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Multi-Functional Removal™ Kit

# MFR Kit



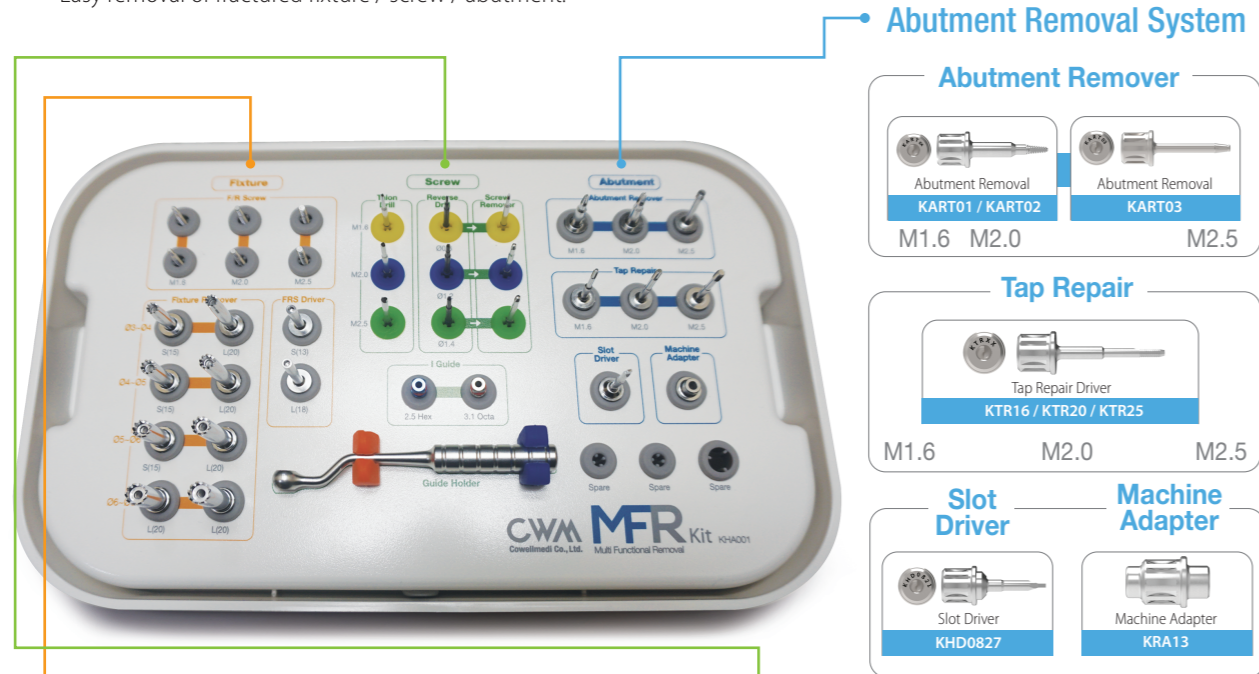
# CWM

Cowellmedi Co., Ltd.

*The pioneers in Dental Implant & E.rhBMP-2*

Multi-Functional Removal™ Kit  
**MFR KIT** [KHA001]

> Easy removal of fractured fixture / screw / abutment.



**Abutment Removal System**

**Abutment Remover**

Abutment Removal  
KART01 / KART02

Abutment Removal  
KART03

M1.6 M2.0 M2.5

**Tap Repair**

Tap Repair Driver  
KTR16 / KTR20 / KTR25

M1.6 M2.0 M2.5

**Slot Driver**

Slot Driver  
KHD0827

**Machine Adapter**

Machine Adapter  
KRA13

**Fixture Removal System**

**F/R Screw**

Fixture Removal Screw  
KFRS16

Fixture Removal Screw  
KFRS20

Fixture Removal Screw  
KFRS25

M1.6 M2.0 M2.5

**Fixture Remover**

03-04  
Fixture Removal  
KFR3515 / KFR3520

04-05  
Fixture Removal  
KFR4015 / KFR4020

05-06  
Fixture Removal  
KFR5015 / KFR5020

06-08  
Fixture Removal  
KFR6015 / KFR6020

**FRS Driver**

Fixture Removal (Sub. Narrow)  
KFRSD13 / KFRSD18

**Torque Wrench**  
KTW002

**Screw Removal System**

**Talon Drill**

M1.6  
Talon Drill (Claw Drill)  
KSRCD08  
KSRCD12  
KSRCD14

**Reverse Drill**

M2.0  
Reverse Guide Drill  
KSRGD08  
KSRGD12  
KSRGD14

**Screw Remover**

M2.5  
Screw Remover  
KSRSR08  
KSRSR12  
KSRSR14

**I Guide**

I Guide (Sub. 2.5 Hex)  
KSRIG25H

I Guide (Int. 3.1 Octa)  
KSRIG31O

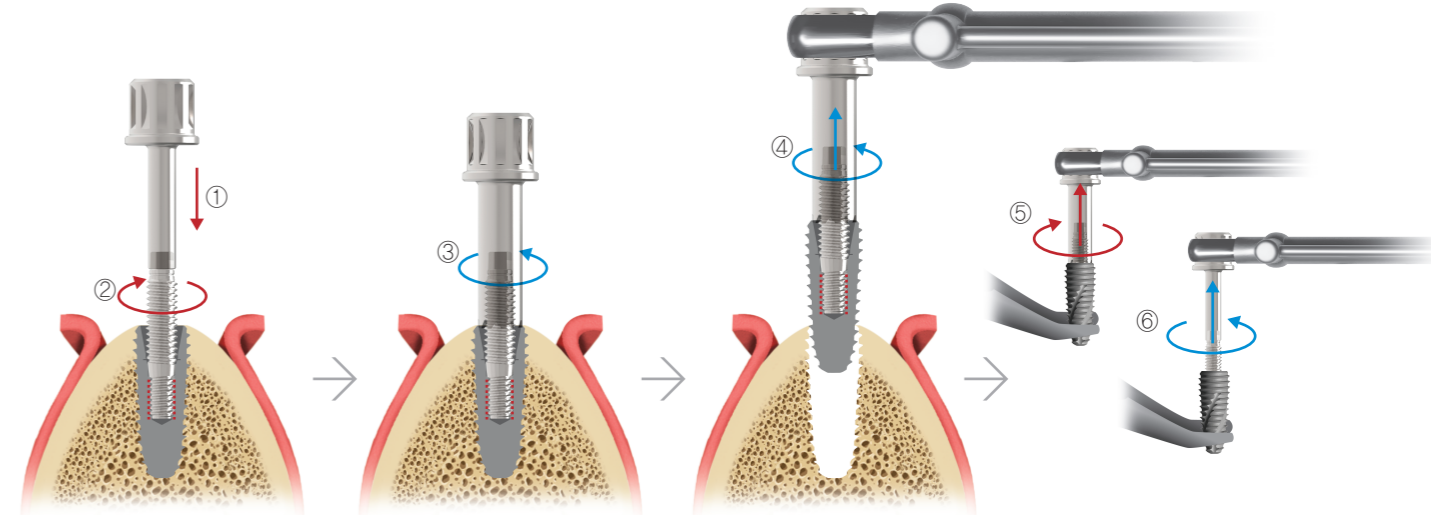
\*Silicon O-Ring  
KSRIG001

**Guide Holder**  
KSRGH01

**MFR Kit - Components**

**1. Fixture Removal System**

- 1 Connect the F/R Screw to the FRS Driver.
- 2 Connect the F/R Screw mounted FRS Driver to the fixture (clockwise 40~60 N.cm) and remove the FRS Driver.
- 3 Connect the Fixture Remover to the F/R Screw (counterclockwise).
- 4 Remove the fixture after connecting the Torque Wrench (counterclockwise, 100~400 N.cm).
- 5 To remove the fixture from the Fixture remover, use such device as vise to fix the Fixture Remover and connect to the Torque Wrench.
- 6 After connecting the FRS Driver to the F/R Screw, use the Torque Wrench to remove the F/R Screw (counterclockwise).

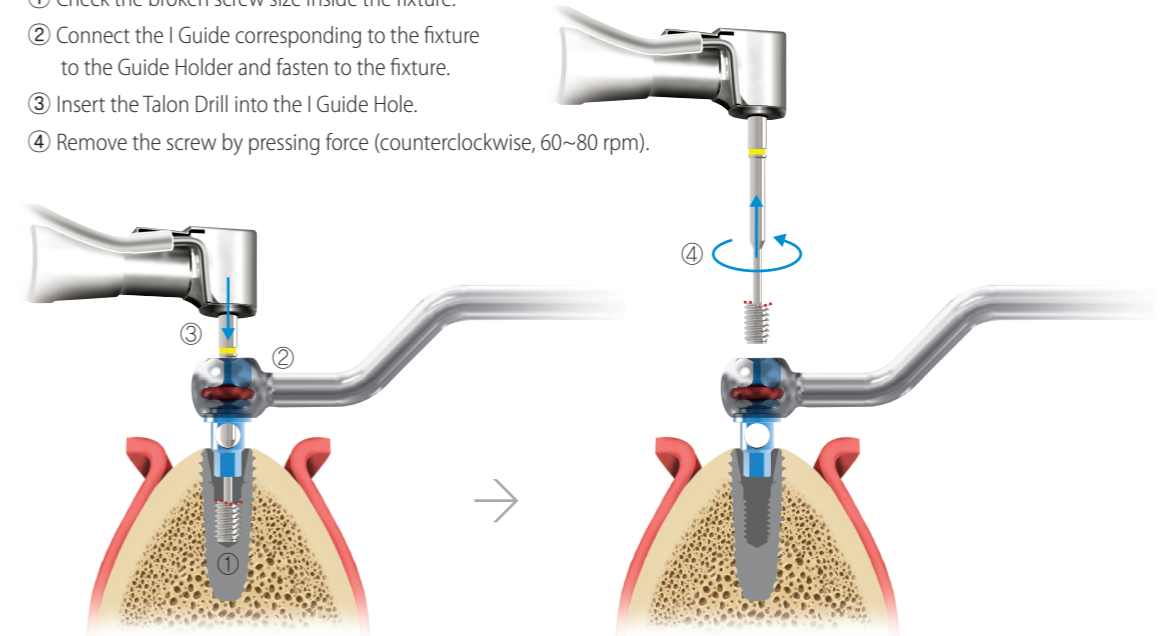


- ※ One-time use of the F/R Screw is recommended (bending or fracture may happen if more than 100 N.cm and using twice may be possible if less than 100 N.cm).
- ※ Sufficient irrigation is required when removing the fixture.
- ※ When the maximum torque is exceeded, the fixture may be bent or fractured.
- ※ If the fixture can not be removed even with maximum torque, remove the Fixture Remover & F/R Screw, remove bones around fixture using round bur and retry to remove.

**2. Screw Removal System**

**Talon Drill**

- 1 Check the broken screw size inside the fixture.
- 2 Connect the I Guide corresponding to the fixture to the Guide Holder and fasten to the fixture.
- 3 Insert the Talon Drill into the I Guide Hole.
- 4 Remove the screw by pressing force (counterclockwise, 60~80 rpm).

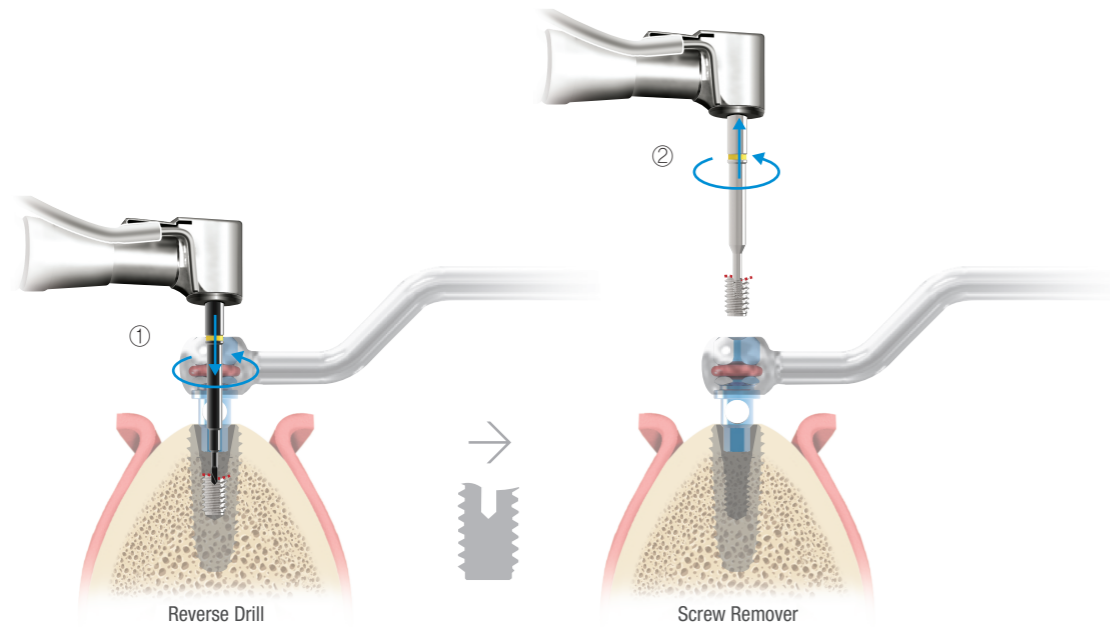


※ If the I Guide and fixture could not be correctly connected, the path is not correct.

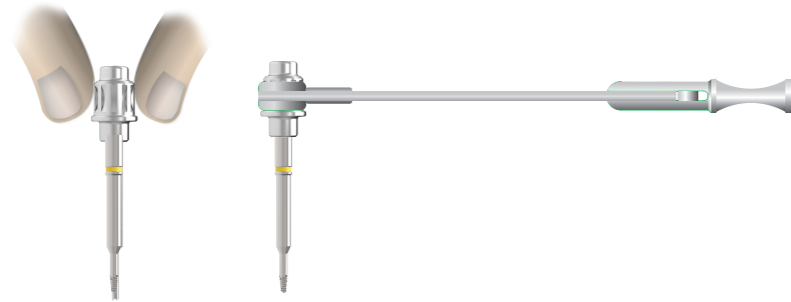
## Reverse Drill & Screw Remover

If the screw could not be removed by the Talon Drill

- ① Form the hole on the fractured screw (depth 1~2mm / counterclockwise / 1,200~1,400 rpm).
- ② Use the Screw Remover according to the created drill hole, remove the screw by pressing force (counterclockwise, 80 N.cm).



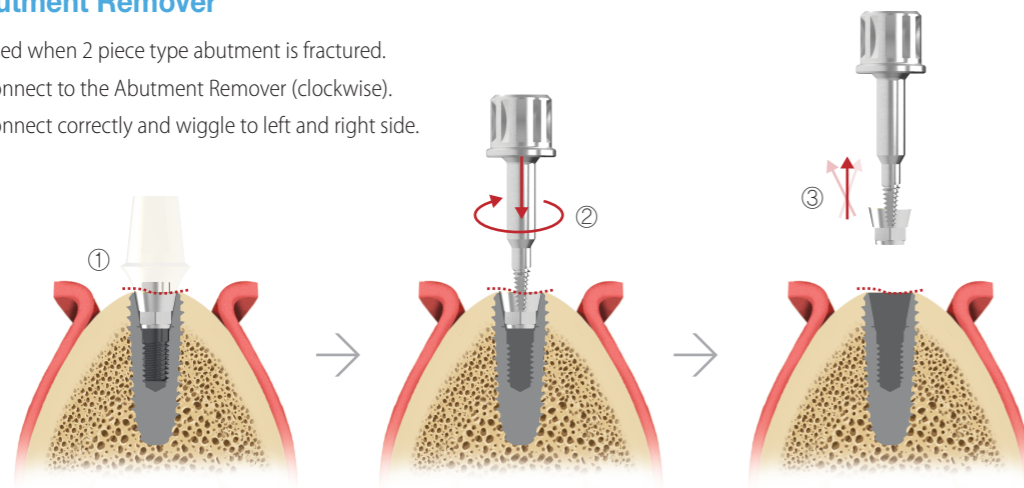
- ※ If the path of the I Guide and fixture did not match, it would be difficult to remove the screw because the drill hole is away from the center of the screw.
- ※ Reverse drilling requires removal of chips by irrigation & suction.
- ※ The fractured screw may be removed during reverse drill hole creation.
- ※ If necessary, fasten to the Machine Adapter and use the hand or Torque Wrench.



## 3. Abutment Removal System

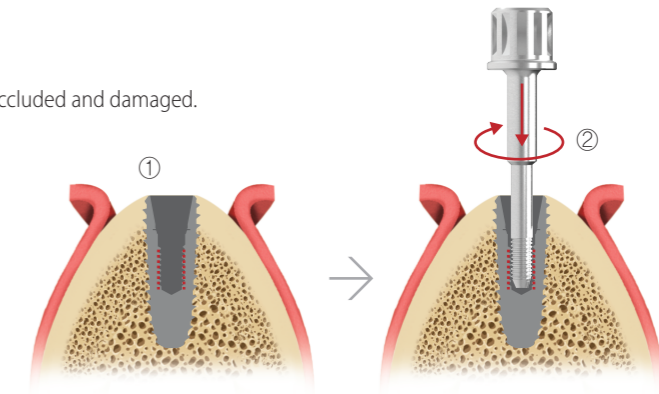
### Abutment Remover

- ① Used when 2 piece type abutment is fractured.
- ② Connect to the Abutment Remover (clockwise).
- ③ Connect correctly and wiggle to left and right side.



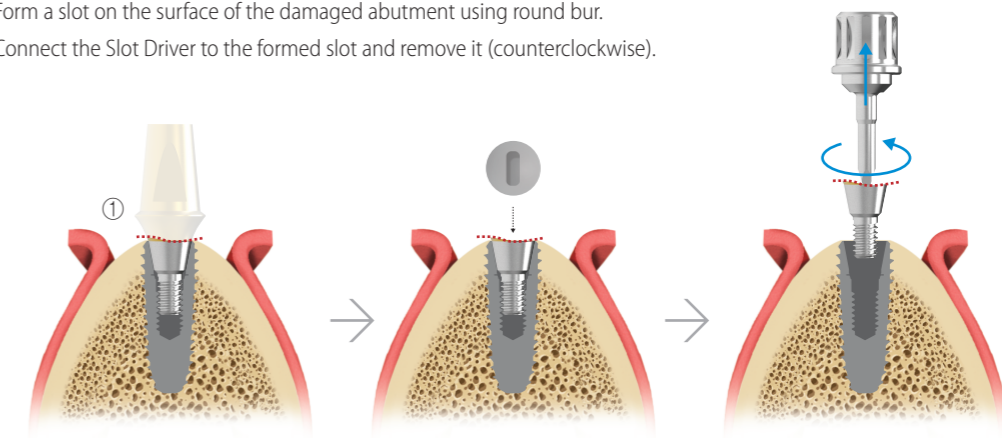
## Tap Repair

- ① Used when the thread inside the fixture is occluded and damaged.
- ② Reproduce the thread using the Tap Repair.

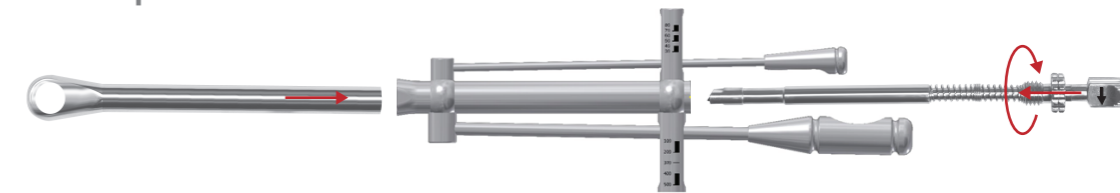


## Slot Driver

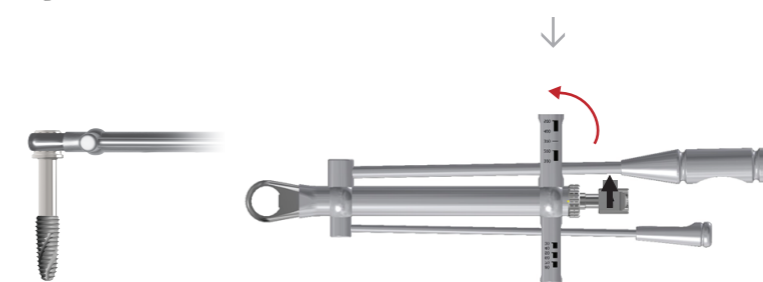
- ① Used for the damaged solid abutment (1 piece type), healing abutment and cover screw.
- ② Form a slot on the surface of the damaged abutment using round bur.
- ③ Connect the Slot Driver to the formed slot and remove it (counterclockwise).



## 4. Torque Wrench



Place the fixture  
(clockwise, 40~80 N.cm).



Remove the fixture  
(counterclockwise, 100~400 N.cm).

## MFR Kit (Multi-Functional Removal™ Kit)

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