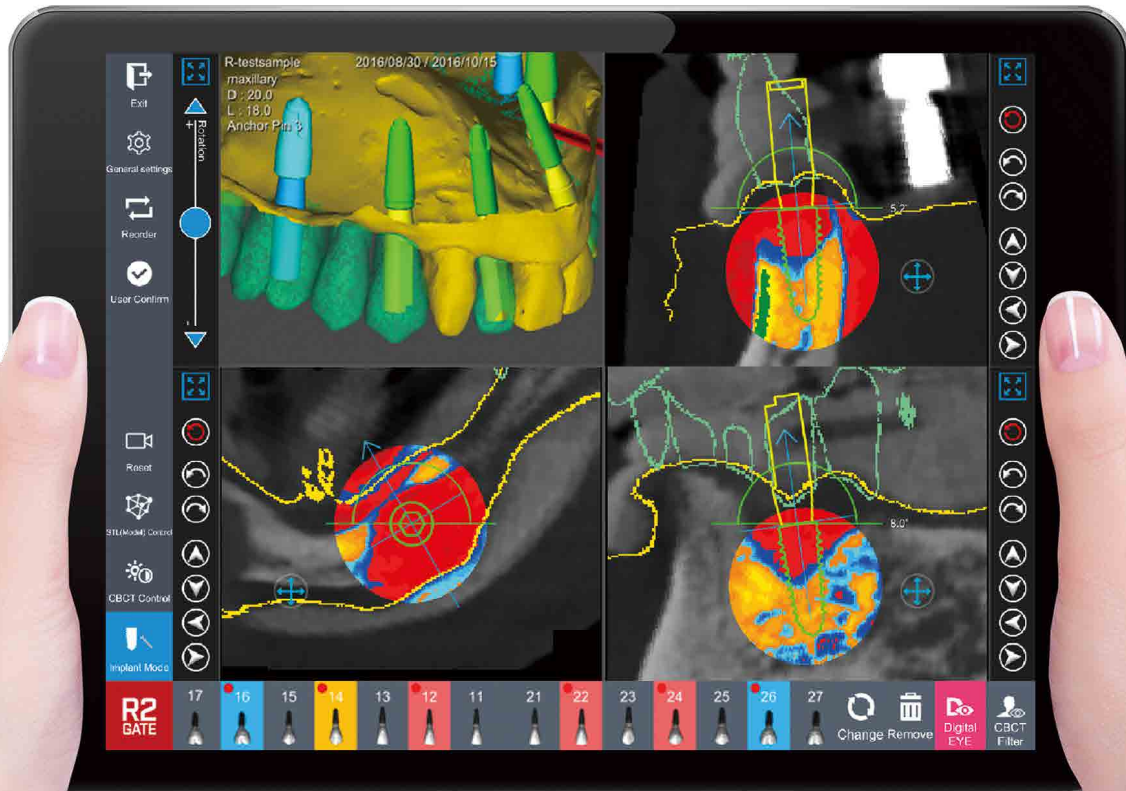




Turning imagination
into reality

R2GATE Lite™

Meet the most innovative
implant diagnostic software program in
the most innovative way!



R2GATE™

Innovation & Intuition

R2GATE is an innovative implant diagnostic software program that analyzes the oral condition and guides the best way for implant treatment.

Anatomic Landmark

With CBCT, the shape of the jaw, the position of the mandibular nerve and the maxillary sinus can be easily identified to prepare a safe treatment plan.

Bone

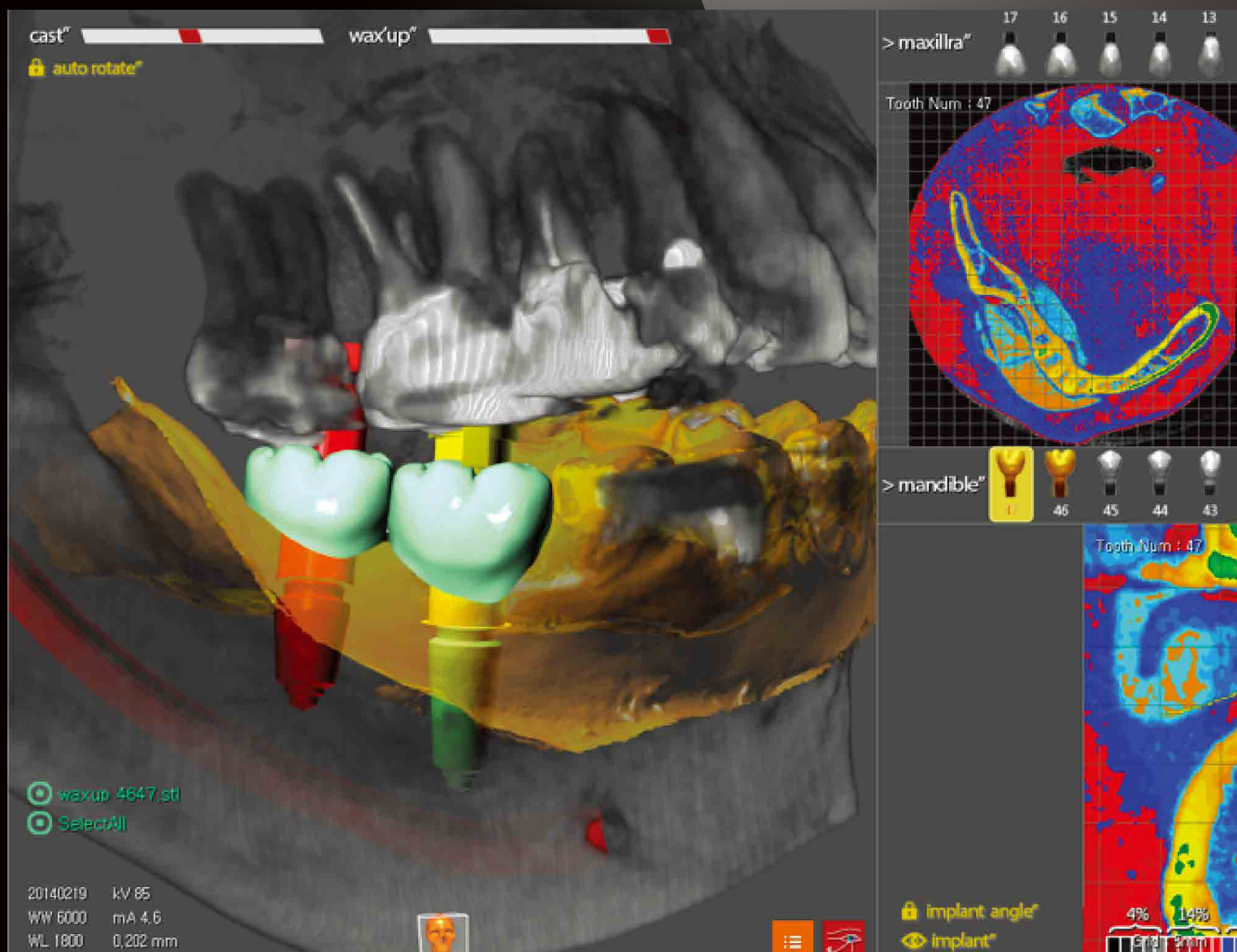
After intuitively checking the shape and density of cortical bone and cancellous bone via Digital Eye, you can obtain strong initial stability by customizing the drilling sequence. Also, the software provides a guideline for whether immediate loading is possible or not.

Soft tissue

To select the best implant position, the software intuitively shows the adjacent teeth, shape and thickness of gingivae, and the relationship with the opposing teeth.

Teeth & Occlusion

The purpose of implant treatment is to recover the lost or hopeless teeth. With R2Gate, the most ideal position for the implant can be selected by checking crown design and occlusion with adjacent and opposing teeth.

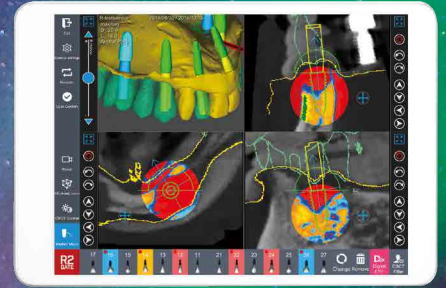


PC to Mobile Innovation for **R2GATE™** users!

The actual purpose of digital dentistry should be to offer a practical tool to fully assist dental practitioners in their every day practice without limits of time or location.



R2GATE Lite™ Communication and Design efficiency

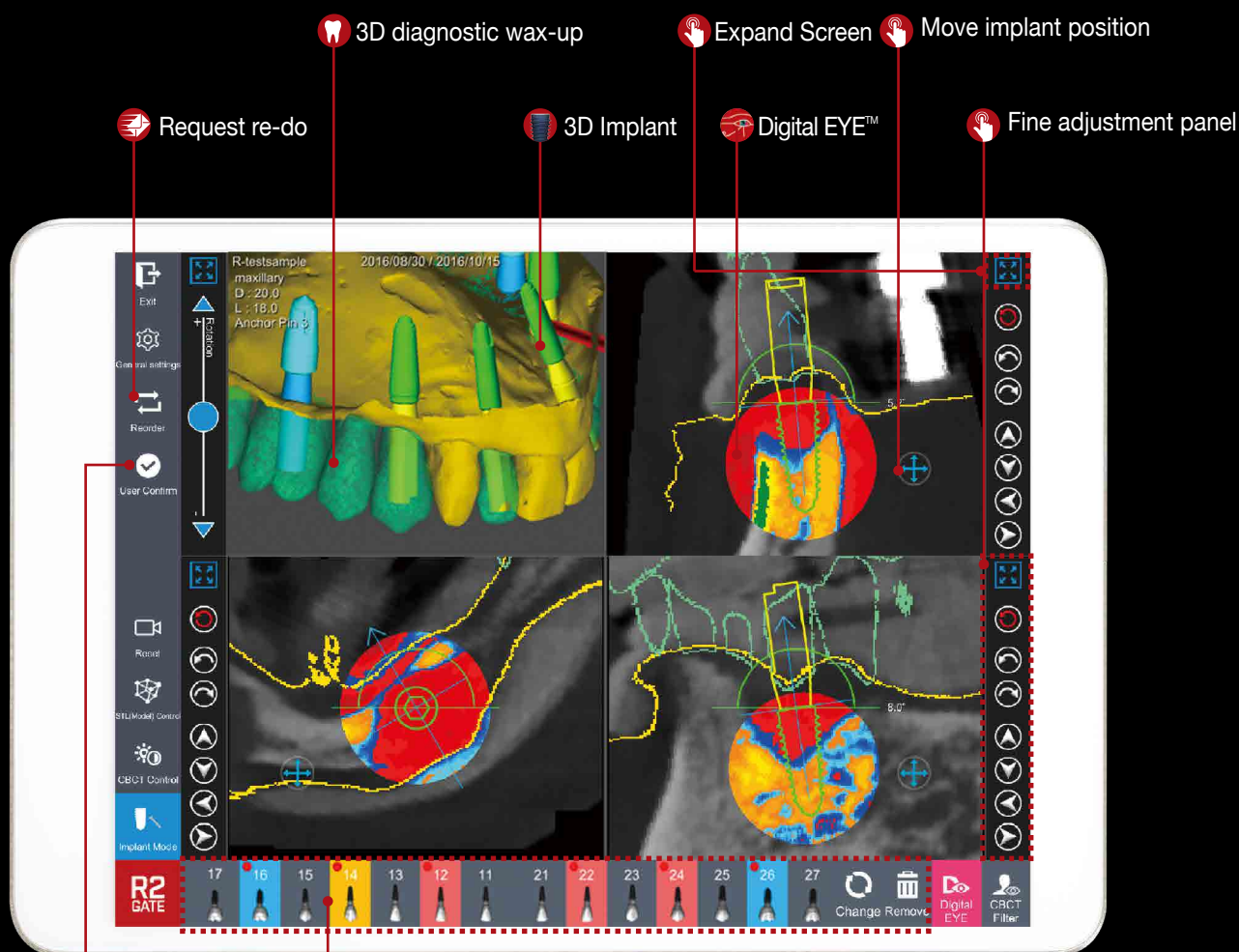


With R2GATE Lite, everywhere you are becomes your clinic for you & your patients. You can check, edit, confirm, or send a file to R2GATE Design Center at anytime, anywhere.

R2GATE Lite™

Light and Upgraded

The innovation is showing essential information in a user friendly way.



Case Confirm

Select or Edit Implant

You can easily select, add, remove, or modify an implant. Using the international teeth numbering system, you can edit an implant that is currently loaded on the planning.

Pink represents an implant that is already planned, yellow indicates selected implant.

Blue indicates implant newly created implant by user.

Red dot in the selected implant indicates that user has modified the size, position, or angle from initial loading stage.

- Expand current plane
- Initialize
- Tilt to left
- Tilt to right
- Move upward
- Move downward
- Move left
- Move right

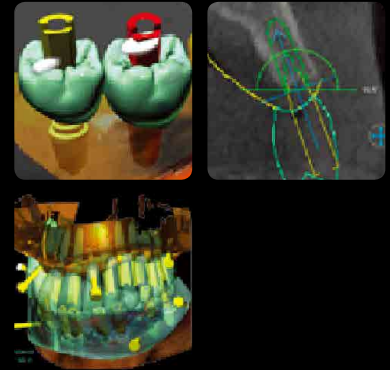


3 essential key factors for implant diagnosis : Bone, Soft tissue, Teeth

For an ideal implant treatment, alveolar bone, soft tissue, and prosthetics must work together.

R2GATE intuitively analyzes and shows the condition of alveolar bone and soft tissue, and optimates prosthetic outcome for ideal treatment planning.

For multiple implant cases especially, the distance between implants/platform level and the implant axis angle can be easily understood beforehand for simpler treatment and prosthetic procedure.

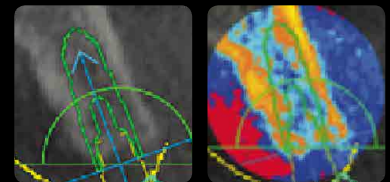


Digital EYE™

Standard black and white CT analyses the data in 256 shade levels, but human eyes only detect 16 levels with the naked eye.

R2GATE Digital EYE regenerates 256 shades into color to deliver a much more detailed and intuitively understandable guideline of the bone condition.

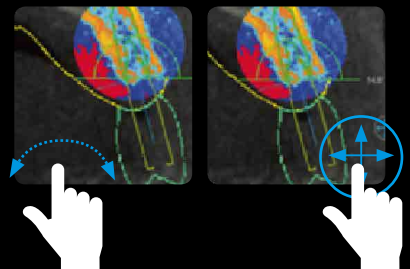
Also, it standardizes the brightness level that each CT equipment has and provides an objective Houns Field Unit. This significantly differs from the color that other CT data provides.



Easily shift, zoom in, zoom out, rotate with your finger

Easily change the position of the implant with your finger.

- Implant rotation: Lightly touch the screen and drag to rotate the implant.
- Implant shift: Lightly touch the ⊕ sign from the lower part of the screen, and drag to move the implant position.
- Zoom in & out: You can easily zoom in & out by using two fingers. Please use the "Moving Key" on the right corner of the screen if accurate adjustment is needed.



Fast and easy diagnosis check

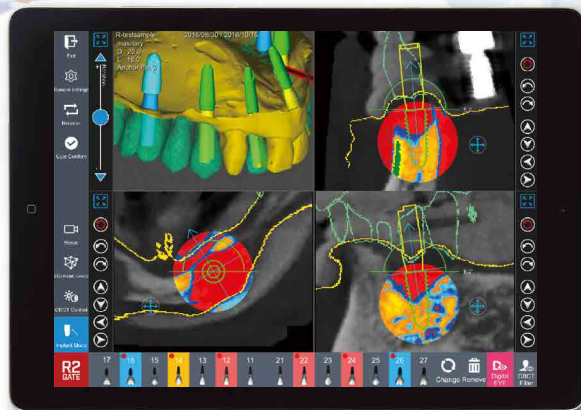
You can confirm the diagnosis immediately by using the "User Confirm" function, or you can send the changes to the center. If you need to revise the model or the implant placement site, you can use the "Reorder" function to conveniently receive the diagnosis again.

Auto detecting

All the information that you have done through R2GATE Lite is automatically saved, and all confirmation or modified data will be sent to R2GATE Design Center.

Communication with **R2GATE Lite™**

Throughout consultation about implant treatment with a patient, ensuring the patient clearly understands their oral condition and the future possible outcome of the treatment is a major factor in assuring patient satisfaction. Using R2GATE LITE on IPAD, the doctor can easily show the visual information on treatment planning from diagnosis through to the optimal treatment.



Experience the most innovative
implant guide surgery!
Virtual planning becomes a reality.



Precise **R2GATE GUIDE** Using 3D Printing

R2GATE Guides are designed directly based on the your diagnosis and are printed using a 3D printer. Windows(for drill stopper, implant position, and hex control) are printed as one-body for improved precision and convenience.



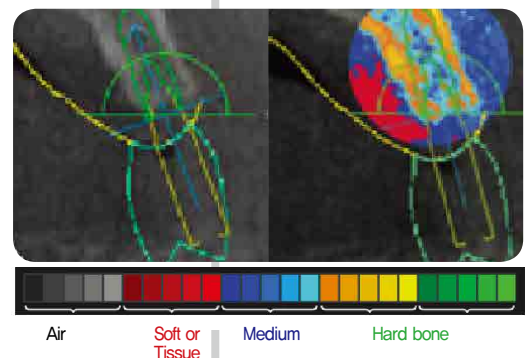
ONE-DAY IMPLANT service

Get your implant and prosthetics done in one day!

Depending on the bone density, patients can get customized abutments, made before surgery, right after the implant surgery. Prosthetics can be manufactured as single, bridge, or screw-retained type according to your preferences.

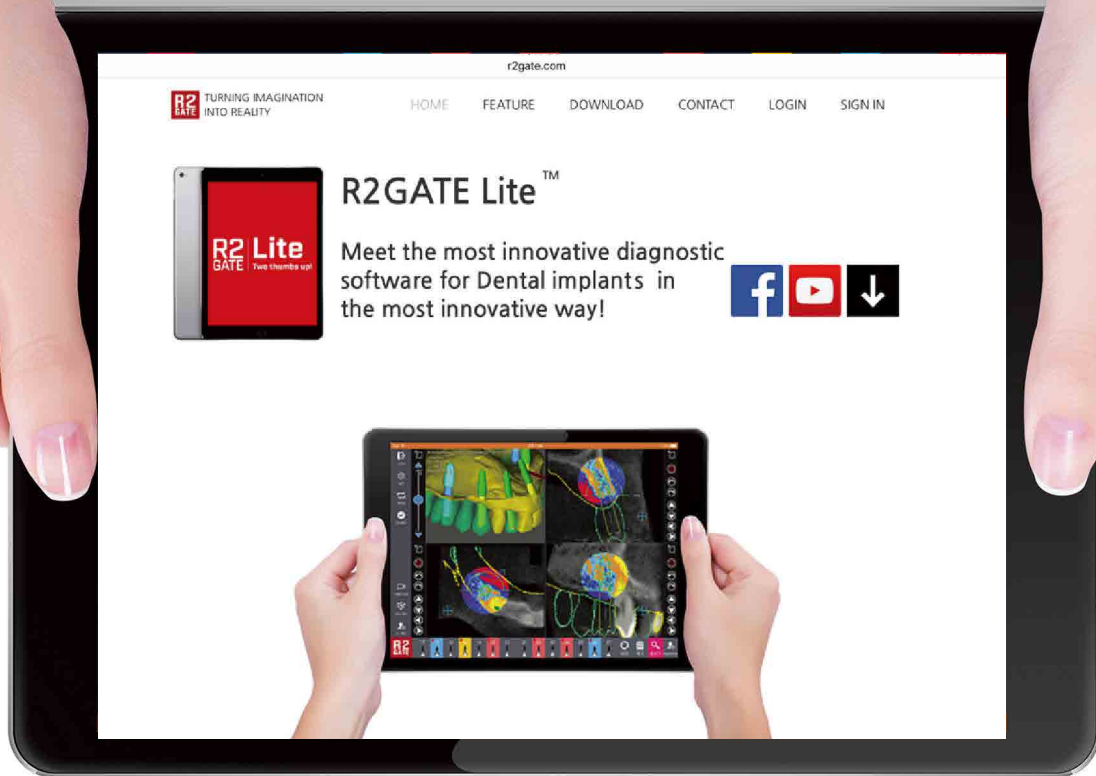
Intuitive view of patient's bone density **Digital EYE™**

Digital EYE applies the Hounsfield Unit concept to CBCT and regenerates black and white into color to deliver a more detailed intuitive bone condition. Based on this information, you can decide implant position and size and the drilling sequence in order to obtain ideal initial stability.





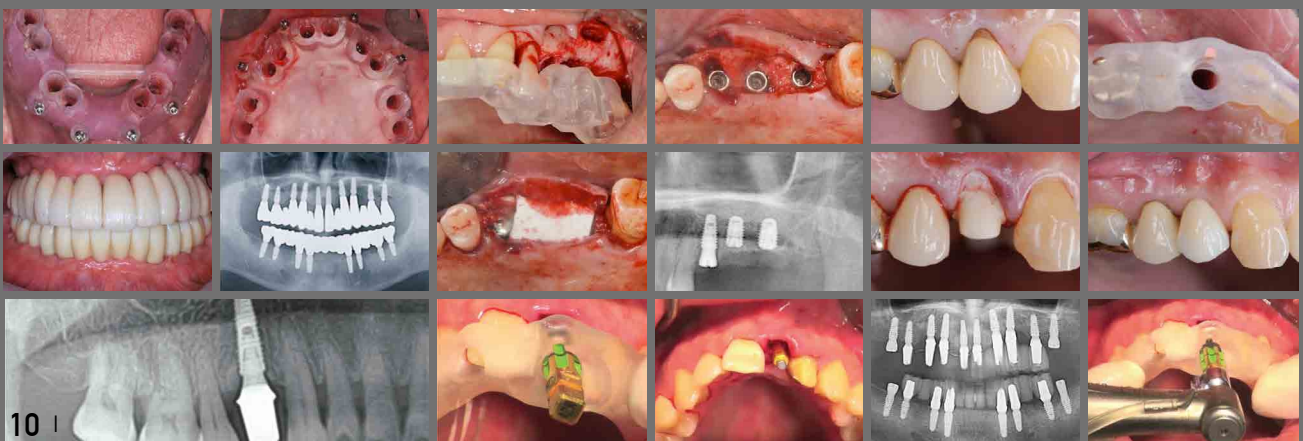
Turning imagination
into reality



R2GATE™ proves itself with clinical cases

7,137 cases / 16,049 implants

Visit our website www.r2gate.com and go to
Facebook or Youtube for various clinical videos.



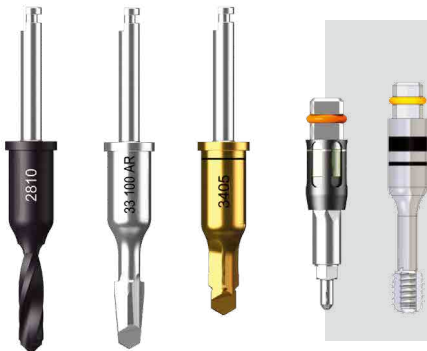
Simple and Practical

R2GATE UNIVERSAL KIT

Flexible kit for all implant systems

Simple and practical Universal Kit

R2GATE Universal Kit includes essential guide drills and tools that can be used for various implant systems. Final drills and other necessary tools can be added for your preferred implant system.



Add optional Tools for your preferred implant system

You can add optional tools like implant carrier, tap drill, cortical bone drill and more for your preference. Refer to MegaGen Implant Catalogue for more information.

We provide a new Disposable final drill for each surgery.

Along with with R2GATE Guide, we provide a disposable final drill for ideal initial stability based on the patient's bone density. Now, safer surgery can be done with our disposable final drill.



No spoons, No sleeves

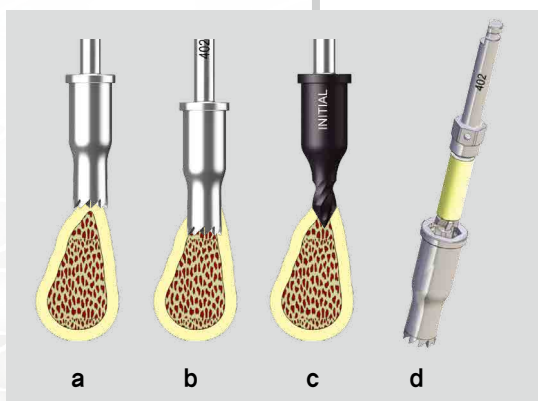
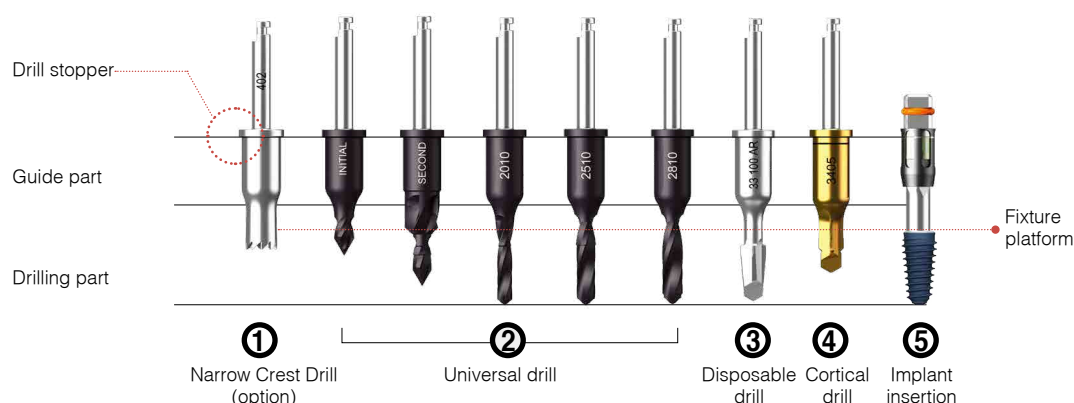
R2GATE GUIDED surgery



All you need is a few basic principles.

Our **guided drill design** does not need spoons or sleeves

All of our drilling components from initial drill to implant carrier are designed as one-body. You do not need any additional sleeves or spoons, making surgery time shorter.

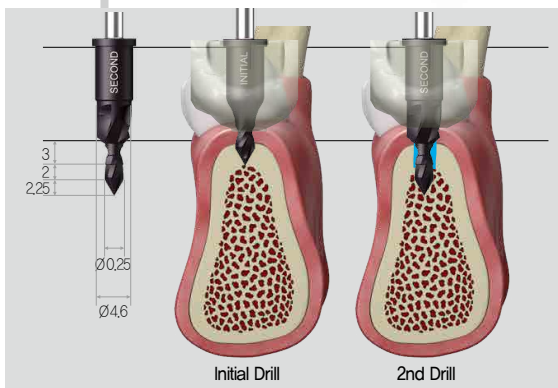


Narrow Crest Drill for narrow or steep alveolar ridge

If a regular drill is used on narrow or steep alveolar ridge cases, a drill may slip and the drilling path will be made in the wrong direction. In these cases, use a narrow crest drill first and flatten the drilling area to prevent slipping.

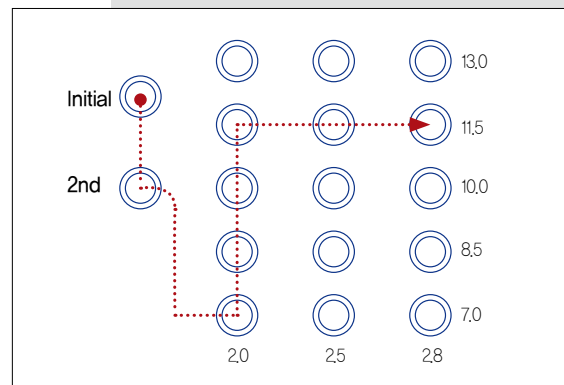
Instruction

- Counter-clockwise: Engage the blade onto the ridge by rotating a drill with less than 100 RPM
- Clockwise: Drill with 400~600 RPM
- Start a drilling sequence with initial drill
- You can use collected bone by separating the drill body after drilling



1st & 2nd Drilling

The 2nd drill also works as a profiler which removes excess bone above the fixture platform for a better connection with prosthetics. If bone density is dense or high resistance during drilling, stop 2nd drilling protocol and repeat 2nd drilling protocol right before fixture placement.



Crucial Step: Basic drilling

Ø2.0 drilling is very important to complete the coronal pass of a drill. Especially when the guide core is short due to thick gingivae, gradual drilling to secure the depth of a fixture is essential for successful surgery.

Eg) When placing a 11.5mm length fixture
initial Drill->2nd drill->2.0x7->2.0x8.5->2.0x10->2.0x11.5
->2.5x11.5->2.8x11.5->Final drill->Cortical bone drill

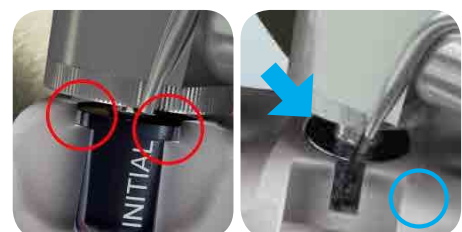
Slow Drilling in a Drill Core

You MUST start drilling only when the drilling guide part is inserted in a drill core. When the drilling guide part is completely inserted in to the drill core, start drilling in low RPM. Recommended RPM is 300~500 RPM.



Slow UP & DOWN Motion

Drilling must be done in the order of increasing the depth of osteotomy and then widening the diameter according to the suggested drilling protocol. Proceed drilling 1mm deeper in every up & down motion. Keep repeating up and down motion slowly until the drill stopper touches the stopper position on the guide.



Deliver a **Fixture** as it is planned

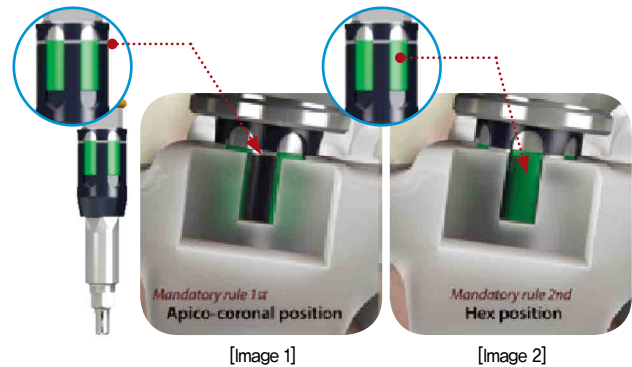
Make sure to connect Handpiece Carrier onto a fixture and deliver it through the R2GATE Guide as planned.

a. Fixture depth control

Align the upper line of the Handpiece Carrier with the Guide Window as [Image 1]

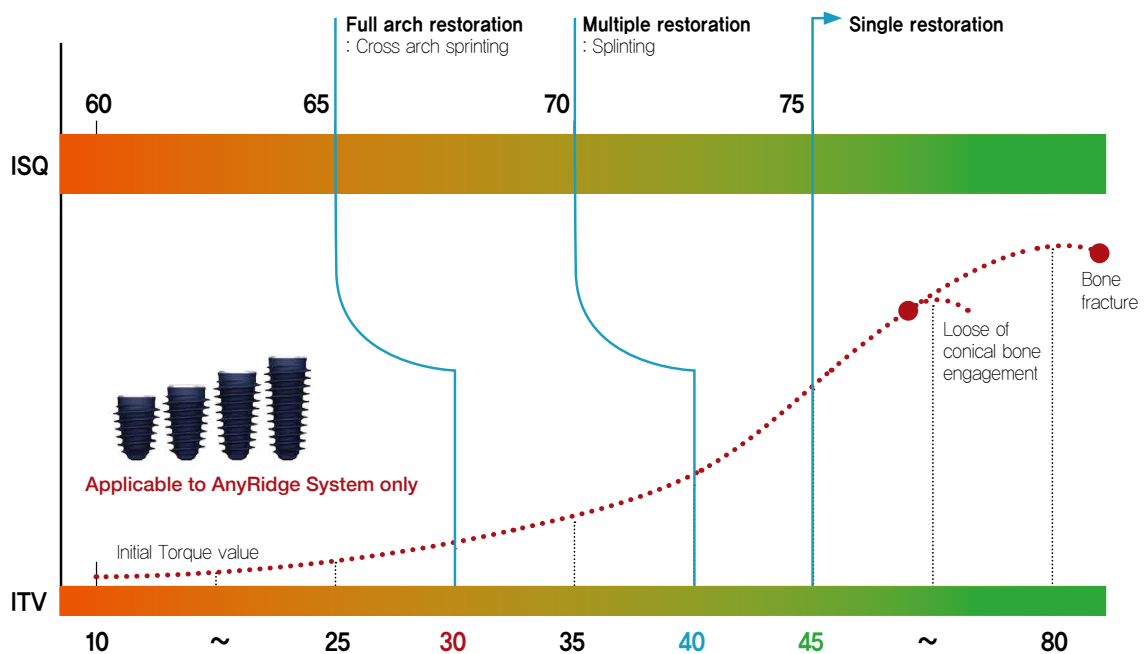
b. Hex position control

Align the green part of Handpiece Carrier as [Image 2] to make hex position in buccal direction.



We provide a general standard for immediate loading [ISQ & ITV]

If you use AnyRidge System, the recommended ITV (Initial Torque Value) and ISQ (Implant Stability Quotient) for immediate loading are $ITV = 45\text{Ncm}/ISQ=75$ or above. These values are only for the AnyRidge system and cannot be applied to other systems.



Must have Accessory kit

R2GATE Narrow Guide kit for Mini System

Are you planning on using a Mini implant? Are you worried about the surgery because of narrow surgical space? Narrow Guide Kit with $\phi 3.5\text{mm}$ drill core is designed to overcome narrow surgical spaces such as anterior mandibular, narrow distance between adjacent teeth or adjacent implants.



For the fixation of fully edentulous guide; R2GATE Anchor kit

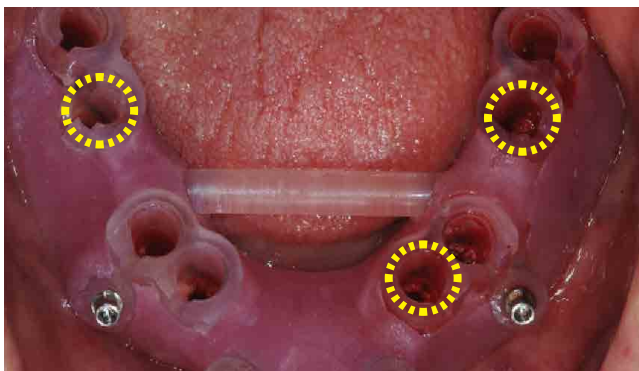
R2GATE Anchor Kit is used to fix fully edentulous R2GATE Guide in the mouth.

Anchor Pin:

Put R2GATE Guide and Putty Bite together and put it into patient's mouth. Let the patient bite firmly. Then, insert an anchor pin into the pin holes on the guide and fix them using a driver. If bone density is dense, Slightly drilling to penetrate cortical bone area with $2.0 \times 13.0\text{mm}$ drill will be helpful for better fixation.

Anchor Screw:

For fully edentulous guide, placing fixtures and connecting anchor screw in a triangular form is highly recommended for better fixation as the image below.



When regular fixture and wide fixture are needed to place in edentulous case, there will be 2 set of R2GATE guides for regular fixture and wide fixture placement. Anchor screw will provide same position of fixation for both of R2GATE Guides.



Anchor Pin



Anchor Screw



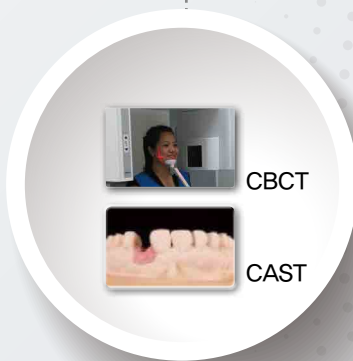
R2GATE™ Order Procedure



Order

Virtual Planning

1



CBCT

CAST

- Take CT using R2 Tray
- Take impression and fabricate a stone cast model
- Submit CBCT data file and stone cast model to R2GATE Design Center

2



- Scanning the stone cast model
- Virtual Wax-up design
- Matching scan file with CBCT data
- Setting up a primary virtual planning
- Sending the planning for confirmation



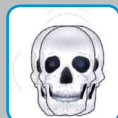
1



2



3



4

- 1 CT must show entire implant surgical site
- 2 Patient should bite R2Tray strong
- 3 Patient should not bite CT bite block
- 4 Patient should not move while taking CT



SMS and e-mails

We send SMS and e-mails for each order process

- Stone cast model submission
- CBCT data file submission
- Sending virtual diagnostic treatment planning file
- R2GATE Guide shipping



Turnaround for virtual diagnostic treatment planning file to be delivered

- If surgery appointment is set: 3~4
- If surgery appointment is undecided: 4~5



Edit and Confirm via R2GATE Lite

R2GATE Guide 3D Printing

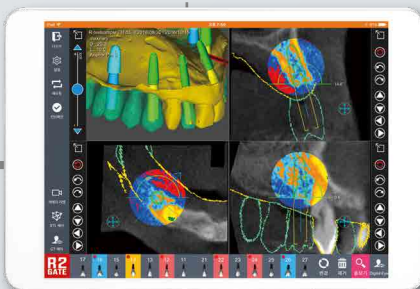
Shipment

3



4

5



- Check R2GATE Lite order list
- Select an order and download planned data
- Check and edit the planned file if necessary
- Confirm or request for re-planning
- Printing R2GATE Guide
- Packing disposable drill
- Attaching diagnostic planning report
- Packing
- Shipping



The case when major editing is not necessary on primary diagnostic file

- Change implant size, position, or angle
- Add or remove an implant



The case when patient's oral condition is changed or entire planning itself has to be modified

- When the stone cast model seems distorted
- When diagnostic wax-up needs to be re-do
- When you need to add an implant that is out of primary set up range



Manufacturing period and shipment (based on business day)

- Single: 5 business days after model submission
- Full-mouth: 7 business days after model submission
- OneDay Implant: +2 days on the indicated day above

ID? Password??

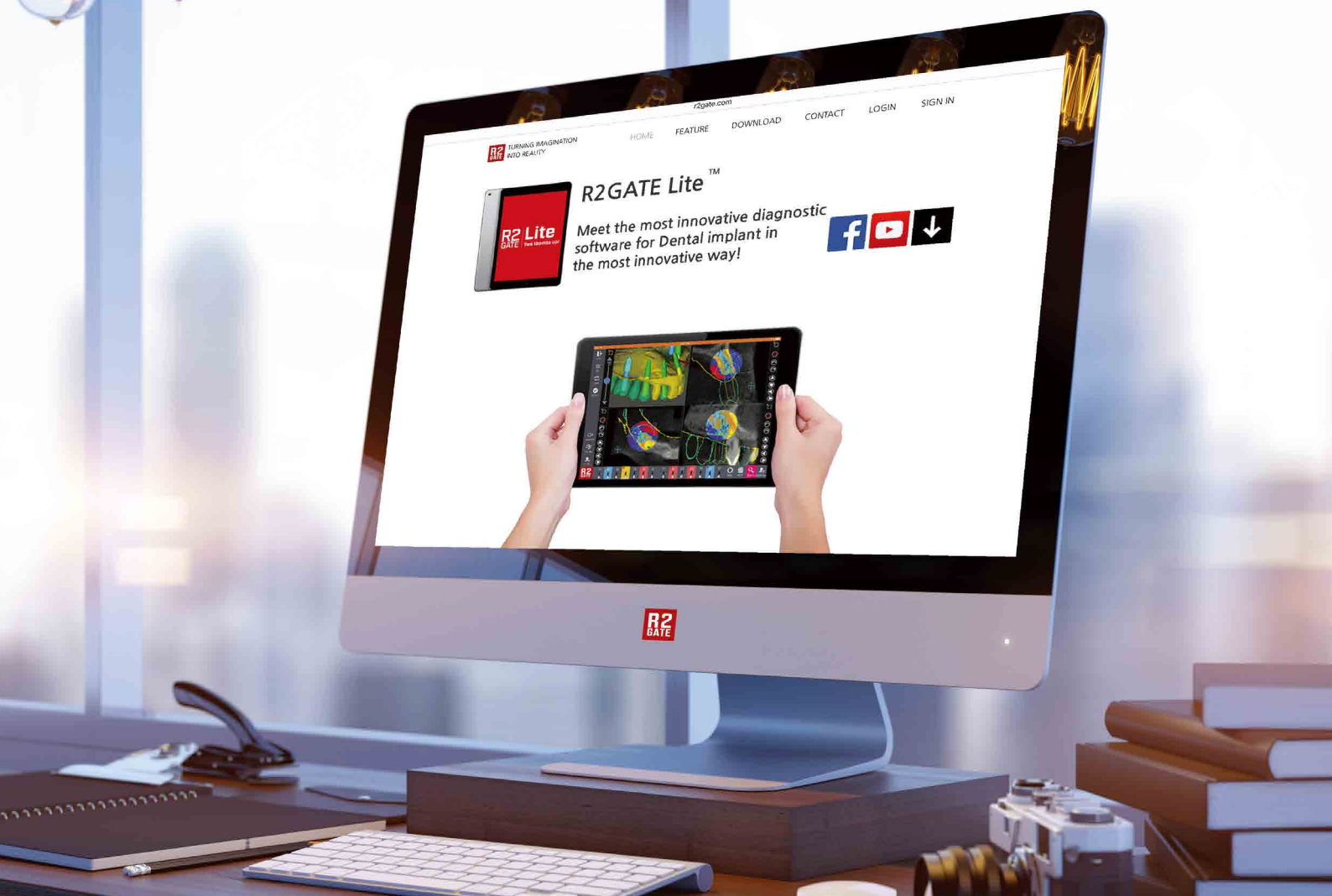


www.r2gate.com

If you are a first time user of the **R2GATE service**, you need to sign-in to be a member. If you forgot either ID or Password, please contact **R2GATE Design Center**.

[cs@r2svc.com]





IDDA

SOUTH KOREA

41940, 10F 12 Gong Pyeong Ro, Jung Gu Dae-Gu, Republic of Korea
TEL +82-70-4352-1120
FAX +82-70-7469-1120
E-MAIL R2GATE@r2svc.com

NINGBO MEGAGEN CHINA CHINA

No. 456 Tonghui road, Jiangbei Inverstment & Pioneeriong (Park C), Ningbo
TEL +86-574-2770-9928

SC DDX EUROPA SRL ROMANIA

Str. Dr. Nicolae Staicovici, Sector 5 Bucuresti, Romania
TEL +4-0784-709-496
E-MAIL office@r2eucenter.com

MEGAGEN HONG KONG Ltd. HONG KONG

604D, InnoCentre 72 Tat Chee Avenue, Kowloon Tong Kowloon, Hong Kong
TEL +852-2866-0199

DENTAL GURU RUSSIA

Bid 43/2, Pokrovka Str. Moscow, 105062, Russia
TEL +7-92-6526-2697
E-MAIL sedov135@gmail.com

SUNRISER MEDICAL TAIWAN

12f. No 815, Sec 5, Zhongxiao East Rd., Taipei City 11562, Taiwan
TEL +886-2-2788-1335
FAX +886-2-2788-2885
E-MAIL minanlee73@gmail.com

SOLIDENTAL LTD. TURKEY

Gulbahar Mah, Buyukdere Cad. No:99 D:7, Mecidiyekoy, Istanbul Turkey
TEL +90-21-2211-3932

LAZARUS CO.,LTD. JAPAN

Assortie hommachi. 7F, 2-3-4 Hommachi Chuo-Ku Osaka-City Japan
TEL +81-6-6266-3500
E-MAIL lazarus@dune.ocn.ne.jp



Turning imagination
into reality



Head Quarter & Factory
Gangnam Office
www.imegagen.com

472 Hanjanggun-ro, Jain-myun, Gyeongsan, Gyeongbuk, Korea
5F MegaGen Tower, 607 Seolleung-ro, Gangnam-gu, Seoul, Korea

T.+82-1544-2285
T.+82-1566-2338