTION SHOULD BE GIVEN IN VERIFYING THE FITNESS OF THE MAGNETIC MALLET IN THE SURGERY.**



## **4.0. INSTRUCTIONS FOR THE STERILIZATION**

### **STERILIZATION BY AUTOCLAVE OF THE HANDPIECE (LC) WITH ITS CORDSET AND CONNECTOR (M) JOINT, SILICONE CAP ( V) AND CROWN REMOVER HOOK (U).**

The handpiece (O/LC) with its cordset and connector (M), and the crown remover hook (U) should be sterilized by autoclave before its first use as they're non-sterilized supplied.

The handpiece (O/LC) with its cordset and connector (M) should be always sterilized by autoclave before any practice/treatment

After having uncoupled the parts, (see the sections 3.1 and 3.2 ) you should carry out the cleaning process. Brush off under flowing tap water then proceed with the sterilization by autoclave

#### **AUTOCLAVE DIRECTIONS FOR USE :**

Achievement of the dewpoint through the proper combination of temperature and pressure values which should be the following ones :

- 121 °C per 1 Bar
- 135 °C per 2 Bars

#### **N.B.**

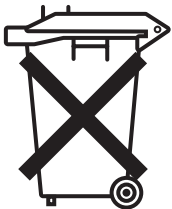
**THE HANDPIECE MUST BE SUBMITTED TO AN INSPECTION AFTER 3 YEARS FROM ITS FIRST USE. THE USER, AFTER THAT PERIOD, MUST SEND THE HANDPIECE TO THE DISTRIBUTOR/MANUFACTURER FOR THE NECESSARY CHECK WHICH WILL BE HANDLED BY THE MANUFACTURER SERVICE REPAIR.**

## 5.0. MAINTENANCE AND REPAIRS

In the event of failures or malfunctions calling for repairs you should promptly advice the manufacturer/distributor so that the device will be called in.

The distributor/manufacturer only will carry out the failures test and the repair works

## 6.0. DISPOSAL OF WASTE



This device meets the requirements of **Directive 2002/96/CE** for electric and electronic devices disposal-**RAEE**. At the end of the period of use the device and the accessories, must be sent for recycling of the materials or for disposal in a manner which poses no threat to humans or the environment. The manufacturer is responsible for the compliance with National requirements.

### **6.1 RESPONSIBILITY**

The manufacturer is liable for safety, reliability and performances of this device only if:

- The installing has been performed in order to adhere rigorously to the instructions.
- All necessary alterations or repairs have been carried out by authorized repair service only.
- The device has been used in accordance with the instructions for use and its intended use.

### **6.2 WARRANTY**

The manufacturer undertakes to provide the final customer of this device with a warranty of satisfactory functions freedom from faults in both and manufacturing process for the duration of 24 months from the delivery date. In case of justifiable

complaints the manufacturer will provide repairs and/or spare parts free of charge. Nevertheless the manufacturer will charge the final customer with shipment costs and it is not accountable for risks arising from the shipment itself. For other instances the manufacturer will refer to the warranty indicated in the trade general conditions.

**Any opening, repair or alteration carried out by un-authorized persons relieves the manufacturer of all responsibility concerning the safe working of the device and nullifies the warranty.**

### **6.3 TECHNICAL LITERATURE**

The manufacturer will furnish on request circuit diagram, the component list, all descriptions and information useful to the technical assistance in order to carry the authorized repairs.



Organizzazione con sistema di gestione certificato  
ISO 13485:2003

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