

DentCare

BQP-D15 3D Printer **User Manual** **for Hardware**

Version 1.0



Content

Product Information

Instructions For Use	4
Safety Precautions	4
General Information	5
Package Contents	5
Product Overview	6

Setting Up Your 3D Printer - DentCare BQP-D15

Unpack	7
Location	8
Connecting To The Power Adapter And Cable	8
Power Button Control	9
Touch Screen Control	9

Prepare For Print

Install Building Platform	10
Fill Resin Tank	10

After Print

Remove Model	11
Clean Building Platform	11
Clean Resin Tank	11
Post Processing	11

Engineering Mode

Projector Control	12
Clean Tank Mode	12

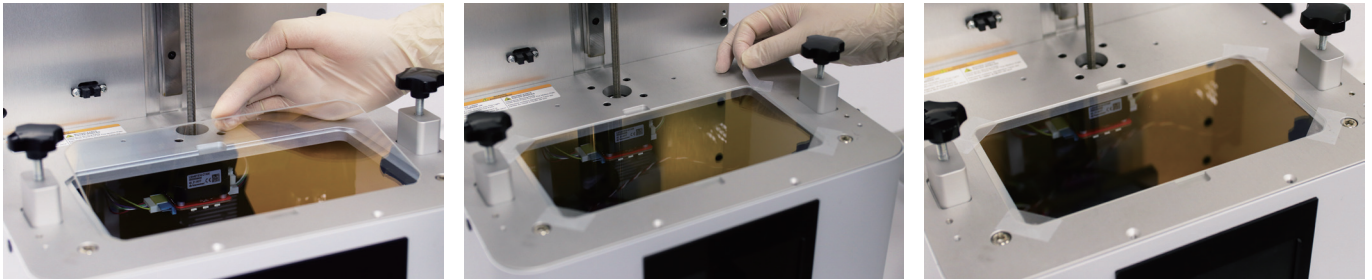
Specifications

Product Information

Instructions For Use

Please read through the following Instructions before you start using your printer.

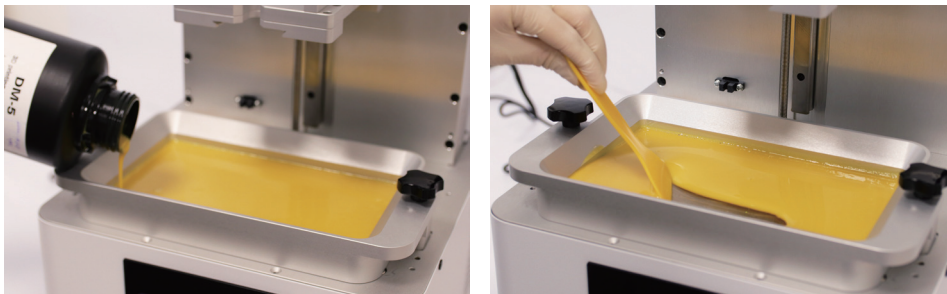
- (1) Ensure that the glass under tank is positioned flat at the corners point, and place thin tape on all four corners for stable and avoid damaging printer while printing.
- (2) Ensure the glass is well setup before printing.



- (3) Place resin tank on and tighten the screw lock.



- (4) Pour the resin in and stir with spatula. Ensure no residuals inside the tank



- (5) Ensure the building platform is clear and make sure avoid any printing item or residues remain on the building platform. Then re-install the building platform in place and tighten screw lock. (While installing building platform, one hand has to hold on and the other hand tighten the screw lock.)



- (6) Avoid print at center point with a single object or small parts repeatedly, it may damage the tank.

Safety Precautions

Please read through the following Safety Precautions before you start using your printer.

1. Use only the power adapter and accessories provided by the manufacturer.
2. Before plugging the power adapter into an electrical outlet, verify the local power rating conforms with the specified voltage and frequency.
3. This printer needs a grounded, 1-phase electrical power source.
4. Make sure power and communication cables are well managed to prevent from tripping.
5. Only use resins recommend by BenQ manufacturer. Use of other unauthorized resins may cause printing failure.
6. Do not expose the resin tank to direct light source because the resin will solidify under UV light.
7. Chemical substances like resin may cause skin irritation, please read the guidelines in Material.
8. Safety Data Sheet (MSDS) of the resin supplied by manufacturer. It is recommended to wear gloves when necessary.
9. When moving the printer for a long distance, be sure to withdraw the remaining resin in reaction tank and clean the tank in advance to prevent from resin overflow.
10. Keep doors closed during printing or curing to prevent UV leakage.
11. UV light may cause injury of eyes, do not stare into the printer directly when it is in operation. It is recommended to wear UV protective glasses during operating the printer.
12. Place the device on a level surface and keep the printer in an upright position at all times.
13. Do not store the printer in extreme hot and cold temperatures.
14. Do not disassemble or repair the device by yourself. Doing so may cause device malfunction or danger.
15. Warning :Picker is hazadous moving parts in BQP-D15 Printer. Keep body parts out of picker's motion path.
16. Emergency shut down method : Press Power Button and hold 3 seconds to shut down.
17. This product is designed for specific application and needs to be installed by a qualified personal who has 3D printer and related rule knowledge. A qualified person understands the requirements and risks involved with installing electrical equipment in accordance with national codes.

General Information

Product Name	DentCare BQP-D15
Power Input	100~240V AC, 50Hz/60Hz
Adapter	100~240V AC, 2A, 50/60Hz
Net Weight	20 kg
Printer Dimension W x D x H	40 x 30 x 47 mm
Package Size and Weight	62 x 62 x 75 cm / 22 kg (Including pallet)
Operating Temperature	10° to 30°
Humidity (RH)	40% to 60% BQP-D15 should keep in dry conditions
Storage of Printing Material	Store the materials at ambient temperature from 15° to 28° And do not exposure to the light, otherwise resin may solidified
<ul style="list-style-type: none"> · Liability: In case you do not follow the operating manual we cannot be held responsible for damages of the machine or injuries on the operator. · Repair can only be carried out by authorized person of BenQ. 	

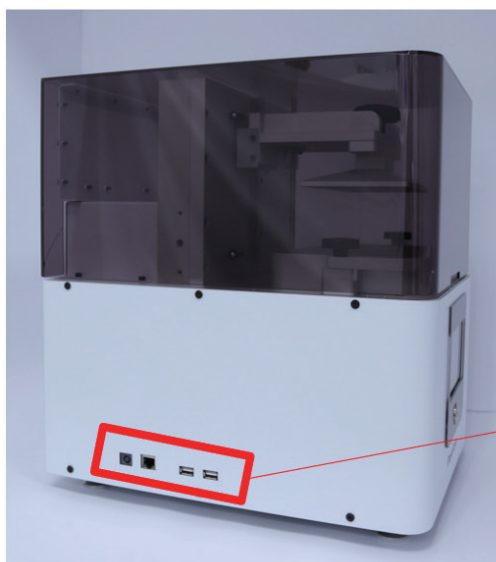
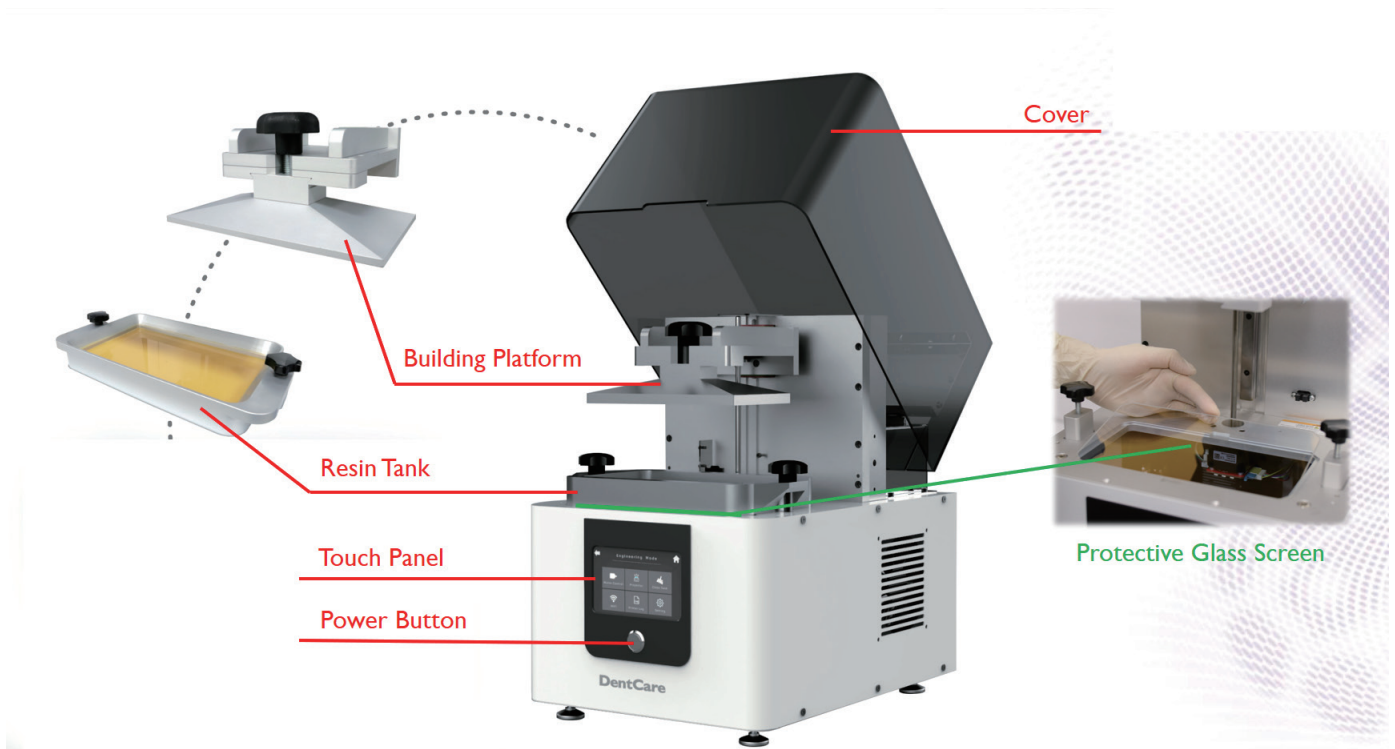
Package Contents

There is a printer and an accessory box inside the package. As soon as you receive our products, please verify its content and check if there's any exterior damage due to transportation.

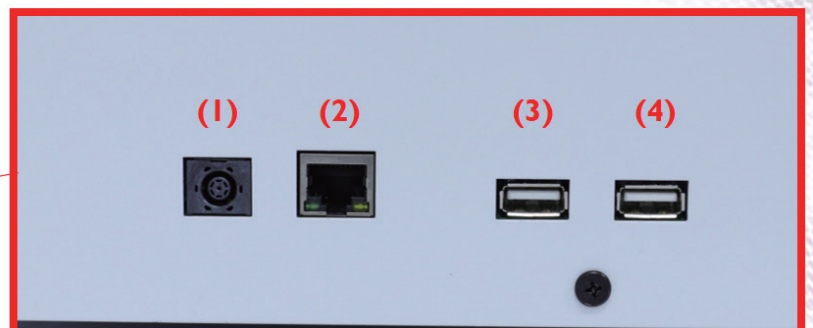


- ① ethernet cable
- ② cord
- ③ adapter
- ④ plug adapter
- ⑤ putty knife
- ⑥ tweezer
- ⑦ side cutter
- ⑧ scraper
- ⑨ resin scraper

Product Overview



- (1) Electrical Outlet/ Adapter
- (2) Network Port/ RJ-45 Cable
- (3) USB Port I
- (4) USB Port 2



Setting Up Your 3D printer - DentCare BQP-D15

Unpack

(1) Place the protection box on a flat surface



(2)
Remove 4 white protecting stable lock surrounding the box (one per surface)



(3)
Remove the outer box from top



(4)
Unpack completed



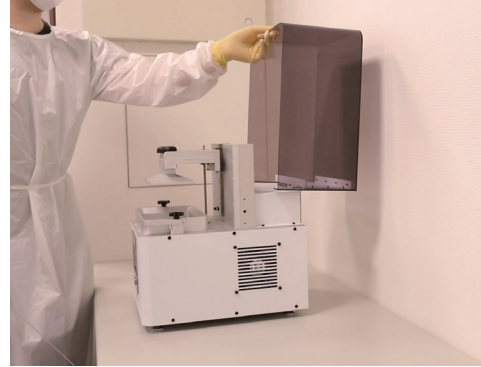
WARNING

※ Printer net weighs about 20kg.
Please be careful, and use proper lifting techniques to avoid injury.

Location

Ensure your BQP-D15 is placed on a flat table top with access to mains electricity. Avoid sunlight direct as this will degrade material left in the machine.

- (1) Required at least 20cm space around the printer.
- (2) When open the cover, make sure there's enough space behind and above the printer.



WARNING

※ Dust pollution will cause printing failure. Do not place your printer in dusty environment, such as zirconia milling workplace.

WARNING

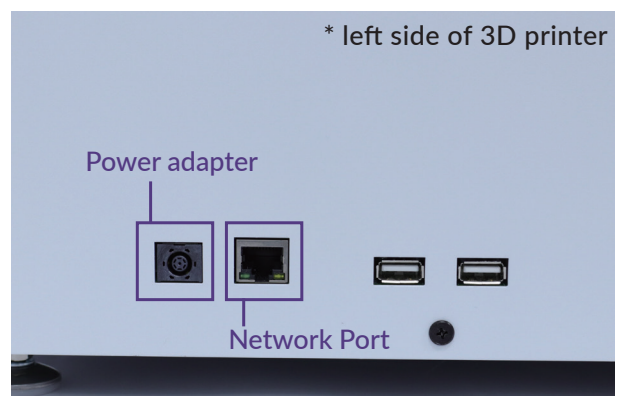
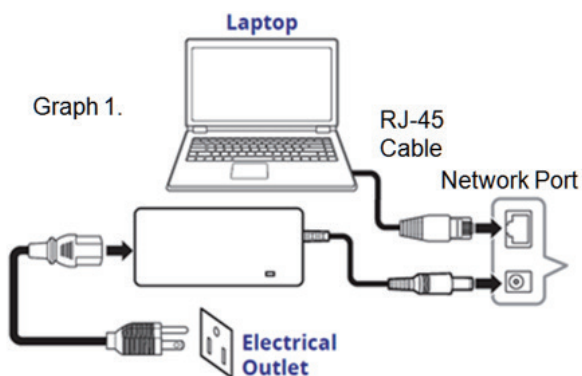
※ Printer net weighs at least 20 kilograms. Please be careful, and use proper lifting techniques to avoid injury.

NOTE Do not discard your carton. Put it in a safe place should you need to ship your printer for any reason.

Connecting To The Power Adapter And Cable

- (1) Connect the power cord and adapter to BQP-D15, and then plug it into an electrical outlet
- (2) Connect your printer with laptop

- Basic : Connect printer and laptop by RJ-45 cable (Graph1.) [Initiating time 1 minute]
- LAN : Connect both printer and laptop to local area network [Initiating time a few seconds]
- IP sharer : Connect both printer and laptop to IP sharer [Initiating time a few seconds]



Power Button Control

(1) Power on

Press Power Button => Panel shows Starting up => Panel shows Menu



(2) Power off

Press Power Button => Confirm message => Confirm to shut down

(3) Emergency shut down

Press Power Button and hold 3 seconds to shut down

(4) Power button signal

Blue		Solid	Standby mode
		Blinking	Starting up or printing in progress
Red		Solid	Error

Touch Screen Control

(1) Select file & print:

Upload .3dp; file through USB port, the printing parameters will automatically apply the same one in slicing software.

The printing setting is same as printing setting interface in slicing software.

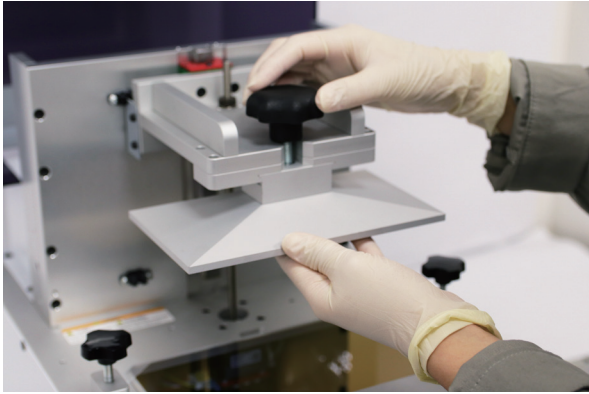
You can print either over ethernet cable or from your USB device.

- Go to print.
- Upload your .3dp file.
- Press print.

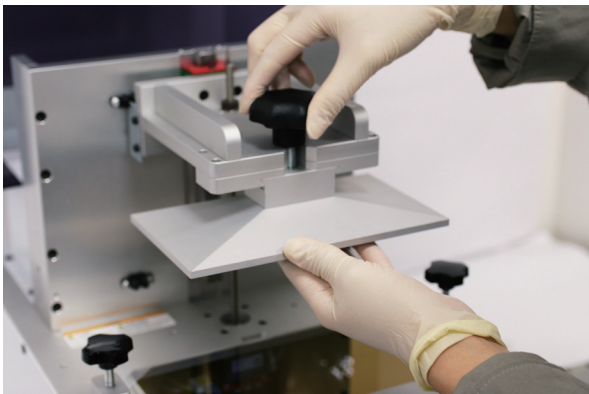
Prepare For Print

Install Building Platform

(1) Carry the building platform and install it onto the machine.

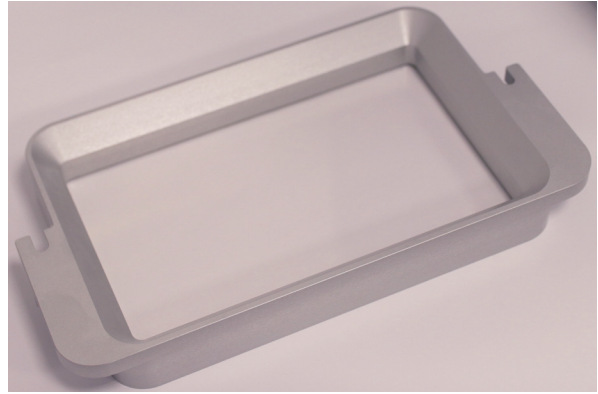


(2) Screw and lock the building platform onto the machine.



Fill Resin Tank

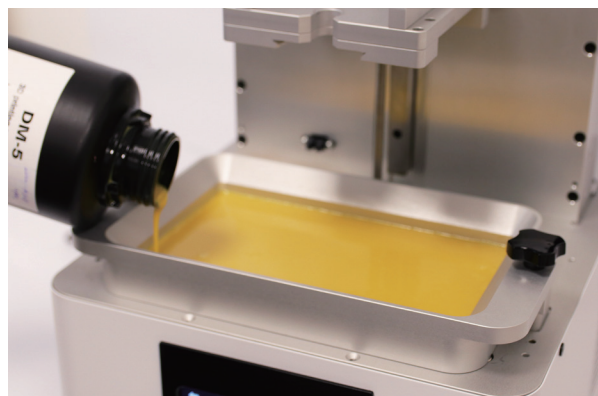
(1) Make sure the resin tank is empty and the bottom has to be clear.



2. Screw the resin tank from two point.



3. Pour resin.

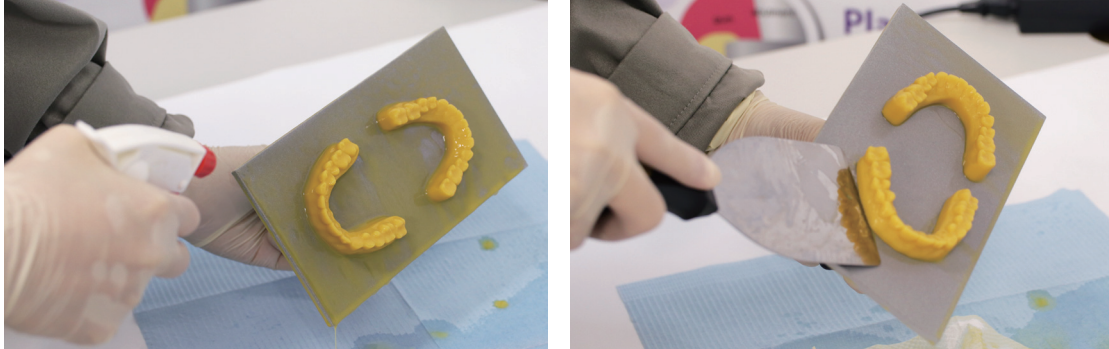


- ※ Remove the building platform: Unscrew the building platform → Remove the building platform
- ※ Remember to screw two point of resin tank after install it.

After Print

Print Removal

Unscrew the resin tank → Remove the building platform and printed model → Use air gun and ethanol to clean the printed model → Post curing (Additional post curing unit is required) → Carefully remove the printed model from the building platform → Use putty knife to help separate the printed model and building platform.



※ Do not expose the resin tank to direct light source because the resin will solidify under UV light. Use tray to cover the resin tank to prevent solidify.

Clean Building Platform

Use putty knife or similar object to scrape away the excess printed model on the picker. If any greasy residue persists, use a soft cloth dipped in alcohol to rub the surface until the grease is removed.

※ Do not use chisel to scrape off the printed parts on the building platform. The rugged surface of picker will cause the resin tank & UV glass be damaged.

Clean Resin Tank

Pour resin out of tank → Pour ethanol into tank and soak in a while → Use tissue or lens tissue softly wipe the bottom of tank → Finished cleaning.

Post Processing

(1) Clean

- Put your 3D model into 95% alcohol
- Put it into the ultrasonic cleaner
- Set 1 minute to clean your 3D model

(2) Dry

- Dry your 3D model before post cure

(3) Post cure (To cure resin-based composites)

- Post cure your model under a light curing unit (UV lamp)
- Curing time depends on the intensity and wavelength of your lamp

Engineering Mode

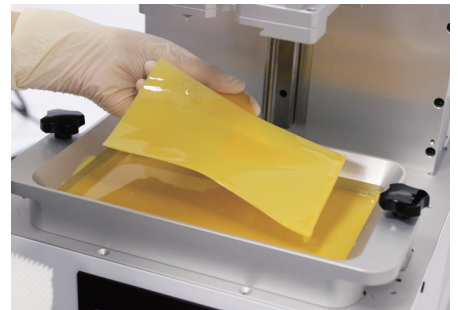
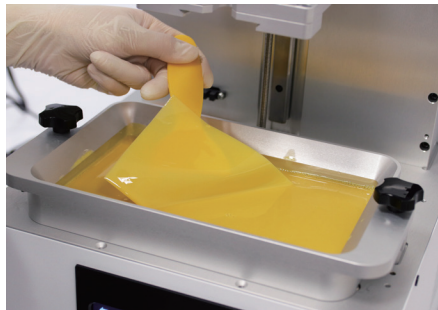
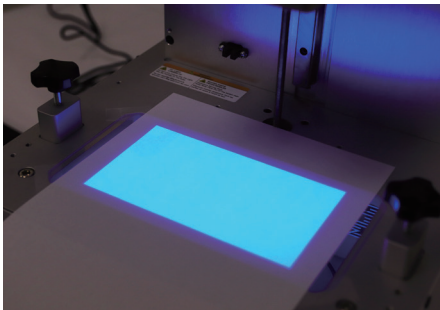
Projector Control

- (1) On/Off : Turn on or off the projector
- (2) Pattern menu : From 01 to 09 are more choices of test patterns.
- (3) Light(%): At 100% is the existing brightness of light engine, users can set higher brightness or lower brightness for test printing.

Clean Tank Mode

Cure one layer at the bottom of the resin tank to remove some residues.

- (1) Set curing time
- (2) Press "Clean"
- (3) Scrape the resin layer off with resin scraper



Notifications

- Do not shut down the power during curing
- Do not interrupt the firmware upgrade process. Any interruptions during the firmware upgrade process may cause your printer to malfunction.
- Update the firmware frequently for better user experience.
- Before printing, please check the surface of building platform and tank is clean, no residual, or may affect printing quality.
- Tank and building platform are consumables, suggest replace for a period, or may affect printing quality.
- Tank has lifespan. Evenly arrange the printing model can protect the tank, do not print on one single point repeatedly.

Specifications

DentCare BQP-D15	
Technology	Digital Light Processing (DLP)
Printing Area (WxDxH)	150mm x 84.3mm x 75mm
XY Res.	58um
Z-axis Layer Thickness	5~200um
Wavelength(LED)	405nm
Light Engine Pixels	2560 x 1440 pixels
Connectivity	USB, Ethernet

Support

More detailed operation steps can be viewed at :

<https://www.youtube.com/channel/UCB-KilG9-bINsZQS5iOV55Q>



BenQ AB DentCare Corp.

Tel: +886-2-2658-3588 Fax: +886-2-2658-9788

7FL, 52 Zhou-z St., Neihu Dist., Taipei | 11493, Taiwan

www.benqabdentcare.com



BenQ AB DentCare 

