

米娜®骨劈开骨挤压工具箱

米娜®骨劈开/骨挤压/穿翼/修复四合一工具箱



MINA BS/BE KIT
MINA BS/BE/TPP/PC KIT

Contents

米娜骨劈开骨挤压工具箱MINA BS/BE Kit

产品介绍&使用说明 Product Introduction&Instruction for Use	01
产品构成 Components	04
米娜骨劈开骨挤压工具箱 MINA BS/BE Kit	09

米娜四合一工具箱MINA BS/BE/TPP/PC Kit

产品介绍&产品特征 Product Introduction&Product Features	10
产品构成 Components	11
米娜四合一工具箱 MINA BS/BE/TPP/PC Kit	13
工具箱管理方法 Kit Management Method	14

米娜骨劈开骨挤压工具箱

产品介绍Introduction

骨挤压手术=定位修整+防护切割+骨挤压钻

骨劈开手术=定位修整+防护切割+骨凿+有效隔离固定间隙

骨挤压+骨劈开=MINA BS/BE KIT

MINA BS/BE KIT是一套专用于牙槽嵴扩张的工具盒,可以安全便捷的进行骨劈开骨挤压等手术

MINA BS/BE KIT工具盒中,整合了骨挤压钻、骨劈开、骨凿等基础工具,可以满足多种增隙需求

骨挤压钻具有特殊的膨胀螺纹,稳定的挤压扩张,避免对牙槽嵴造成额外损伤

独有的防护切轮,定点定深切割快速成型,很好的解决了术中切割骨时,保护术外区域软组织的问题

MINA独创的骨劈开刀片,可用于骨扩张后固定牙槽骨,可以有效保持增隙后的固定间距,简单稳定

Bone expander surgery = positioning and trimming + safe cutting + bone expander drill.

Bone splitting surgery = positioning and trimming + safe cutting + osteotome + effective isolation and fixation of the gap.

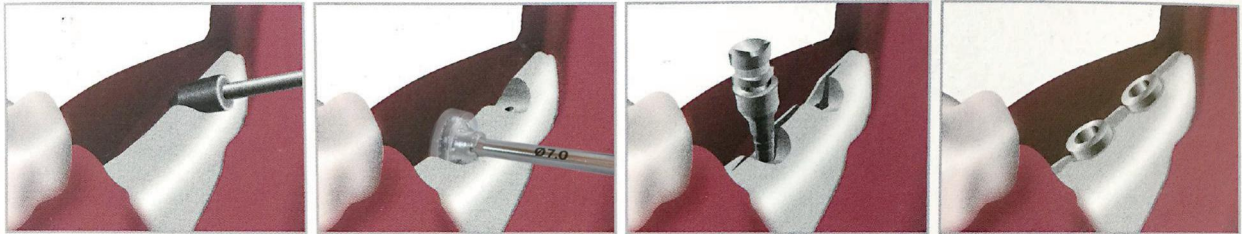
Bone expander + bone splitting = MINA BS/BE Kit.

MINA BS/BE KIT is specifically designed for alveolar ridge expansion, enabling bone splitting, bone expander etc to be carried out safely and conveniently.

In the MINA B/S KIT, basic tools such as bone expander drills, bone splitters and osteotomes are integrated, which can meet various gap expansion needs.

The bone expander drill has special expanding thread for stable expansion, avoiding additional damage to alveolar ridge. In addition, the unique protective safe disk can perform fixed-point and fixed-depth cutting for rapid shaping, effectively solving the problem of protecting the soft tissues outside surgical area when cutting bones during the operation.

The bone splitting blade independently developed by MINA can be used to fix the alveolar bone after bone expansion and can effectively maintain the fixed spacing after gap expansion, which is simple and stable.



使用MINA菠萝钻进行骨面平整,确定种植窝洞位置

Level bone surface by bone trimmer and locate planting hole

根据种植窝洞位置,使用防护切轮对骨面进行切割

Use safe disk to cut bone surface according to planting hole

置入骨挤压钻,进行骨挤压增隙

Put in bone expander drill for expansion gap

植入植体

Implant the implant

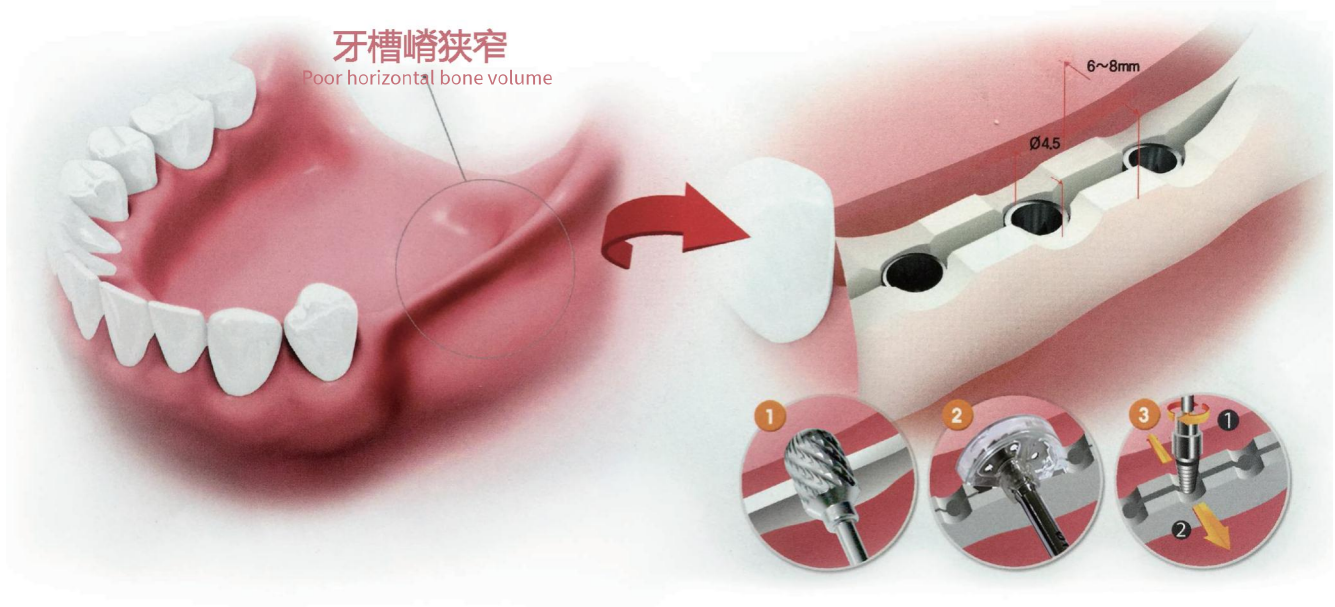


- 1.骨挤压钻:逐级扩张宽度,便于在骨量狭窄的区域植入植体
- 2.防护切轮:用于横向切割骨量狭小的空间,特有的防护罩,有效避免误伤其他部位
- 3.菠萝钻:用于修整骨平面、平整骨吸收严重的牙槽嵴
- 4.骨挤压钻扳手用延长杆:连接扳手,延长骨挤压钻
- 5.骨挤压钻机用延长杆:将骨挤压钻连接种植手机上使用
- 6.骨挤压钻手动延长杆:手动拧入或取出骨挤压钻时使用
- 7.骨劈开骨凿:选择植体植入位置,手动敲击扩张牙槽骨,增加狭窄区域间隙
- 8.骨劈开刀片:固定已增隙的骨壁,防止闭合

1. Bone expander drill: It expands the width step by step, facilitating the implantation of implants in areas with narrow bone mass.
2. Safe disk: It is used for horizontal cutting in spaces with narrow bone mass. Its unique protective cover effectively prevents accidental injuries to other parts.
3. Bone trimmer: It is used to trim the bone plane and level the alveolar ridge with severe bone resorption.
4. Ratchet extension: It is used to connect the wrench and extend the bone expander drill.
5. Machine extension: It is used to connect the bone expander drill to the implant handpiece for use.
6. Manual extension: It is used when manually screwing in or removing the bone expander drill.
7. Bone chisel: It is used to select implantation position, manually tap to expand the alveolar bone and increase the gap in narrow areas.
8. Bone splitting blade: It is used to fix the bone wall that has already had its gap increased and prevent it from closing.

MINA BS/BE KIT 牙槽嵴狭窄的完美解决方案

Perfect Solution for Poor Horizontal Bone Volume Problem



MINA BS/BE KIT 骨劈开骨挤压工具箱

MINA BS/BE KIT在进行骨增隙手术时提高了初期稳定性,且相比GBR骨形成速度快,愈合时间短且二次感染风险低,减少患者不适,性价比更高

MINA BS/BE KIT Bone Splitting and Bone Expander Kit

When performing bone gap expansion surgeries, MINA BS/BE KIT improves the initial stability. Moreover, compared with GBR (Guided Bone Regeneration), it has a faster bone formation speed, a shorter healing time, a lower risk of secondary infection, reduces patients' discomfort and offers a higher cost-performance ratio.

产品介绍 Introduction

1. 操作简单, 减短手术时间, 提高手术效率
 2. 骨挤压钻为特殊研磨加工, 使用寿命长, 挤压速度快
 3. 骨挤压钻有多种尺寸, 选择适合规格, 可安全方便的进行挤压
 4. 骨挤压钻采用特殊膨胀螺纹设计, 更加精确的挤压、膨胀受植区骨床, 微创完成骨挤压增宽术
 5. 螺纹经特殊设计, 毫无切削功能, 操作时, 可均匀挤压周边骨质, 达到微创完成骨挤压
1. It's easy to operate, which can reduce the operation time and improve efficiency.
 2. The expander drill is processed by special grinding, featuring a long service life and a fast expansion speed.
 3. There are various sizes available for the expander drill. By choosing a suitable size for trial use, expansion can be carried out safely and conveniently.
 4. The bone extrusion drill adopts a special expanding thread design, enabling more precise expansion of the bone bed in the recipient area and allowing the bone expansion and widening procedure to be completed minimally invasively.
 5. The thread is specially designed without any cutting function. During operation, it can evenly expand the surrounding bone tissue, achieving minimally invasively bone expansion.

使用方法 Usage



牙槽嵴的水平宽度至少3mm-4mm
菠萝钻: $\Phi 7.0$
推荐转速: 1200-1500rpm
The horizontal width of the alveolar ridge needs to be greater than 3mm-4mm.
Bone trimmer: $\Phi 7.0$
Recommended speed: 1200 - 1500rpm



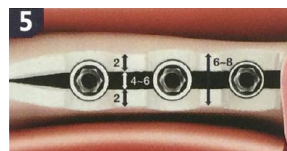
按顺序用成形钻扩孔后达到骨扩增效果。
• 骨挤压钻: 按照EXD25-EXD45的顺序依次使用。
• 推荐转速: 25~35rpm
• 种植机推荐扭矩: 35Ncm以下
[注意] 扭矩过大时种植机和手机会卡住, 所以扭矩过大时提前连接延长器。
Achieve the effect of bone augmentation by sequentially using forming drills to enlarge the holes.
• Bone expander drills: Use them in the order of EXD01 - EXD05 one by one.
• Recommended speed: 25 - 35 rpm
• Recommended torque for the implanter: Below 35 Ncm
[Note] When the torque is too large, the implanter and the handpiece will get stuck. So when the torque is too large, connect the extender in advance.



1. 在要种植的区域做标记
• 菠萝钻: $\Phi 7.0$ (半径 3.5mm)
• 定位钻定点: 若要种植的部位是35-37, 第一个种植位点和第二个种植位点分别是离邻牙5.0mm和7.0mm的位置。

2. 定点

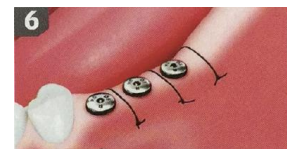
定位钻
1. Mark the area where the implant is to be placed.
• Bone trimmer: $\Phi 7.0$ (with a radius of 3.5 mm).
• Guide drill for positioning: If the tooth positions to be implanted are 35 - 37, the first implant site and the second should be at positions 5.0 mm and 7.0 mm away from adjacent teeth respectively.
2. Positioning
Guide drill.



植入锥形种植体。
• 标准骨: 4.5mm的种植体
• 硬骨: 4.0的种植体
Implant the tapered implant.
• For standard bone: Use an implant with a diameter of 4.5 mm.
• For dense bone: Use an implant with a diameter of 4.0 mm.



1. 用 $\Phi 10.0$ 的切轮全长预备垂直切口线。
2. 在牙槽嵴顶上从远中到近中预备水平切口线。
3. 另外在邻牙周围用 $\Phi 7.0$ 的切轮预备切口线
• 切轮: $\Phi 7.0$, $\Phi 10.0$
• 推荐转速: 1200-1500rpm
1. Use $\Phi 10.0$ safe disk to prepare the vertical incision line along its entire length.
2. Prepare the horizontal incision line from the distal to the mesial on the alveolar ridge crest.
3. Additionally, use $\Phi 7.0$ safe disk to prepare the incision line around the adjacent teeth.
• Safe disk: $\Phi 7.0$, $\Phi 10.0$
• Recommended speed: 1200 - 1500 rpm



连接愈合基台后缝合
• 愈合基台要露出龈上2mm
Suture after connecting the healing abutment.
• The healing abutment should be exposed 2 mm above the gingiva.

构成 Components

01 骨挤压钻 (Bone Expander Drill)

- 采用特殊膨胀螺纹设计, 毫无切削功能, 操作时可均匀挤压周边骨质, 达到微创完成骨挤压、骨膨胀的目的, 更加精确的挤压、膨胀受植区骨床, 微创完成骨挤压、增宽术
- 为了在骨幅量狭窄的区域植入植体, 用骨扩张器逐级扩张骨宽度
- 推荐扭力: 25-40Ncm

• It adopts a special expanding thread design without no cutting function. During operation, it can evenly expand the surrounding bone tissue, achieving the purpose of minimally invasive bone expansion and bone expansion. It can more precisely expand the bone bed in the recipient area, and complete the bone compaction and widening procedure with minimal invasion.

- In order to implant in an area with a narrow bone width, a bone expander is used to gradually expand the bone width.
- Recommended torque: 25 - 40Ncm.

型号 (Model)	EXD25	EXD30	EXD35	EXD40	EXD45	
规格 (Spec)	1.8/2.5	2.0/3.0	2.5/3.5	2.8/4.0	3.0/4.5	
Bone Expander Drill						25.5mm
						15mm

- 规格为钻尖直径/钻身直径
The spec represent diameter of drill tip/body

02 定位钻 (Splitting Drill)

- 为放入骨挤压钻制备窝洞, 保证扩张位置的准确性
- To prepare the cavity for inserting the bone expander drill to ensure the accuracy of the expanded position.

型号 (Model)	STD20
规格 (Spec)	Ø 2.0mm
Splitting Drill	

03 骨挤压钻机用延长杆 (Machine Extension)

- 用于将骨挤压钻连接到种植手机上使用
- It is used to connect the bone expander drill to implanter for use.

型号 (Model)	SAT01	
Machine Extension		

04 骨挤压钻扳手用延长杆 (Ratchet Extension)

- 用于延长骨挤压钻, 连接到扭力扳手使用
- It is used to extend the bone expander drill and connect to torque wrench for use.

型号 (Model)	SAT02	
Ratchet Extension		

05 骨挤压钻手动延长杆 (Manual Extension)

- 用于延长骨挤压钻, 手动旋转使用
- It is used to extend the bone expander drill by manual rotation.

型号 (Model)	SAT03	
Manual Extension		

06 防护切轮 (Safe Disk)

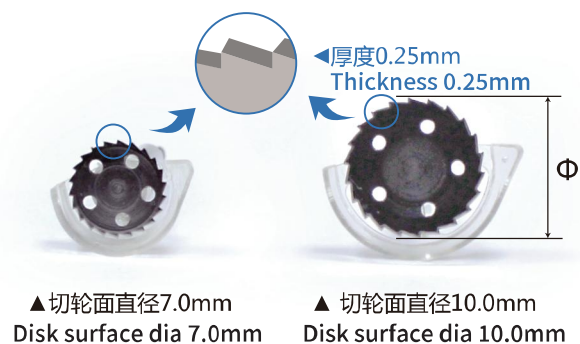
- 防护切轮直径分别7mm、10mm(D)
- 防护切轮总长23mm
- 推荐转速1200-1500rpm
- There are 7 mm and 10 mm diameter of safe disks.
- Total length of safe disk is 23 mm.
- Recommended speed: 1200-1500rpm.

型号 (Model)	SFD07	SFD10
D (mm)	Ø 7.0	Ø 10.0
HL (mm)	23	23



切轮刃部拥有良好的切削能力和高强性能
使用多次后都可以锋利如初
特有防护装置，安全放心

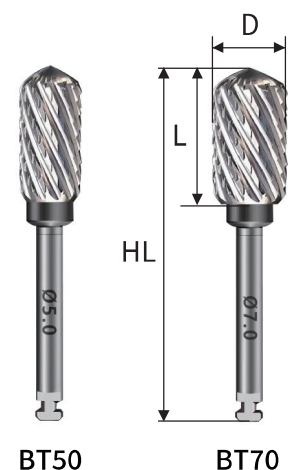
The cutting edge has excellent cutting ability and high strength performance, and it can remain sharp as before even after used multiple times
Equipped with a special protective device, it is safe and reassuring.



07 菠萝钻 (Bone Trimmer)

- 菠萝钻直径5mm和7mm (D)
- 菠萝钻工作端长度11mm、13mm (L)
- 菠萝钻总长29mm
- 推荐转速1200-1500rpm
- The diameter of bone trimmer is 5mm and 7mm (D) .
- Working end length is 11mm and 13mm (L) .
- Total length is 29 mm.
- Recommended speed: 1200-1500rpm.

型号 (Model)	BT50	BT70
D (mm)	Ø 5.0	Ø 7.0
L (mm)	11	13
HL (mm)	29	29



08 棘轮扳手 (方孔) Ratchet Wrench (Square Hole)

- 可以连接骨挤压钻扳手用延长杆, 以及骨挤压钻, 便于手动操作
- It can be connected with the ratchet extension and bone expander drill to facilitate manual operation.

型号 (Model)	SRW02
Ratchet Wrench (Square Hole)	

09 骨劈开骨凿 (直) (Bone Chisel Straight)

- 骨劈开工具, 劈开牙槽骨的直骨凿
- 带有刻度, 便于术中观察劈开深度
- 可以方便快捷的进行骨劈开手术
- Bone splitting tool, a straight chisel for splitting the alveolar bone;
- It is convenient to observe the splitting depth during the operation with graduations;
- Perform the bone splitting surgery conveniently and quickly.

型号 (Model)	CS25
宽度 (Width)	4mm
Bone Chisel Straight	

10 骨劈开骨凿 (弯) (Bone Chisel Curved)

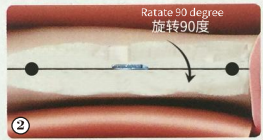
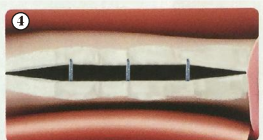
- 骨劈开工具, 劈开牙槽骨的弯骨凿
- 带有刻度, 便于术中观察劈开深度
- 更适用于直骨凿不易接触到的后牙区
- Bone splitting tool, a curved chisel for splitting the alveolar bone;
- It is convenient to observe the splitting depth during the operation with graduations;
- More suitable for the posterior tooth area where the straight chisel is not easily accessible.

型号 (Model)	CA15
宽度 (Width)	4mm
Bone Chisel Curved	

11 骨劈开刀片 (Bone Splitting Blade)

- 骨劈开工作后，用牙骨锤敲击至牙槽骨中，防止间隙合拢
- 如增隙距离较大，可在插入骨劈开刀片后将其旋转 90 度，以其辅助功能，形成较大的格挡空间
- 自身具有牢固、可靠的优点，有助于骨劈开手术的顺利进行

- After the bone splitting, use to strike it into the alveolar bone to prevent the gap from closing.
- If the gap widening distance is large, after inserting the bone splitting blade, it can be rotated 90 degrees to use its auxiliary function to form a larger blocking space.
- It has the advantages of firmness and reliability, which is conducive to bone splitting surgery.

型号 (Model)	WDP01	
厚度 (Thickness)	1.0mm	
Bone Splitting Blade		   

12 骨挤压手用扳手 (Handle Wrench)

- 用于连接骨挤压钻和方孔延长杆的扳手
- 手用扳手可以更精细地操作，避免因力量过大而损伤神经血管，保证手术的安全性

- A wrench used to connect the bone expander drill and square extension.
- The handle wrench can operate more delicately, avoid damaging nerves and blood vessels due to excessive force and ensure safety of the operation.

型号 (Model)	BEW01
Handle Wrench	

米娜骨劈开骨挤压工具箱 (MINA BS/BE Kit)



EXD25



EXD30



EXD35



EXD40



EXD45



STD20



SAT01



SAT02



SAT03



SFD07



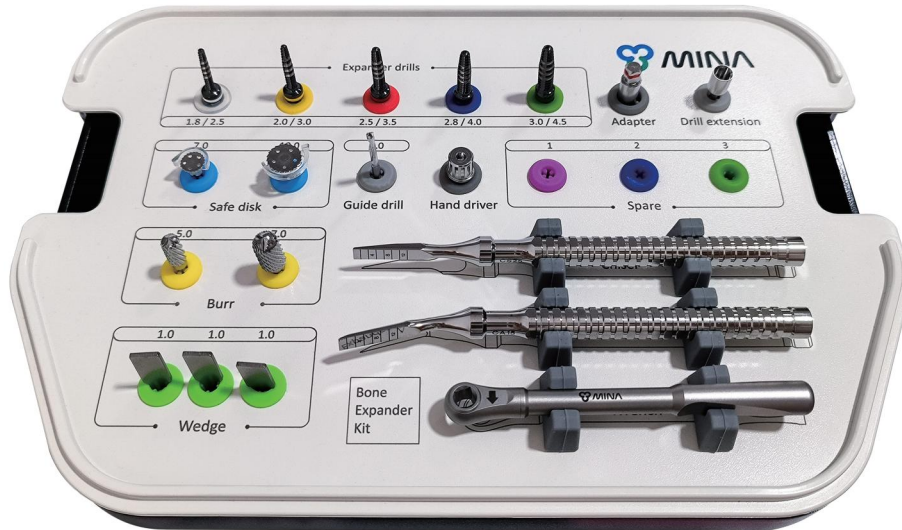
SFD10



BT50



BT70



WDP01



CS25



CA15



SRW02



BEW01

MINA BS/BE/TPP/PC KIT

米娜四合一工具箱

产品介绍Introduction

本工具盒集合了骨劈开 (BS)、骨挤压 (BE)、穿翼 (TPP)、修复 (PC) 四种功能, 涵盖了从牙槽嵴扩张、种植体植入到后期修复等多个关键牙科手术环节, 满足多样化手术需求, 无需在不同手术阶段更换多个独立工具盒, 提高手术效率, 节约成本, 方便快捷

BS骨劈开、BE骨挤压专用于牙槽嵴扩张的工具盒, 可以安全便捷的进行骨劈开骨挤压等手术, 整合了骨挤压钻、骨劈开、骨凿等基础工具, 可以满足多种增隙需求

TPP穿翼配备持钉器, 持钉器头部与种植体的连接部分精确匹配, 能够将种植体准确地旋入预先制备好的骨洞内, 提高种植体植入的精准度, 有利于种植体稳定性和手术成功率。骨凿标有详细尺寸, 为精度手术提供了量化依据, 医生可依据手术部位具体需求, 精准操作骨凿对骨组织进行修整, 适用于对操作精度要求高的穿翼手术

PC修复数据精准, 高等级医用不锈钢制造, 型号齐全, 无需额外寻找适配工具, 即可完成二期修复, 提高手术连贯性

This kit integrates four functions, namely bone splitting (BS), bone expansion (BE), trans-zygomatic pterygoid (TPP), and prosthesis (PC). It covers several key dental surgery procedures from alveolar ridge expansion, implant insertion to later-stage prosthesis, meeting diverse surgical needs. There is no need to replace multiple independent kit during different surgical stages, which improves efficiency, saves costs, and is convenient and fast.

The BS bone splitting and BE bone expansion toolbox, which is specifically designed for alveolar ridge expansion, enables safe and convenient operations such as bone splitting and bone expansion. It integrates basic tools like bone expander drills, bone splitters, and chisels, and can meet various space-increasing requirements.

The TPP kit is equipped with screw holders. Connection between the head of screw holder and the implant is precisely matched, enabling the implant accurately screwed into pre-prepared bone cavity, improving the precision of implant insertion and contributing to the stability of the implant and the success rate of the surgery. The chisels is marked with detailed dimensions, providing a quantitative basis for precision surgeries. Doctors can precisely operate the chisels to trim the bone tissue according to the specific requirements of surgical site, suitable for trans-zygomatic pterygoid surgeries that require high operational precision.

The PC prosthetic tool is characterized by accurate data, manufactured from high-grade medical stainless steel, and has a complete range of models. It can complete the second-stage prosthesis without additional tools, improving the continuity of surgery.

产品特征Characteristics

1. 功能集成, 四种功能结合, 满足多样化手术需求
2. 牙槽嵴扩张安全便捷
3. 穿翼精准度高
4. 修复优质高效

1. Integrated functions: Combines four functions to meet diverse surgical needs.
2. Safe and convenient alveolar ridge expansion.
3. High precision in trans - pterygoid procedures.
4. High - quality and efficient prosthesis.

构成 Components

01 种植体持钉器(Implant Holder)

- 顶部与骨挤压扳手连接，尾部与相对应种植体精确匹配
- The top is connected to handle wrench, and the tail is precisely matched with the corresponding implant.

型号 (Model)	FDN223	FDN263	FDS298	FDD248	FDO246	FDC241
D (mm)	1.2	1.5	1.3	1.3	1.5	1.5
Implant Holder						
	24.8					
适用品牌 Applicable Brands	诺宝NP NOBEL	诺宝RP NOBEL	士卓曼 STRAUMANN	登腾 DENTIUM	奥齿泰 OSSTEM	以色列 ISRAEL

02 机用修复螺丝刀(Machinery Prosthetic Driver)

- 机用修复螺丝刀配备M119\M12\M125\M127\MT5\MT6型号满足多种手术需求
- 螺丝刀长30mm
- The machinery prosthetic driver is equipped with M119, M12, M125, M127, MT5, and MT6 restoration screwdrivers to meet various surgical needs.
- The length is 30mm.

型号 (Model)	M119	M12	M125	M127	MT5	MT6
规格 (Spec)	1.19	1.2	1.25	1.27	T5	T6
Machinery Prosthetic Driver						
适用品牌 Applicable Brands	仕诺康 SNUCONE	奥齿泰 OSSTEM	科特斯 CORTEX	登腾 DENTIUM	诺贝尔 NOBEL	士卓曼 STRAUMANN

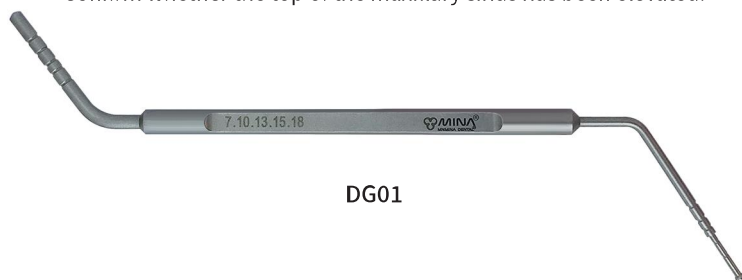
03 扳手用延长杆(Wrench Condenser)

- 用于延长机用钻头, 连接扭力扳手使用
- It is used to extend the machine drill and is connected to the torque wrench for use.

型号 (Model)	SAT04
Wrench Condenser	  

04 测深尺(Double Headed Depth Gauge)

- 测量残存骨厚度
- 确认顶部上颌窦是否提升
- Measure the thickness of remaining bone.
- Confirm whether the top of the maxillary sinus has been elevated.

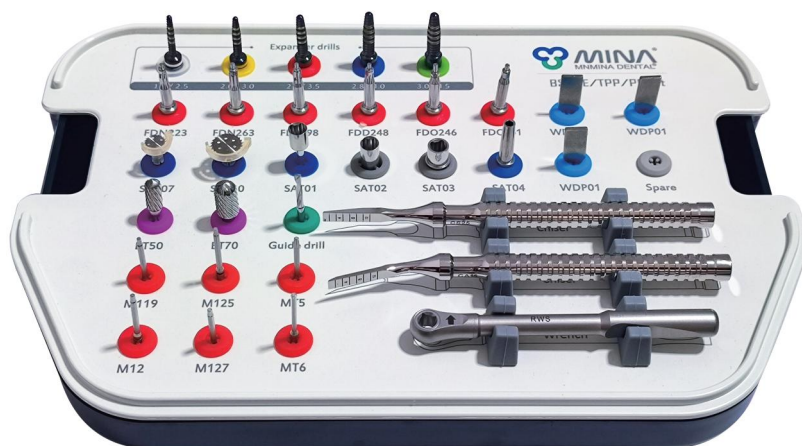
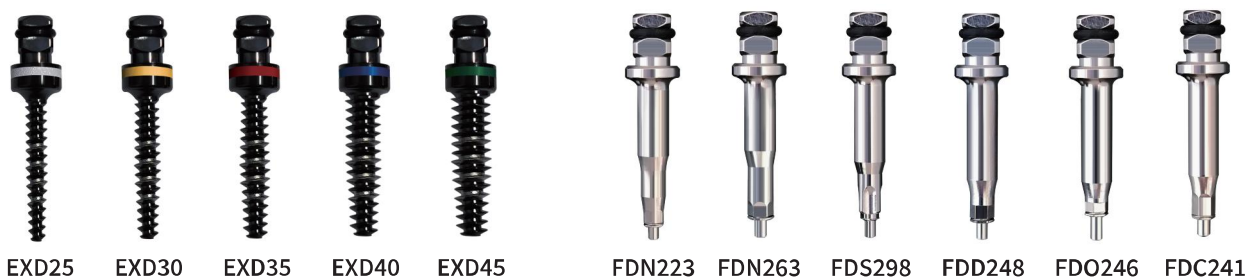


05 穿翼手用锥(Bodkin)

- 穿翼定位用扳手
- 手用扳手可以更精细地操作, 避免因力量过大而损伤神经血管, 保证手术的安全性
- Wrench for trans - pterygoid positioning.
- Manual wrenches enable more precise operation. They can prevent damage to nerves and blood vessels caused by excessive force, ensuring the safety of surgery.

型号 (Model)	BEW02
Bodkin	

米娜四合一工具盒 (MINA BS/BE/TPP/PC Kit)



CS25



CA15



SRW02



DG01



BEW02



BEW01

工具箱管理方法

工具盒管理方法(Kit Management Method)

- ① 所有工具使用完毕后,都要立即浸泡在消毒液中几分钟,避免碎片粘在工具上
注意:不能浸泡过夜。不可使用过氧化氢浸泡,因为过氧化氢会使工具标识变色
- ② 请用软毛刷仔细刷洗工具,直到清洗干净所有碎片
- ③ 请使用钻孔器或者计量注射针来清洗钻头内部
- ④ 如果使用超声波清洗仪,在清洗前,请用干净的纱布将钻头包起来,避免工具钻头互相摩擦
- ⑤ 请使用消毒液清洗所有的底座和盖子
- ⑥ 请在温水中全面地仔细清洗所有的工具、托盘和盖子
- ⑦ 完全干燥后请仔细检查,确认工具没有任何的损坏和腐蚀
- ⑧ 请把所有的工具按照正确的位置标示放回工具盒里的托盘上
- ⑨ 请用消毒袋将工具箱密封
- ⑩ 请把工具箱放在134℃的蒸汽压锅中消毒15分钟,或者参考生产厂家的其他建议
- ⑪ 请把工具箱放在干燥、干净的区域,室温保存

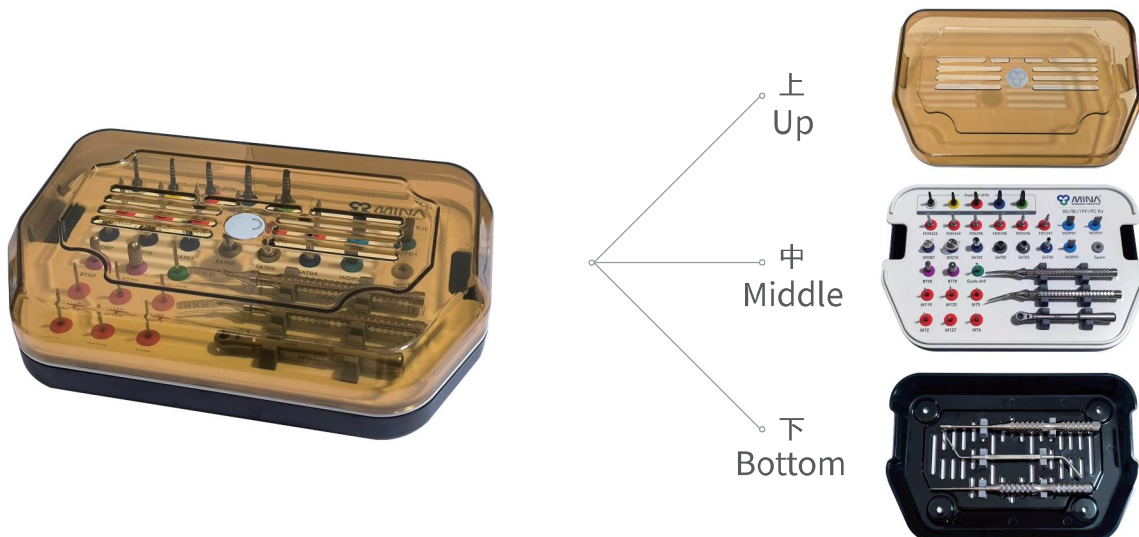
注意事项:

手术后请将所使用的器具及时分离清洗,外科手术器具在手术前建议再进行一次消毒
(温度: 134℃ 时间: 15分钟)

- ① After using all the tools, immerse them in the disinfectant solution immediately for a few minutes to avoid debris sticking to the tools.
Note: Do not soak them overnight. Do not use hydrogen peroxide for soaking, as hydrogen peroxide will cause the tool markings to change color.
- ② Please use a soft-bristled brush to scrub the tools carefully until all debris is removed.
- ③ Please use a drill or a measuring injection needle to clean the inside of the drill bits.
- ④ If an ultrasonic cleaner is used, please wrap the drill bits with clean gauze before cleaning to avoid friction between the tool drill bits.
- ⑤ Please use disinfectant solution to clean all bases and lids.
- ⑥ Please thoroughly and carefully clean all tools, trays and lids in warm water.
- ⑦ After complete drying, please check carefully to confirm that there is no damage or corrosion on the tools.
- ⑧ Please put all the tools back onto the trays in the toolbox according to the correct position markings.
- ⑨ Please seal the toolbox with a sterilization bag.
- ⑩ Please sterilize the toolbox in a steam autoclave at 134 °C for 15 minutes, or refer to other suggestions from the manufacturer.
- ⑪ Please store the toolbox in a dry and clean area at room temperature.

Precautions:

After the operation, please separate and clean the used instruments in a timely manner. It is recommended to disinfect the surgical instruments once again before the operation (temperature: 134 °C, time: 15 minutes).





Company Name: Mapleisland Medical Technology (Qingdao) Co., Ltd.
Address: 77 Keyun Rd, Hi-tech Zone, Qingdao City, Shandong Prov., China
Postal Code: 266114
Mobile: +86-15308385888
Office Tel: +86-532-80963040
Email : mapleisland2024@163.com
WS: www.mnmina.com



Made in China