

Product Name : MANI DENTAL MICROSCOPE Z



READ THE INSTRUCTION BEFORE USE

Before using the MANI DENTAL MICROSCOPE Z, please see the instructions as indicated below.

<Warnings>

1. Only trained and instructed operators are allowed to use. Administrator should provide training to all people involved.
2. Do not use this product except for the dental service and treatment. Use it in accordance with the intended use.
3. Do not use this product at explosive or flammable atmosphere.
4. Do not use this product in case any failure is found.
5. Do not look at the sun, laser beam, irradiator or other strong light through lens tube, object glass or eyeglass.
6. Do not look at light source through object glass or light guide.
7. Do not use turbine or other devices near this product since dust preventing glass and sub-object glass could break because of accidental contact.
8. Lock the caster stoppers of floor stand.
9. Keep baby and child away from this product except for the purposes of dental treatment and practice.
10. Sterilize silicone cap with autoclave before each use.

<Contraindications and prohibitions>

1. Do not use this product in case failure or break is found.
2. Do not remodel or alter.
3. Do not apply excessive pressure.
4. Keep hands clear of movable portion or take things away during operation.
5. Do not use cell-phone, PHS, transceiver or other devices which generate electromagnetic ray near this product as it could cause malfunction. Provide instruction to people involved to turn off electric devices which generate electromagnetic ray.

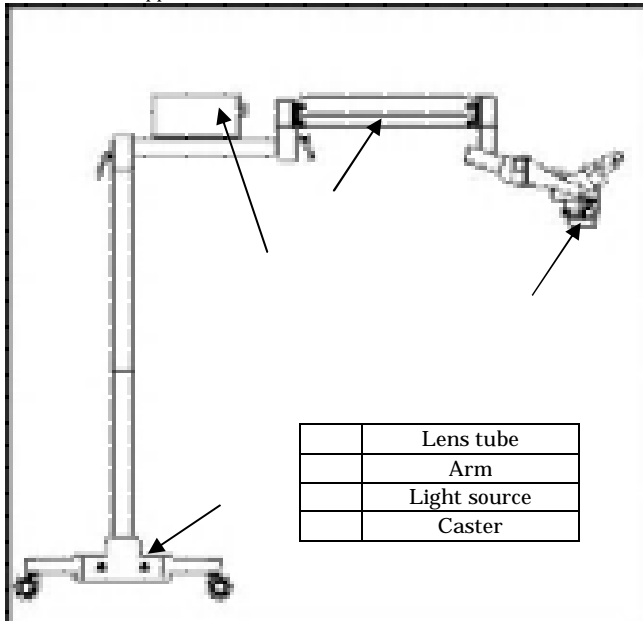
See instruction manual for more details.

<Structures and principals>

Fixed lens tube microscope

1. This is a dental microscope used for treatment in closeup oral cavity (tooth and periodontal structure etc.) by light source light guiding system with right-and-left separation zoom object glass. This product could be moved near patient.
See instruction manual for more details.

2. Product appearance



<Purpose of use and effect-efficacy>

This is an optical microscope used for dental treatment and examination.

Be sure to refer to instruction manual

<Specifications>

Classification	Class I
Level	B
Eyepiece	30degree, 45degree fixing
Magnification	Zoom type, 1:6
Total magnification	4.0 x ~ 24.0 x
Object glass	f=180mm
Focus adjustment	Object glass, Manual focus Range:55mm
Interpupillary adjustment	54mm ~ 75mm
Lens tube weight	Approx. 2.6kg
Illumination	Halogen lamp 12V-100W Halogen lamp 15V-150W
	Light source light guiding system
Balance adjustment floor stand	Remote operating (light quantity adjustment volume/light switch)
	Vertical movement spring arm
	Four-axis machining caster with stopper
Power source	AC100V ± 10% 50/60Hz
Maximum power consumption	100W power supply for halogen lamp
	130W(100W halogen lamp)
	100W, 150W power supply for halogen lamp switching
	140W(100W halogen lamp) 210W(150W halogen lamp)
Fuse rating	100W power supply for halogen lamp
	AC250V 3A
	100W, 150W power supply for halogen lamp switching AC250V 4A
Total weight	Approx. 98Kg

See instruction manual for more details.

<Method of manipulating or method of use>

1. Ambient conditions of use
 - Temperature:0 ~ 40 degrees Celsius
 - Humidity:20 ~ 80%RH
 - Atmospheric pressure:800 ~ 1,060hPa
 See instruction manual for more details.

2. Usage
 - Be sure to check following items before each use.

- 1) Preparation
 - Lock all four casters.
 - Connect all cords appropriately.
 - Connect light guide appropriately.
 - Turn on light source and make sure lamp works correctly.
 - Check the motion of all movable portion.
 - Make sure field of view is clear.

Do not use this product in case any failure or break is found.
See instruction manual for more details.

- 2) Operation
 - Unlock all stopper of casters and move to the preferable place.
 - Lock the casters.
 - Check the lowest descent position.
 - Turn on and adjust brightness by modulated light remote controller.
 - Minimize the magnification by zooming dial and adjust the focus by link arm while looking in eyeglass
 - Maximize the magnification by zooming dial and focus sharply by focus dial.
 - Adjust zooming dial to the most suitable magnification.
 - See instruction manual for more details.

- 3) After use
 - Cool down halogen lamp inside light source and turn off, then unplug electrical outlet.
 - See instruction manual for more details.

<Precautions for use>

1. As written in "Warnings" part.
2. As written in "Contraindications and prohibitions" part.
3. To prevent infection, sterilize silicone cap with autoclave for each patient and make sure sterilization is completed before using.
4. Do not remove arm cover.
5. Do not open lamp cover while this product is turned on.
6. Apply voltage within the range specified.
7. Always connect the earth terminal of power cord.
8. Do not touch any interior portion unless necessary for treatment and do not fall anything inside this product.
9. Pay a special attention for halogen lamp handling.
10. Do not touch halogen lamp with bare hands.
11. Avoid string or using at humidified atmosphere and keep away from liquid.
12. Use accessory provided by MANI only. In case the use of accessory provided by other companies, its safety should be confirmed by MANI.
13. Pay a special attention for any shock as this product is precision mechanical equipment.
14. Contact MANI or specified company immediately in case of any failure or break.
15. This product shouldn't get touch with patient.

Precautions for the use of electric medical equipment (Safety and hazard prevention)

- 1) Only skilled operators are allowed to use.
- 2) Follow the instructions below when setting up this product.
Keep liquids away.
The place should have no bad effect of atmospheric pressure, temperature, humidity, airiness, sun, dust, salt content and sulfur content etc..
The place should have no slope, vibration and shock including transport.
The place should be away from chemical agent storage or gas.
Pay attention to voltage and allowable current of power source frequency.
Check the condition of power supply such as discharge state or polar character etc..
Connect earth properly.
- 3) Follow the instructions below when using this product.
Check contact state of switch, polar character, dial setting and meter etc. to make sure this product works properly.
Make sure earth terminal is connected completely.
Make sure all cords connected properly and safely.
Be careful not to cause improper diagnosis or danger because of using several equipments.
Recheck external circuit which is connected to patient directly.
- 4) Follow the instructions below when the use of this product.
Be careful not to go over necessary time and amount of diagnosis and treatment.
Always pay attention to patient and whole this product to find any abnormality.
In case patient or this product shows abnormality, take appropriate steps such as turning off this product once patient's safety is ensured.
This product shouldn't get any touch with patient
- 5) Follow the instructions below after using this product
Operating switch and dial etc. should be back to the original position in accordance with the process specified and then turn off.
Do not apply excessive force such as pulling out cord forcibly when removing cords.
Follow the instructions below for choosing storage location.
Keep away from liquid
The place should have no bad effect of atmospheric pressure, temperature, humidity, airiness, sun, dust, salt content and sulfur content etc.
The place should have no slope, vibration and shock including transport.
The place should be away from chemical agent storage or gas.
Accessories and cords should be cleaned and put away neatly.
- 6) Unplug immediately in case of smoke, spark or abnormal odor then post an out of order sign. Contact MANI or specified company for repair.
- 7) Do not remodel.
- 8) Maintenance and inspection
This product and the parts should be periodically inspected.
Make sure this product works properly and safely before use if it has not been used for long period of time.
See instruction manual for more details.

<Storages and duration of use>

- Storing
1. Cover with dust cover or silicone cover to avoid exposing to dust, dirt or humidity.
 2. Turn off when stored.
 3. Each knob, arm and lens tube holder should be folded near strut to focus gravity point and to avoid crash and falling.
 4. Avoid shock and bump.
 5. Lock all caster stoppers when stored.
See instruction manual for more details.

<Maintenances and inspections>

1. Daily maintenance should be done in accordance with instruction manual.
2. User (hospital or clinics etc.) should take responsibility for management of use, maintenance and inspection.
3. This product needs to be maintained and inspected once a year for optimal operation as it is high technology product.

Maintenance and inspection by user

Inspection timing	Inspection part	Inspection contents
Before use	Eyeglass	No break or damage is found and set properly.
	Visibility adjustment	No break or damage is found and works properly.
	Fixed lens tube	
	Zooming dial	
	Operation handle	
	Link arm	
	Swing motion arm	No break or damage is found and functions properly.
	Floor stand	
	Light source	
	Light guide	
Joint portion	No break or damage is found. Connected appropriately and functions properly	
Each switch		
	Each cord	No break or damage is found. Connected appropriately and functions properly
	Silicone cap	No break or damage is found and sterilized.
After use	Eyeglass	No break or damage is found and cleaned.
	Visibility adjustment	
	Fixed lens tube	
	Zooming dial	
	Operation handle	
	Link arm	No break or damage is found.
	Swing motion arm	
	Floor stand	
	Light source	
	Light guide	
	Joint portion	
	Each switch	No break or damage is found and sterilized
	Each cord	
	Silicone cap	

See instruction manual for more details.

Maintenance and inspection by technician


Inspection part	Inspection contents
Appearance	Check indication such as lot number and no break or damage of exterior cover is found.
Control system	No break or damage to control system such as power switch and works properly.
Optical system	No break or damage to zoom magnification range and functions properly.
Caster (Floor stand)	No break or damage is found and functions properly.
Operation handle	
Plug	
Light guide	

20100901 (Version 1-0)

<Packagings>

1. Minimum packaging unit: 1 set

<Legal manufacturer >

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The specifications, structures and materials are subject to be changed without previous notices for the demands of improvement.
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