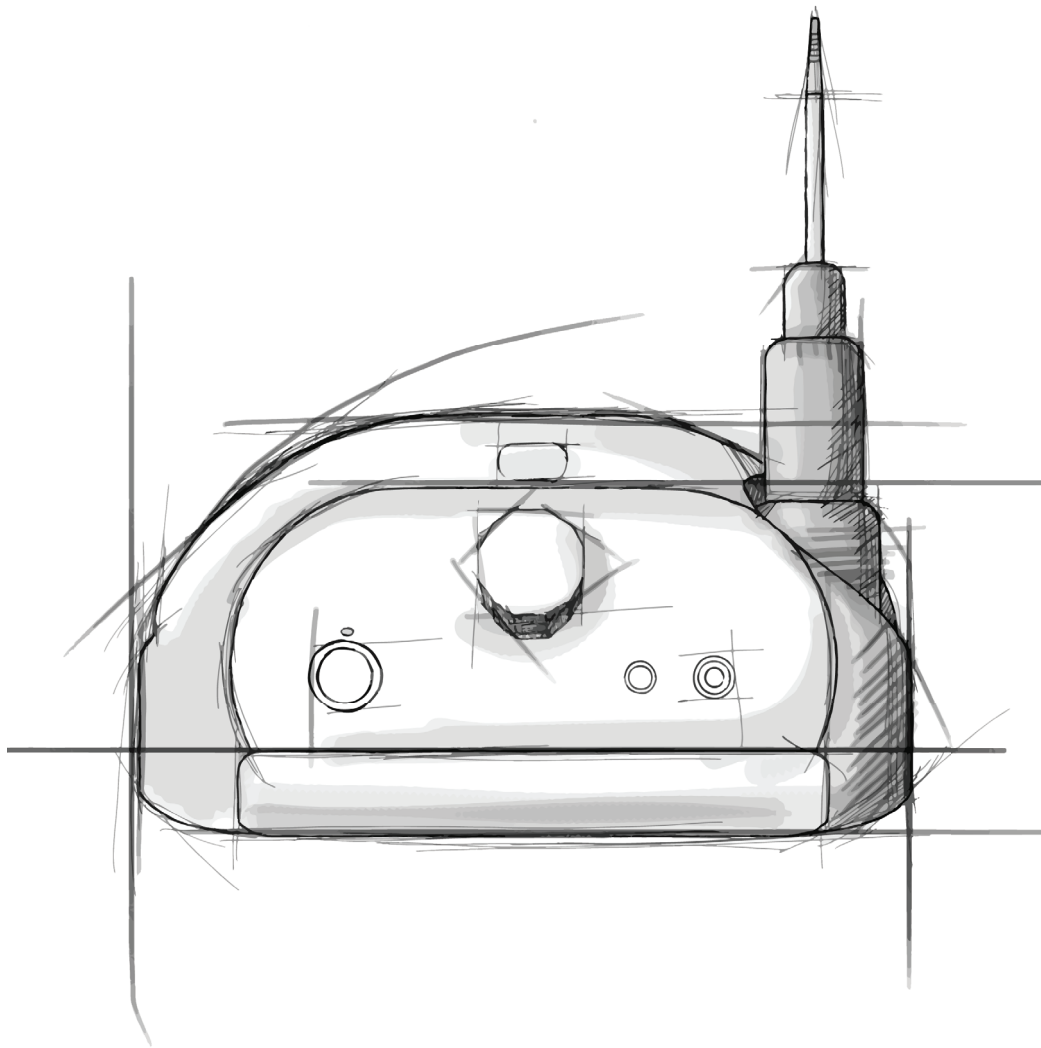


# Magnetic Mallet



*All-in-One*



**Meta Ergonomica's** contribution to more conservative and atraumatic dentistry is the patented All-in-One **MAGNETIC MALLET** which utilizes magnetic-dynamic force for procedures ranging from simple extractions to complex implantology and oral surgery procedures.

This innovative device represents a major technical and clinical breakthrough when compared with manual instruments and older technologies currently in use. Its design is the result of teamwork with clinicians from around the world who helped develop a device that allows doctors to perform both routine and complex procedures with more control, speed and effectiveness.

# HOW DOES THE MAGNETIC MALLET FACILITATE MINIMALLY INVASIVE AND CONSERVATIVE SURGERY PROCEDURES?



## SPEED

The magnetic-dynamic impulse delivers much more force than manual tools. This means increased effectiveness during a procedure.



## PRECISION

The kinetic energy forces are delivered precisely to the treatment area limiting dispersion to the craniofacial mass. This level of precision provides more comfort for the patient and greater accuracy for the doctor during the procedure.



## DIRECTIONALITY

The ergonomics of the hand piece allows the doctor to use only one hand to position the instrument exactly where needed, using a precise longitudinal movement that avoids deviations due to varying bone densities.



## VISIBILITY

Because no irrigation is required and only one hand is needed for use, the doctor's view has fewer obstructions. As a result, the instrument's depth of penetration is easily monitored, more precise and controlled.



## CONTROL

In each procedure that the Magnetic Mallet is used, the forces are delivered in a precise, constant and predictable manner giving the doctor total control during the procedure.



## COLD

The **Magnetic Mallet** does not generate heat in the bone; therefore, there is no need for irrigation. The mechanical friction between the instrument and the bone are developed within microseconds, a time frame not sufficient to increase the bone temperature.

# WHAT ARE THE APPLICATIONS FOR THE MAGNETIC MALLET?

---

## **SPLIT CREST**

in mandible and maxilla

## **OSSEODENSI- FICATION**

with an ample range of osteotomes from 100mm to 550mm all are laser marked to easily see the progressive increases in diameter

## **SINUS LIFT**

for crestal approach

## **EXTRACTION**

including ankylosed and wisdom teeth

## **IMPLANT PLACEMENT**

in flapless technique

## **CROWN REMOVER**

is a reversed action hand-piece and accessories

# WHAT IS THE PATENTED TECHNOLOGY OF THE MAGNETIC MALLET?

1. 5,000G's of acceleration.
2. Magnetic-dynamic thrust.
3. Advanced electronic controller that allows the doctor to easily control the forces with simple turn of a dial.

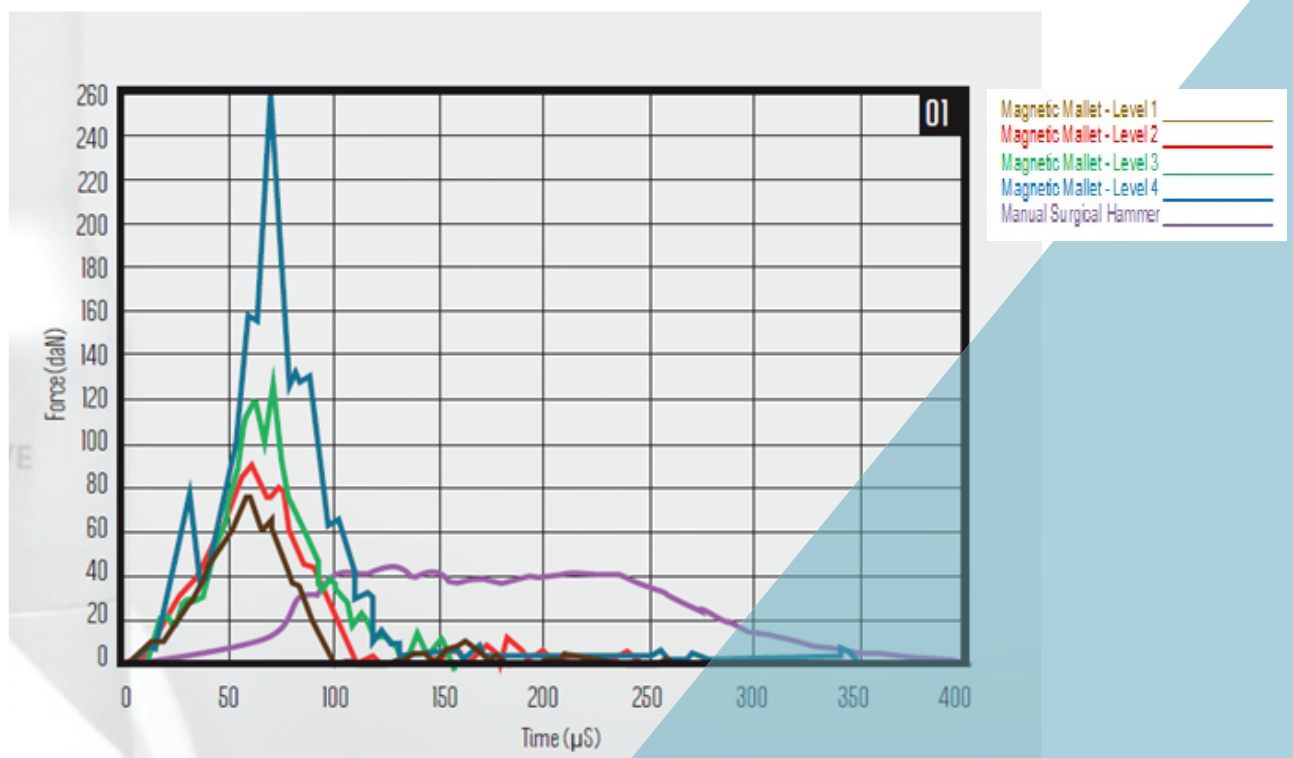
All this means that much more force is delivered just where the doctor needs it in a fraction of the time as compared to using manual tools. The graph shows the difference between the use of a hand-mallet (purple line) and the **Magnetic Mallet** (blue line with standard hand piece at Force 4).

It is 40 Decanewtons (hand-mallet) versus 260 Decanewtons (**Magnetic Mallet**) applied in micro-seconds.

It is a force that allows the doctor to implement the procedures in a rapid, conservative and minimally invasive way.

It doesn't cut or drill, it conserves the bone and does not increase its temperature.

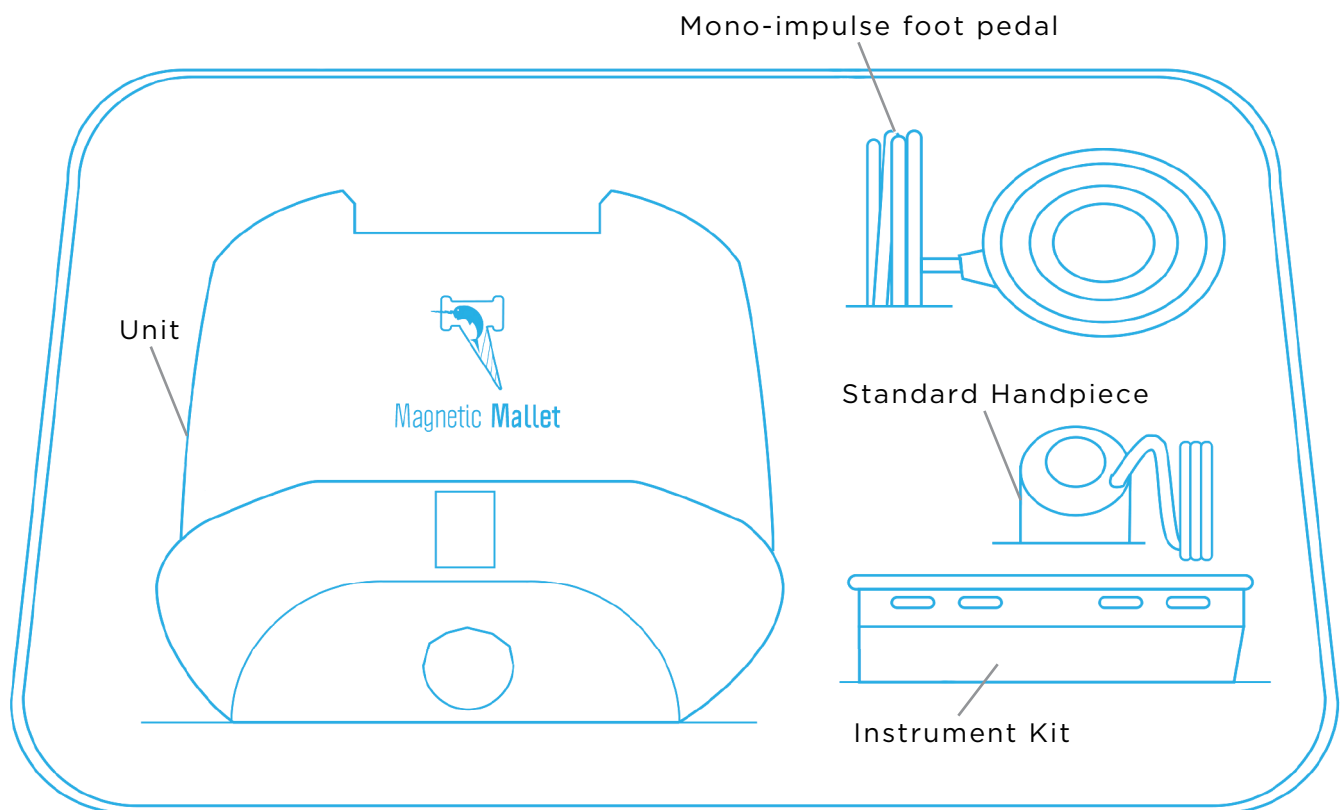
01: Comparison of applied forces (daN /QS ): Magnetic Mallet Level 1,2,3,4 VS Manual Surgical Hammer  
Tests conducted at CNR - Centro Nazionale di Ricerca - University of Milan - MIUR



# CONFIGURATION

## STANDARD DEVICE

---



The basic **Magnetic Mallet** unit includes  
1 Instrument Kit of your choice.

- Osteotome Kit
- Extraction Kit
- Ridge Split Kit

# INSTRUMENTS

---

A wide range of instruments are available for use with the **Magnetic Mallet**. All instruments are made of A630 stainless steel, tempered and passivated for longevity. Wear is negligible. There is no sawing motion and no rotating of the handpiece thus creating no friction.

The Instrument Kits are organized by procedure.

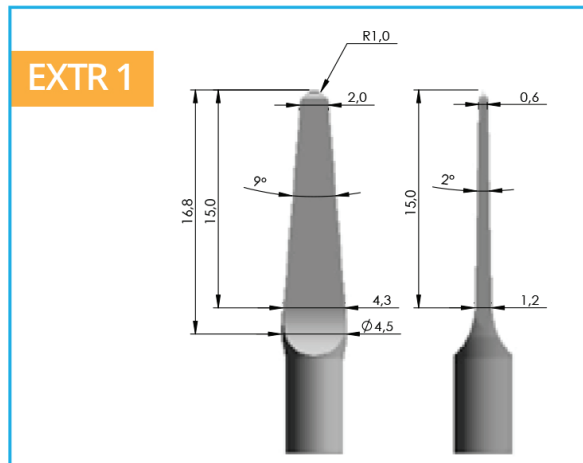
- Extraction Kit
- Osteotome Kit
- Ridge Split Kit

Each Instrument Kit contains 5 straight and 5 double bend (curved) instruments. They are delivered in a autoclavable stainless steel box.

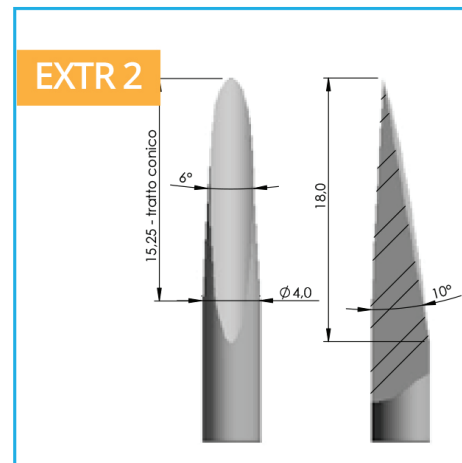


# EXTRACTION KIT

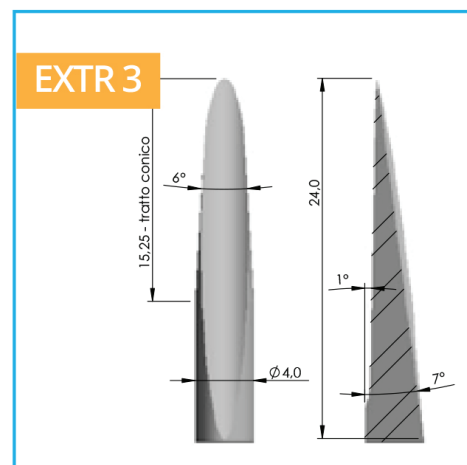
## EXTRACTOR



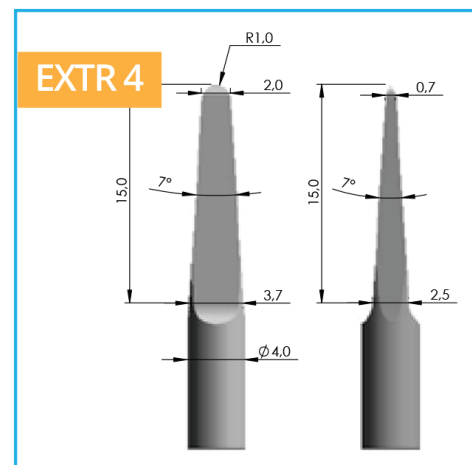
## EXTRACTOR SHORT BLADE



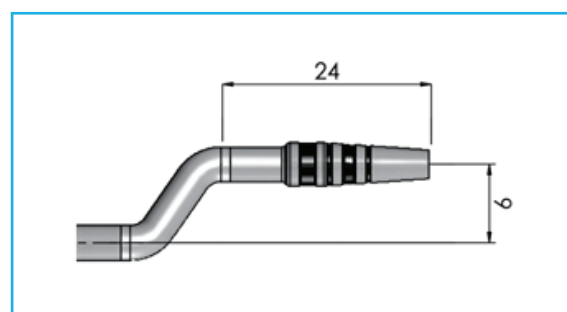
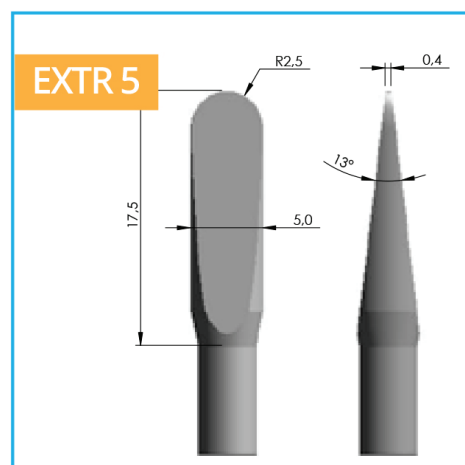
## EXTRACTOR LONG BLADE



## EXTRACTOR FOR WISDOM TEETH SHORT



## EXTRACTOR FOR WISDOM TEETH LONG

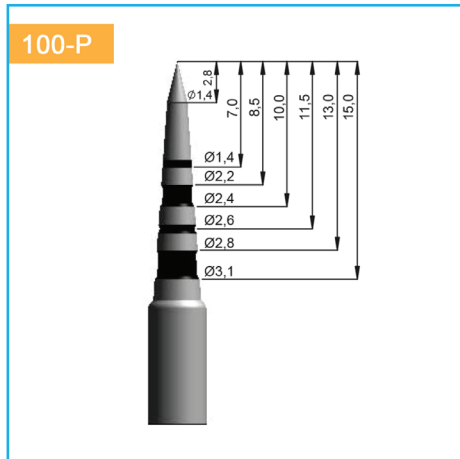


Each kit includes 10 instruments.  
The 5 shown above and 5 matching double bend (curved) design to operate in the posterior.  
The curvature/offset is 9 mm.

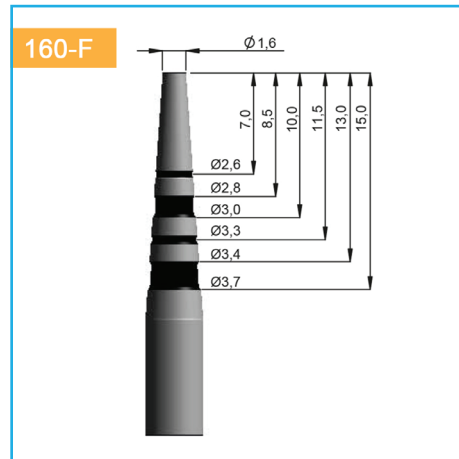


# OSTEOTOME KIT

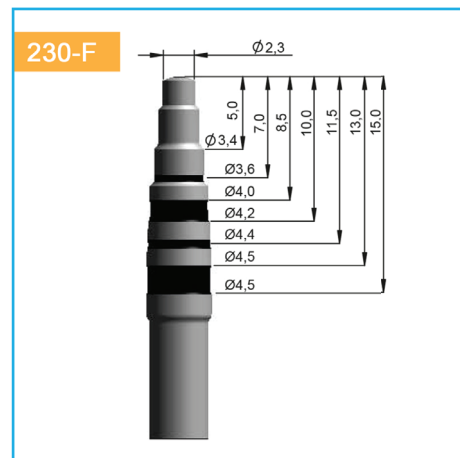
## OSTEOTOME DIA. 100 SHARP TIP



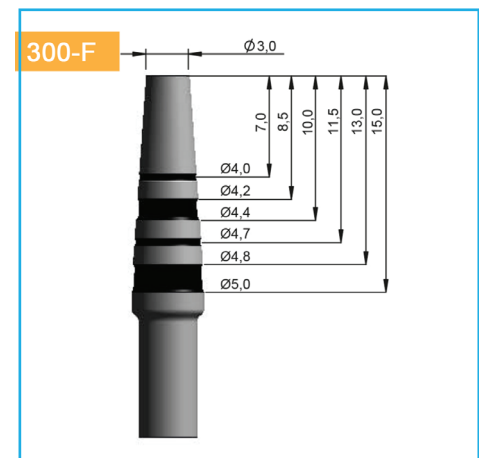
## OSTEOTOME DIA. 160



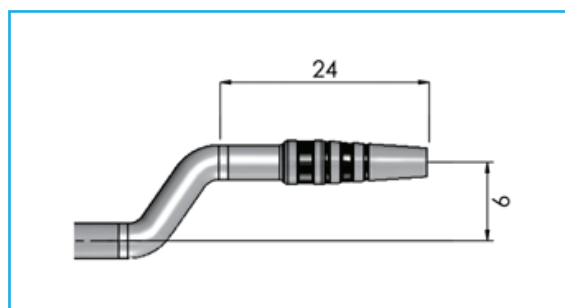
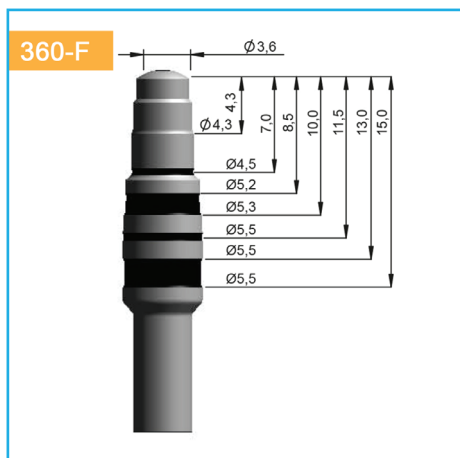
## OSTEOTOME DIA. 230



## OSTEOTOME DIA. 300



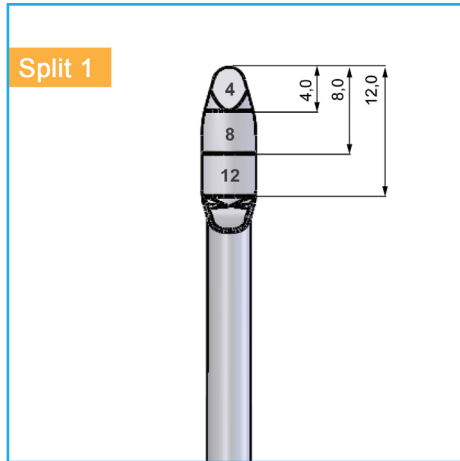
## OSTEOTOME DIA. 360



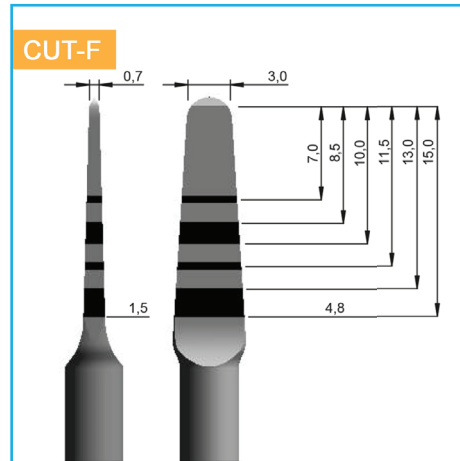
Each kit includes 10 instruments.  
The 5 shown above and 5 matching double bend  
(curved) to operate in the posterior.  
The curvature/offset is 9 mm.

# RIDGE SPLIT KIT

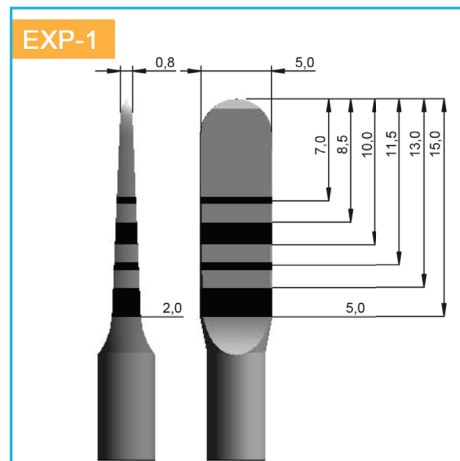
## INITIAL SPLIT BLADE



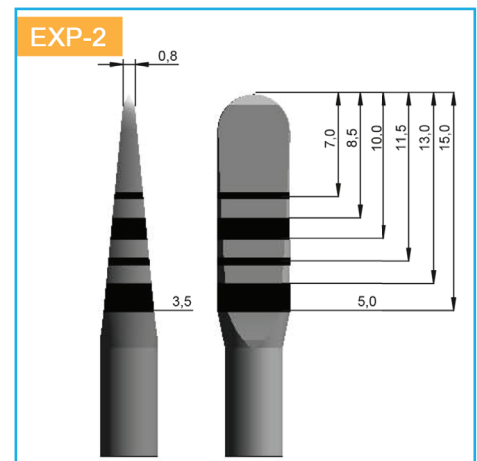
## INITIAL EXPANDER



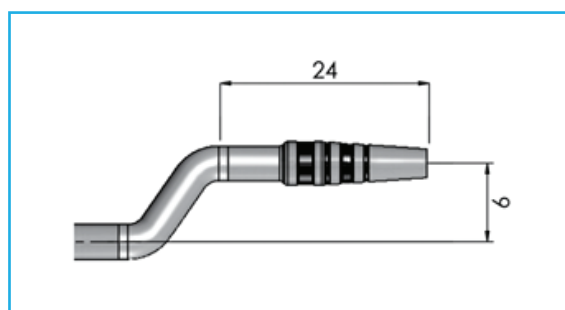
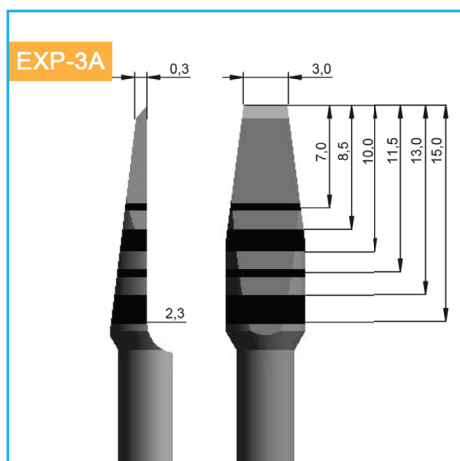
## EXPANDER 1



## EXPANDER 2



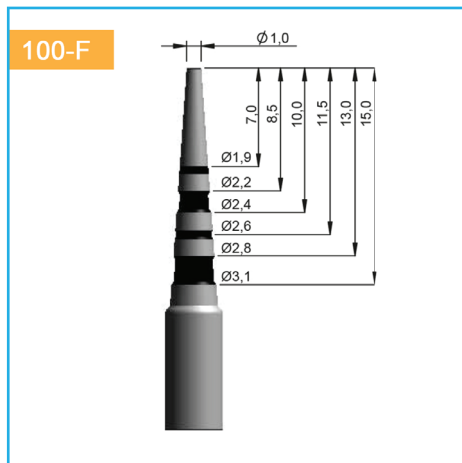
## EXPANDER 3



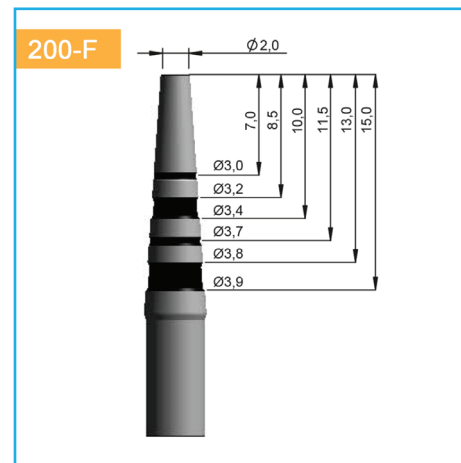
Each kit includes 10 instruments.  
The 5 shown above and 5 matching double bend (curved) to operate in the posterior.  
The curvature/offset is 9 mm.

# SPECIAL INSTRUMENTS

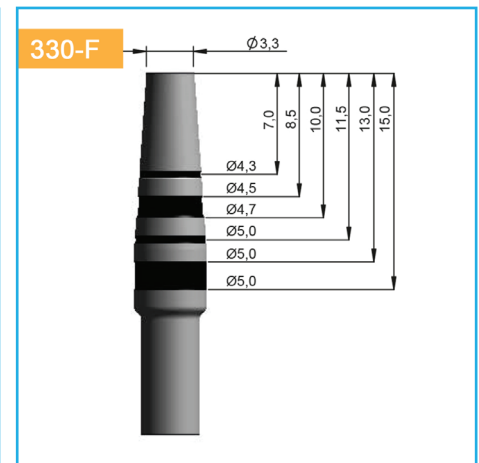
**OSTEOTOME  
DIA. 100**



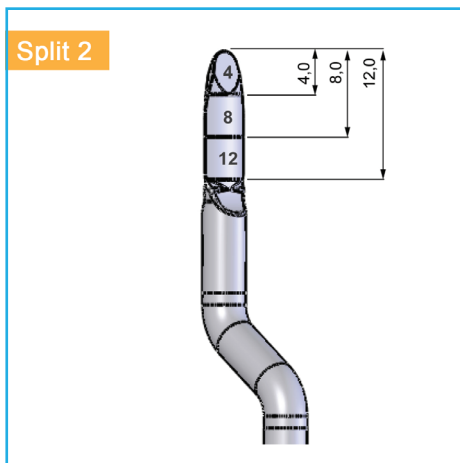
**OSTEOTOME  
DIA. 200**



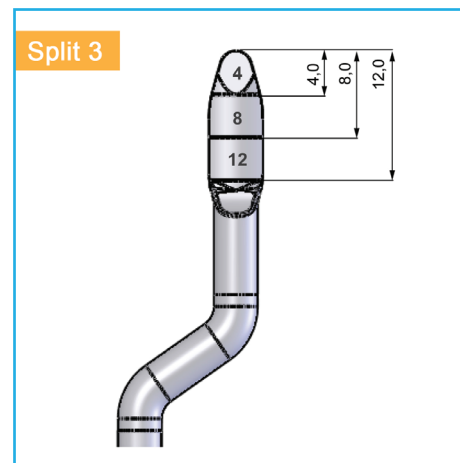
**OSTEOTOME  
DIA. 330**



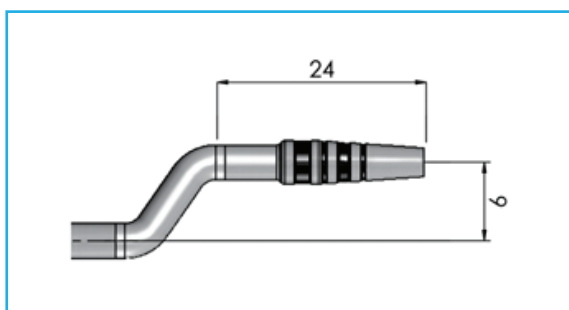
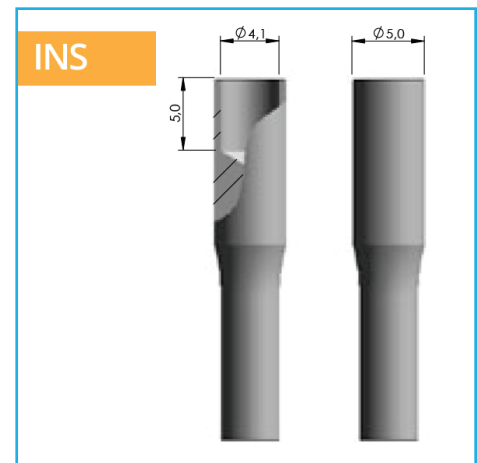
**INITIAL SPLIT  
BLADE**



**INITIAL SPLIT  
BLADE**



**IMPLANT  
INSERTER**



Each instrument is available in straight or double bend (curved) design. The curvature/offset is 9 mm.

# PLUS HANDPIECE

---

The **PLUS handpiece** delivers 30% more force compared to the standard handpiece. It provides a higher effectiveness allowing more comfort for the patient.

It is a perfect solution as second handpiece to optimize time management during sterilization of the standard handpiece and to facilitate procedures in D1 and D2 bone.

The **PLUS handpiece** is used with the same base unit and instruments as the standard handpiece.



# CROWN REMOVER

---

This **Crown Remover** handpiece is used with the regular **Magnetic Mallet** base power unit. It works in reverse and makes crown removal much easier and quicker.

The crown remover can be used with all 4 force settings available with the **Magnetic Mallet**.

It is delivered in a stainless steel case with 3 instruments specifically designed for crown and bridge removal.






**Meta Ergonomica**, located in Milan, Italy has developed and patented the use of magnetic-dynamic forces in oral surgery. Its mission is to design and manufacture medical devices that allow implementation of procedures in a controlled, precise and conservative manner.

Meta Ergonomica devices are manufactured according to TUV Rheinland Standards and are CE certified and FDA cleared.

## META ERGONOMICA

Via Monte Nero, 19  
20029 TURBIGO (MI) - ITALY  
Tel/Fax +39 331890280  
[www.magneticmallet.com](http://www.magneticmallet.com)  
[info@metaergonomica.it](mailto:info@metaergonomica.it)

 <https://www.facebook.com/magneticmallet>

 <https://www.youtube.com/magneticmalletchannel>



Management System  
EN ISO  
13485:2016

[www.tuv.com](http://www.tuv.com)  
ID 9105068970

