MINA
MNMINA DENTAL®

米娜®三合一失败取出工具盒

MINA Fixture&Screw Remover Kit

Edition2025

MINA
MNMINA DENTAL®

Contents

产品介绍 Introduction

种植体折断、骨结合情况差、发生骨吸收、植入扭力过大等情况，都是可能导致种植手术失败的原因。而受力不均、扭矩过大、未精确就位等问题，则是导致基台以及中央螺丝折断的首要因素，如何快速安全的取出，直击病灶，成为医师们面临的难题

MINA三合一失败取出工具盒用于取出损坏、断裂的种植体、基台以及螺丝，可以轻松应对各种种植失败场景，是一款多功能应急综合套装。区别于环钻、球钻、以其他手术器械，MINA三合一失败取出工具盒可以在取出时，尽可能保留稳定种植初始环境，避免骨量流失或破坏配件的原始螺纹，减少因取出过程对其他配件造成伤害

Situations like implant fracture, poor osseointegration, occurrence of bone resorption and excessive implant insertion torque are all possible causes for the failure of implant surgeries. And issues such as uneven stress, excessive torque and inaccurate positioning are the primary factors that lead to the fracture of abutments and central screws. How to quickly and safely remove them and directly address the affected areas has become a difficult problem faced by dentists.

The MINA three-in-one failure removal kit is used to remove damaged and fractured implants, abutments and screws. It can easily handle various implant failure scenarios and is a multifunctional emergency comprehensive kit. Different from trephine drills, round burs and other surgical instruments, the MINA three-in-one failure removal kit can preserve the initial stable implant environment as much as possible during the removal process, avoid bone loss or damage to the original threads of the components, and reduce the harm caused to other components during the removal process.

产品特征 Features

1.集失败种植体、折断基台、断裂螺丝取出于一体,方便快捷

2.所有种植体系统均可适用,万能应急好帮手

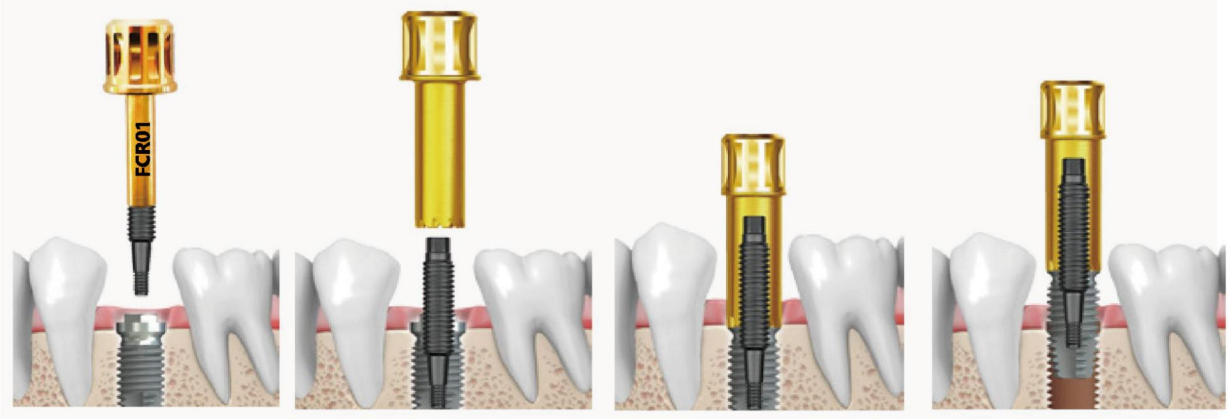
3.三步操作,立时取出,简单高效解决棘手问题,节约手术时间,缓解患者心理压力

4.微创移除失败种植体,避免环钻、球钻的使用,不破坏周边骨质,缩短术后愈合时间甚至可以即刻负重

5.两种取出中央螺丝/基台螺丝的方法,多种方法的尝试,增加修复成功率

6.螺丝取出时,根据种植体系统选择合适的导位器,精准定位打孔,保护种植体内部螺纹

1. It integrates the removal of failed implants, fractured abutments and broken screws into one, which is convenient and fast.
2. It is applicable to all implant systems and is a great helper for universal emergency situations.
3. With just three steps, it can remove them immediately, simply and efficiently solving thorny problems, saving time and relieving the psychological pressure of patients.
4. It can remove failed implants minimally invasively, avoid the use of trephine drills or round burs, without damaging the surrounding bone, shortening the postoperative healing time and even enabling immediate loading.
5. There are two methods for removing central screws/abutment screws. The attempt of multiple methods can increase success rate of restoration.
6. When removing screws, select an appropriate guide according to the implant system, accurately position and drill holes to protect the internal threads of the implant.



构成 Component

01 种植体连接杆(Fixture Connector)

•选择合适规格,连接失败种植体与种植体取出器。
•型号中的M表示公制螺丝,数字表示螺丝外径
如M1.4即代表外径为1.4mm的公制螺丝,以此类推
UNF表示美制细牙螺纹
• Select appropriate specification and connect the failed implant with the implant remover.
• The "M" in the model represents metric screw, and the number indicates outer diameter. For example, M1.4 represents a metric screw with an outer diameter of 1.4 mm, and so on.
"UNF" stands for Unified National Fine (thread), which is an American fine thread.

型号 Model	FCM14	FCM16	FCM18	FCM20	FCU72
					
	M1.4	M1.6	M1.8	M2.0	1-72UNF

•借助连接杆螺丝刀和棘轮扳手,顺时针旋入种植体。失败种植体取出后,逆时针旋转与其分离
• With the help of connector screw driver and ratchet wrench, screw the implant clockwise. After the failed implant is removed, rotate it counterclockwise to separate it.

02 种植体取出器(Fixture Remover)

•与种植体连接杆相连,手动取出失败种植体,配合棘轮扳手使用
• Connect it with the fixture connector, manually remove the failed implant, with combination of ratchet wrench.

•逆时针方向旋转与种植体连接杆相连,逆时针旋转取出失败种植体,取出失败种植体后,顺时针旋转与连接杆分离
•Rotate counterclockwise to connect with the connecting rod of the implant. Then rotate counterclockwise to remove the failed implant. After the failed implant is removed, rotate clockwise to separate from the fixture connector.

表格:根据种植体的平台直径选择合适的种植体取出器
Table: Select the appropriate fixture remover according to the platform diameter of the implant.

直径 Diameter	迷你 Mini		常规 Normal		宽径 Wide	
L (mm)	15mm	20mm	15mm	20mm	15mm	20mm
Fixture Remover						
型号 Model	FRN15	FRN20	FRR15	FRR20	FRW15	FRW20

03 连接杆螺丝刀(Connector Screw Driver)

·用于种植体和种植体连接杆之间的连接和分离，保证结合稳固、能够轻松取下，方便手动操作，配合棘轮扳手使用
·型号:FCR01
★顺时针旋转与种植体连接杆相连

·It is used for connection and separation between implant and the connecting rod, ensuring a firm combination, enabling easy removal, facilitating manual operation and in combination with ratchet wrench.
·Model: FCR01
★Rotate clockwise to connect with implant connecting rod.

FCR01

04 取基台螺丝刀(Abutment Driver)

·用于失败基台的取出，连接棘轮扳手使用
·型号:ARR01、ARR02、ARR03
★进行取出失败基台操作时，逆时针旋转

· It is used for the removal of failed abutments and is used in combination with ratchet wrench.
·Model:ARR01,ARR02,ARR03
★Rotate counterclockwise when removing failed abutments.· It is used for the removal of failed abutments and is used in combination with ratchet wrench.
·Model:ARR01,ARR02,ARR03
★Rotate counterclockwise when removing failed abutments.

*由于本产品工作原理是与取出部位高扭力、相互反作用力，会产生一定概率的损坏，为了提高工作效率，建议为一次性用品，请勿重复使用
Due to the working principle involves high torque and counter-acting forces at the extraction site, there is a certain probability of damage.
To improve work efficiency, it is recommended to use as once-only. Do not reuse it.

ARR01 ARR02 ARR03

05 圆棘轮扳手Ratchet Wrench (Round Hole)

·配合种植体取出器、连接杆螺丝刀、取基台螺丝刀等多种手用工具，完成取出种植体和基台的工作
·旋入和取出过程都应缓慢施力，避免对患者产生额外损伤
型号：SRW01

. Cooperate with various manual tools such as implant remover, connectoe screw driver, abutment driver etc. to remove implant and abutment.
· Apply force slowly during both screwing-in and removal processes to avoid causing additional damage to patients.
·Model:SRW01

SRW01

06 Bar钻(Bar Bur)

·用于取出断裂螺丝，是最简单快捷、优先考虑的取出工具
使用时需配合导位器使用

★取出方向:反转
推荐转速:≤30rpm
*由于本产品工作原理是与金属螺丝高速旋转，会产生一定的损耗，为了提高工作效率
建议为一次性用品，请勿重复使用

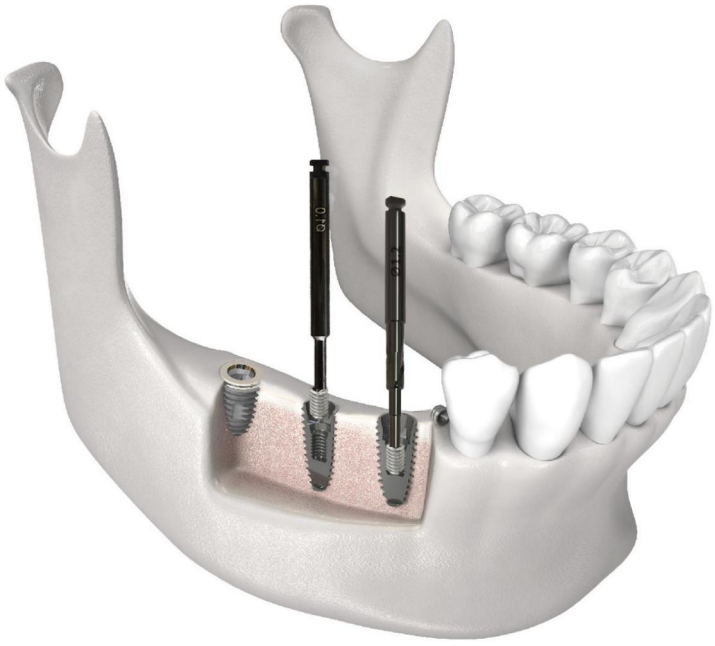
· It is used for removing broken screws and is the simplest, quickest and the preferred removal tool. It needs to be used in combination with a guide when in use.

★ Removal direction: Reverse.
Recommended rotational speed: ≤ 30 rpm.
* Since the working principle of this product involves high-speed rotation with metal screws, certain wear and tear will occur. To improve work efficiency, it is recommended to use as once-only. Do not reuse it.

MRB14

07 成孔钻(Screw Remover)

·如Bar钻无法取出断裂螺丝，可以使用成孔钻在螺丝断面上钻孔，形成新的内螺纹，便于反转取出器下一步工作
If the Bar bur fails to remove the broken screw, you can use the remover drill to drill a hole on fracture surface of the screw to form a new internal thread, which will facilitate next work of the reverse remover.



MRD10 MRD12 MRD08
(选配Selected)

·MRD08、MRD10和MRD12分别适用于窄平台和常规平台螺丝,钻孔时配合导位器使用
★钻孔方向:反转
推荐转速:800-1000rpm
*由于本产品工作原理是与金属螺丝高速旋转，会产生一定的损耗，为了提高工作效率，建议为一次性用品，请勿重复使用

· MRD08, MRD10 and MRD12 are respectively applicable to screws on narrow platforms and regular platforms. Use them in combination with a guide when drilling holes.
★ Drilling direction: Reverse.
Recommended speed: 800 - 1000 rpm.
* Since the working principle of this product involves high-speed rotation with metal screws, certain wear and tear will occur. To improve work efficiency, it is recommended to use as once-only. Do not reuse it.

08 反转取出器(Reverse Bur)

•通过成孔钻备好的孔洞，将反转取出器旋入断裂螺丝，以达到取出失败螺丝的目的

•前端有特殊的锥度设计，更好的贴合成孔钻形成的内螺纹，有效增加摩擦力

MRT10

★取出方向:反转

推荐转速:≤85rpm

*由于本产品工作原理是与金属螺丝高速旋转，会产生一定的损耗，为了提高工作效率建议为一次性用品，请勿重复使用

• Screw the reverse bur into the broken screw through the hole prepared by the remover drill, so as to achieve the purpose of removing the failed screw.

• There is a special taper design at the front end, which can better fit the internal thread formed by the remover drill and effectively increase the friction.

★ Removal direction: Reverse.

Recommended speed: ≤ 85 rpm.

* Since the working principle involves high-speed rotation with metal screws, certain wear and tear will occur. To improve work efficiency, it is recommended to use as once only.Do not reuse it.

09 导位器(Guide)

•引导成孔钻定位，同时可以避免损伤种植体和基台的内螺纹，配合导位器扳手使用

•分为3款种植体系统6种型号，需要根据种植体的连接结构妥善选择

•It guides the positioning of the remover drill and can avoid damaging the internal threads of the implant and the abutment at the same time. It is used in combination with the guide wrench.

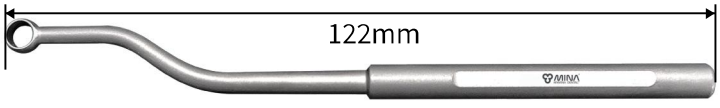
•It is divided into 6 models of 3 implant systems, and it is necessary to make a proper selection according to the connection structure of the implant.

型号 Model	SNG01	SNG02	STG01	STG02	SSG01	SSG02
Guide						
	通用Mini Generic Mini	通用常规 Generic General	Str龈Mini Str Gingiva Mini	Str龈常规 StrGingiva General	Str骨Mini Str Bone Mini	Str骨常规 Str Bone General

10 导位器扳手(Guide Wrench)

•配合导位器使用，将导位器手持固定于种植体上方

•Use it in combination with guide. Hold and fix the guide above the implant by hand.



WNH01

使用方法 Usage

取出失败植体所需工具
Tools required for removing failed implants

连接杆螺丝刀
(FC Driver)

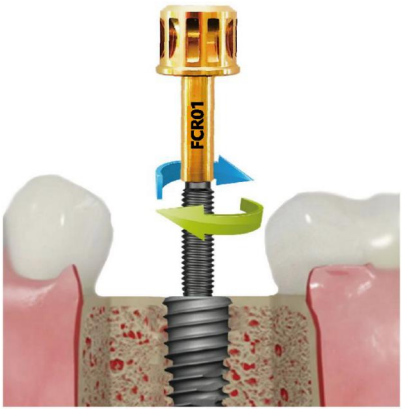
种植体连接杆
(Fixture Connector)

种植体取出器
(Fixture Remover)

圆棘轮扳手
(Ratchet Wrench)

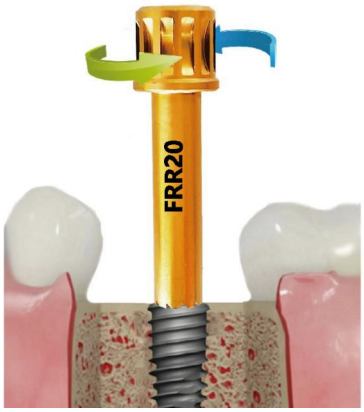
1.清理失败种植体周边，取下连接的基台及其他修复体，保持术区创口视野清晰。根据种植体型号提前准备后续所需的其他工具

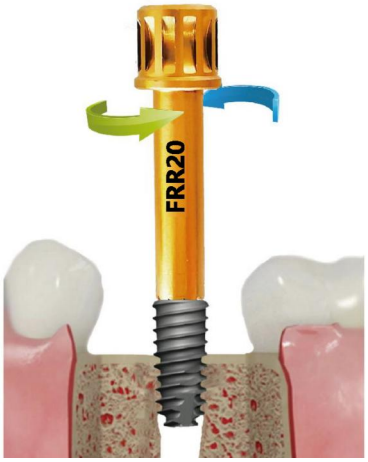
1. Clean the periphery of the failed implant, remove the connected abutment and other prostheses, and keep the surgical area wound with a clear field of vision. Prepare other tools needed later in advance according to the implant model.



2.选择最稳固的种植体连接杆，手动顺时针与种植体连接后，使用连接杆螺丝刀继续固定，直到无法继续旋紧

2. Select the sturdiest connector rod of the implant. After manually connecting it to the implant in a clockwise direction, use the FC driver to continue to fasten it until it can no longer be tightened.





3.选用合适的种植体取出器，逆时针与种植体连接杆相连，直到取出器无法继续旋紧

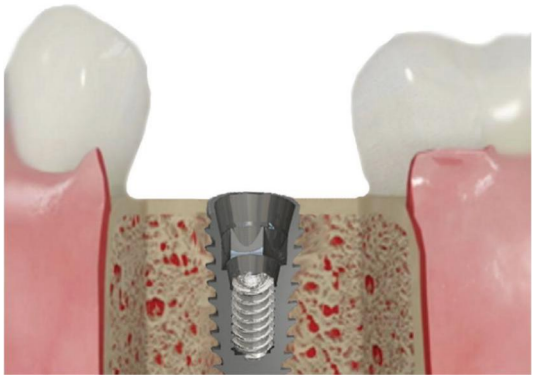
3. Select an appropriate fixture remover and connect it to the fixture connector rod in a counterclockwise direction until the remover can no longer be tightened.

4.连接棘轮扳手，逆时针旋转取出种植体

4. Connect the ratchet wrench and rotate it counterclockwise to remove the implant.

使用方法 Usage

取出断裂螺丝操作方法
Operation methods for removing broken screws



1.清理种植体周边，取下连接的基台及其他修复体，保持术区创口视野清晰。基台折断卡在种植体中的情况下，应先使用取基台螺丝刀(AR Driver)进行基台和螺丝的取出

1. Clean the periphery of the implant, remove the connected abutment and other prostheses, and keep the surgical area wound with a clear field of vision. In case the abutment is broken and stuck in the implant, the abutment and screw should be removed first by using the abutment driver (AR Driver).

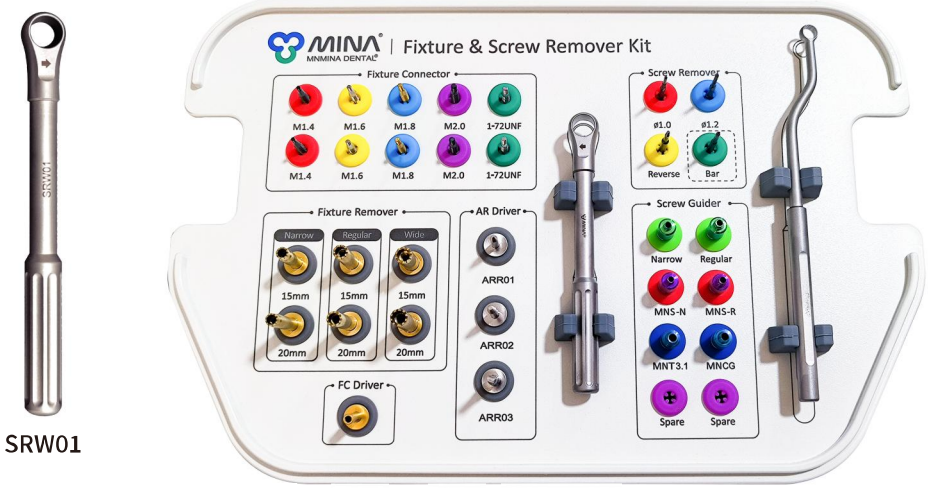
2.先使用Bar钻反转，使用低速勾取折断螺丝，对于折断面不平整的折断螺丝，Bar钻更容易将其取出

2. First, use the Bar bur to rotate in reverse and use a low speed to hook and remove the broken screw. For the broken screws with uneven fracture surfaces, the Bar bur can remove them more easily.

3.无法通过Bar钻取出的情况下，选用成孔钻搭配反转取出器的方式进行取出。首先根据种植体系统不同，选用相应的导位器引导定位，辅助成孔钻在螺丝上反转钻孔。钻孔完成后使用反转取出器，反转取出螺丝

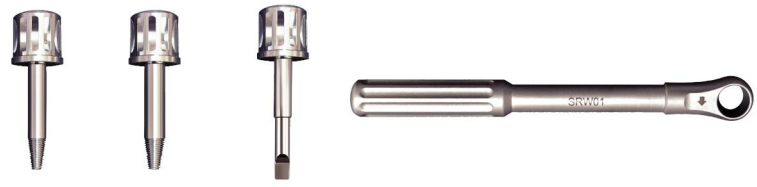
3. In the case where the broken screw cannot be removed by the Bar bur, using the remover drill combined with the reverse for removal. Firstly, according to different implant systems, select the corresponding guide to guide and position, and assist the remover drill to drill holes on the screw in reverse. Use the reverse bur to remove the screw in reverse after drilling.

米娜三合一失败取出工具盒(MINA Fixture&Screw Remover Kit)



失败螺丝取出套装
MINA Screw Remover Kit

失败基台取出套装
MINA Abutment Remover Kit



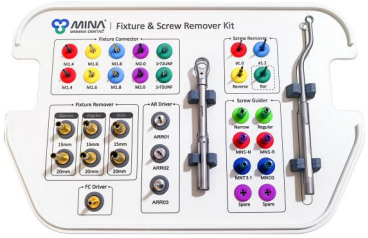
工具盒管理方法(Kit Management Method)

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请用消毒袋将工具盒密封
⑩ 请把工具盒放在134°C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请把工具盒放在干燥、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°C 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.
⑦After 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).

上
Up

下
Bottom



MINA®
MNMINA DENTAL®

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