Document History

Edit date	Version	Topic, revision, action taken

Empower Technologies (Shanghai) Co., Ltd.

Disclaimer

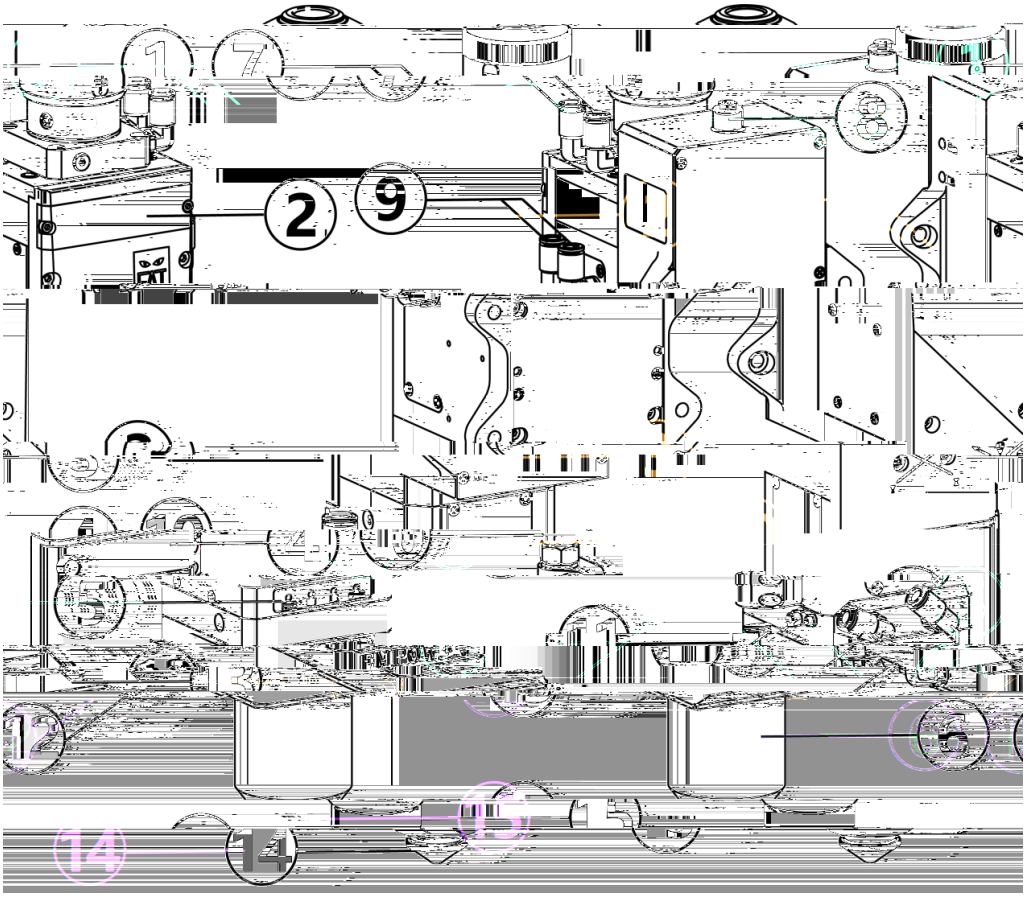
Use Regulations

Personnel Responsibilities

Contents

Product Summary

Structure (with QBH Interface)



Monitor

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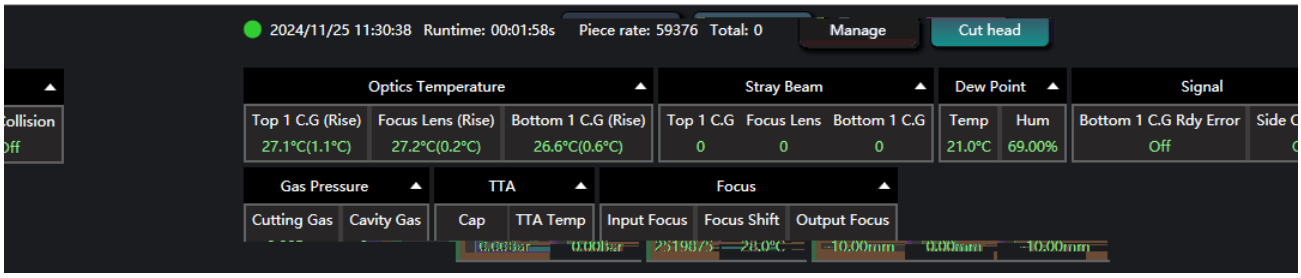


LED

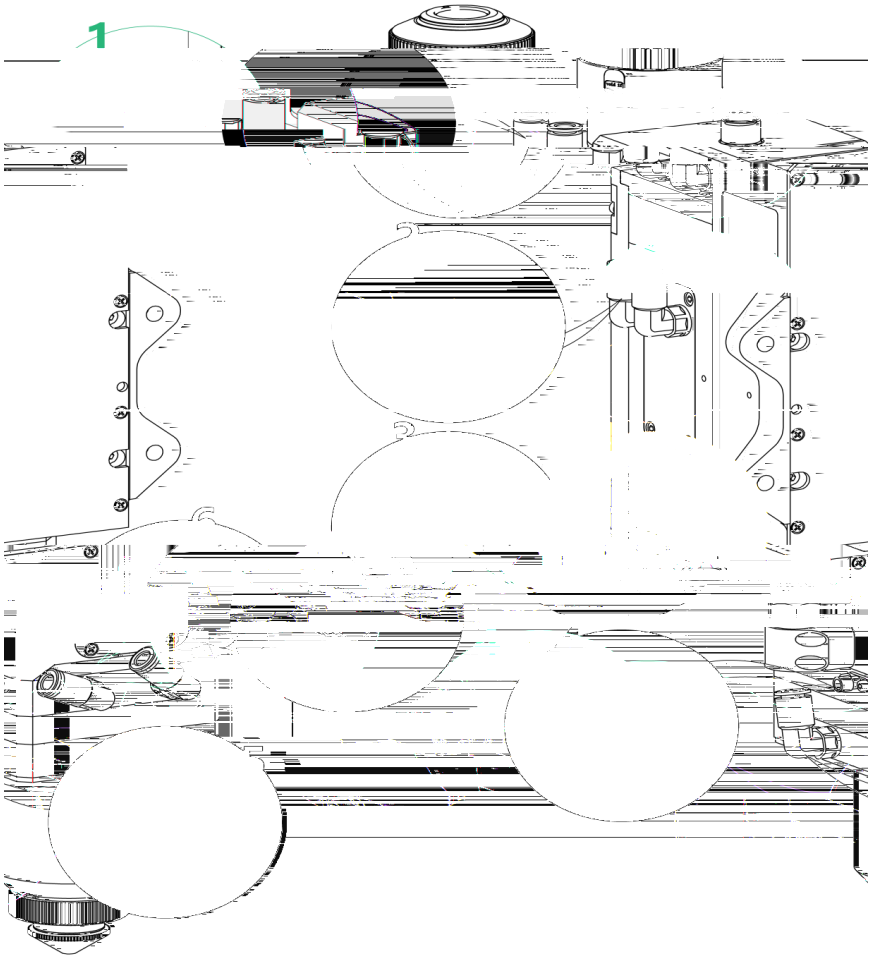
LED No.	LED Status	Status Definition

Technical Datasheet

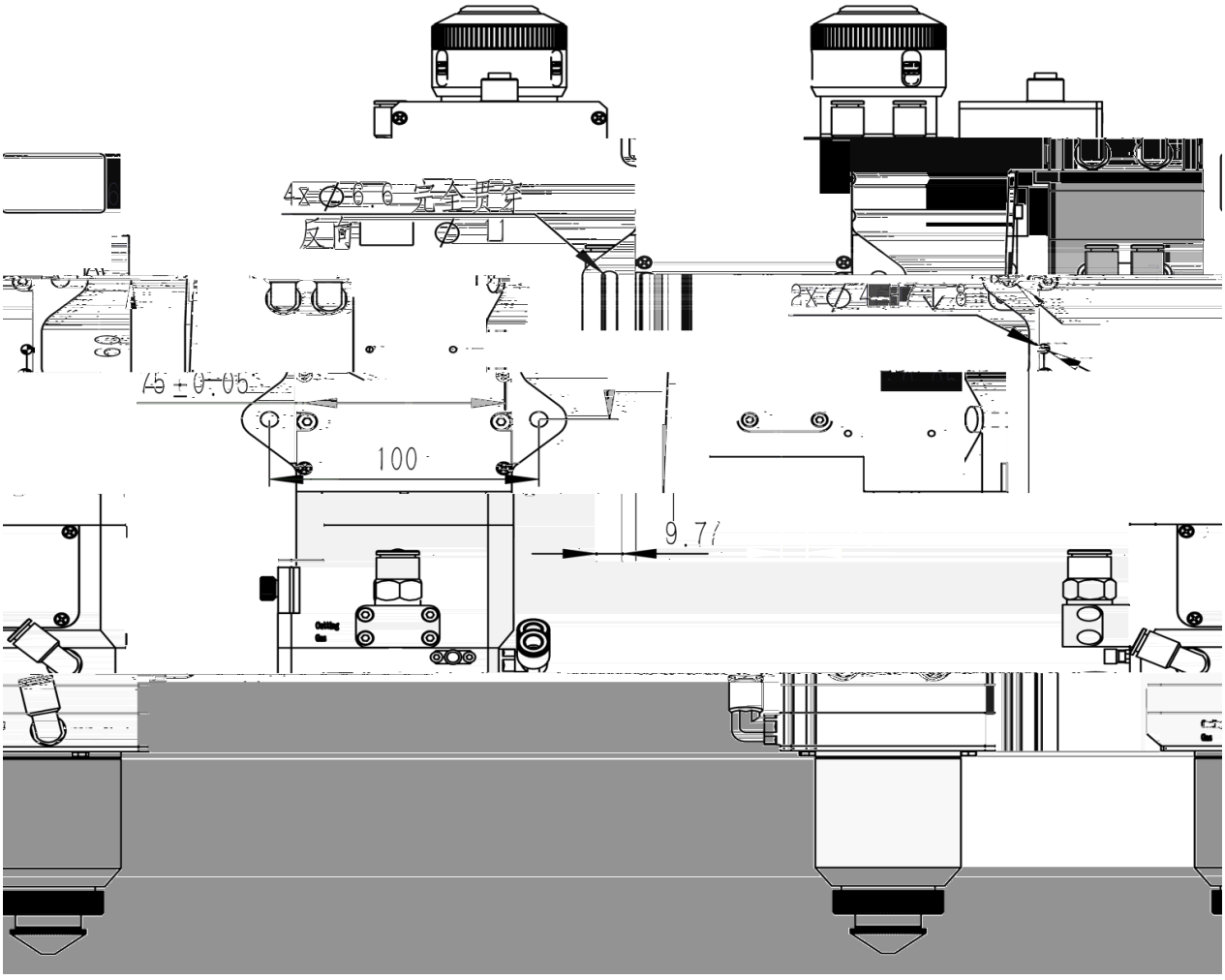
Mechanical Size

Optical Configuration: 100:150

Physical Interface



Mounting of Laser Cutting Head



Earthing of Laser Cutting Head

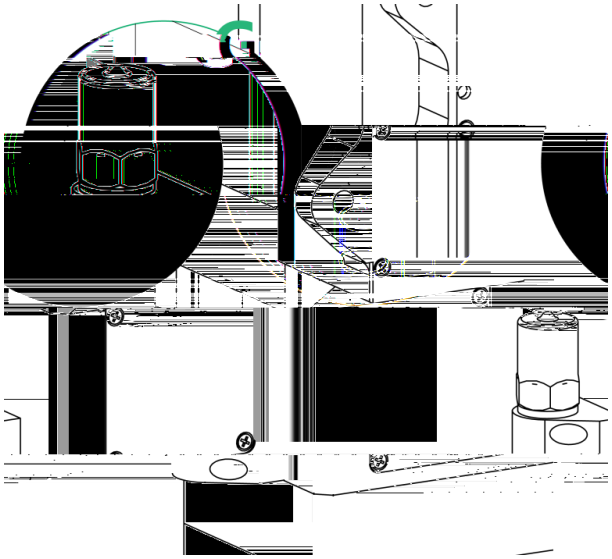
Inspection of Top 1 Cover Glass (1st Installation/Replacement of Fiber)

Maintenance or Repair shall be implemented at dust free workstation.

The cover glass shall be replaced if it cannot be cleaned or a damage happens.

Connection of Cooling Water and Assist Gas

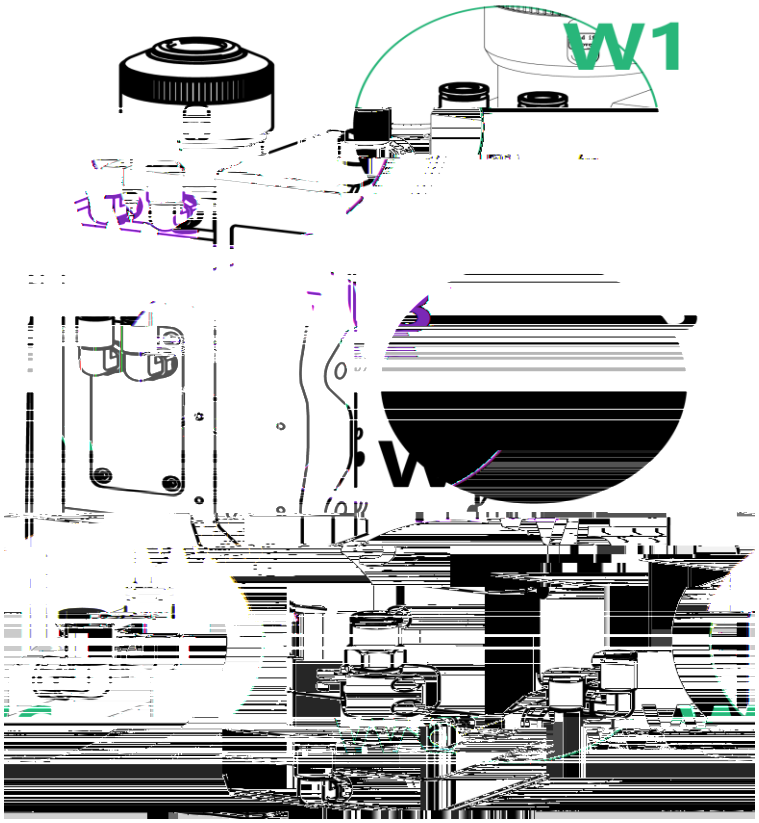
Connection of Cutting Gas



Gas	Purity	Maximum content of water vapor	Maximum content of hydrocarbon

CAUTION: Gas interface cannot be replaced arbitrarily especially do not use PTFE TAPE. Otherwise the gas path will be blocked and cannot do normal cutting which will damage cutting head at the same time.

Connection of Cooling Water



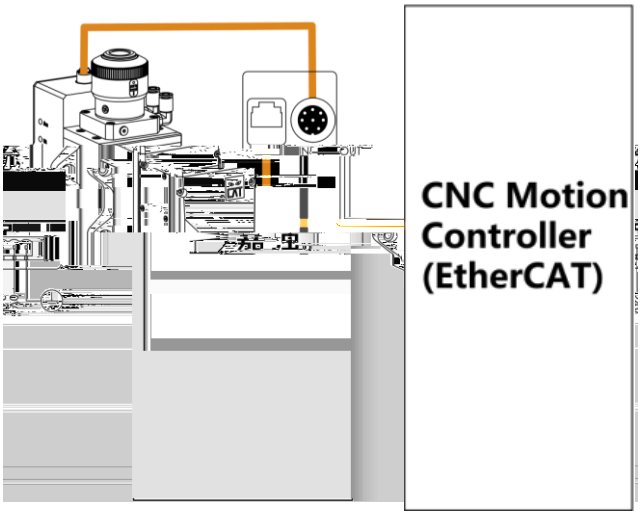
Water In: W2

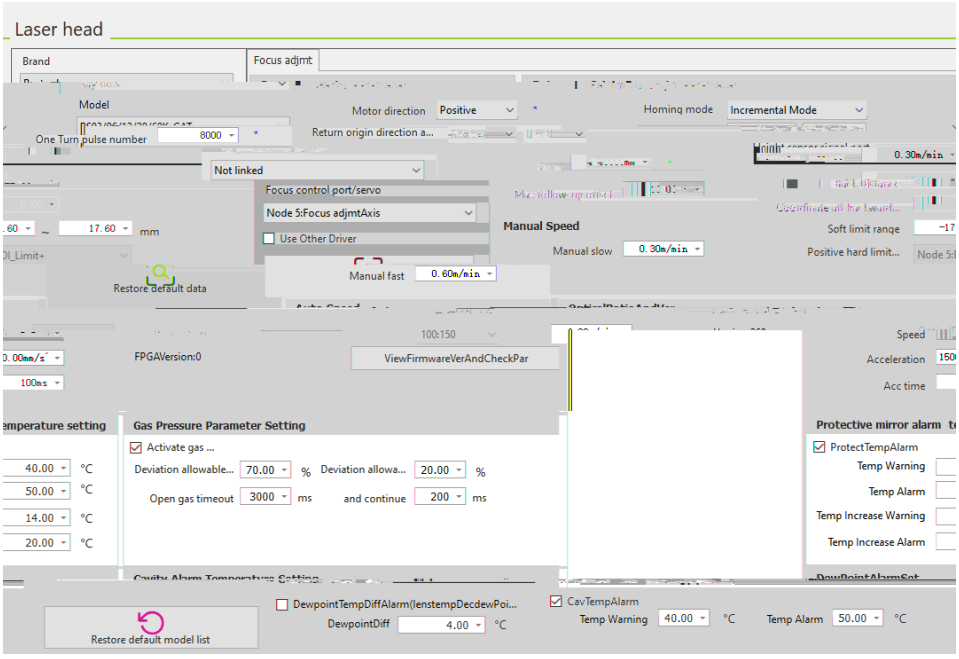
Chain Connection: W1-W3-W4-W5

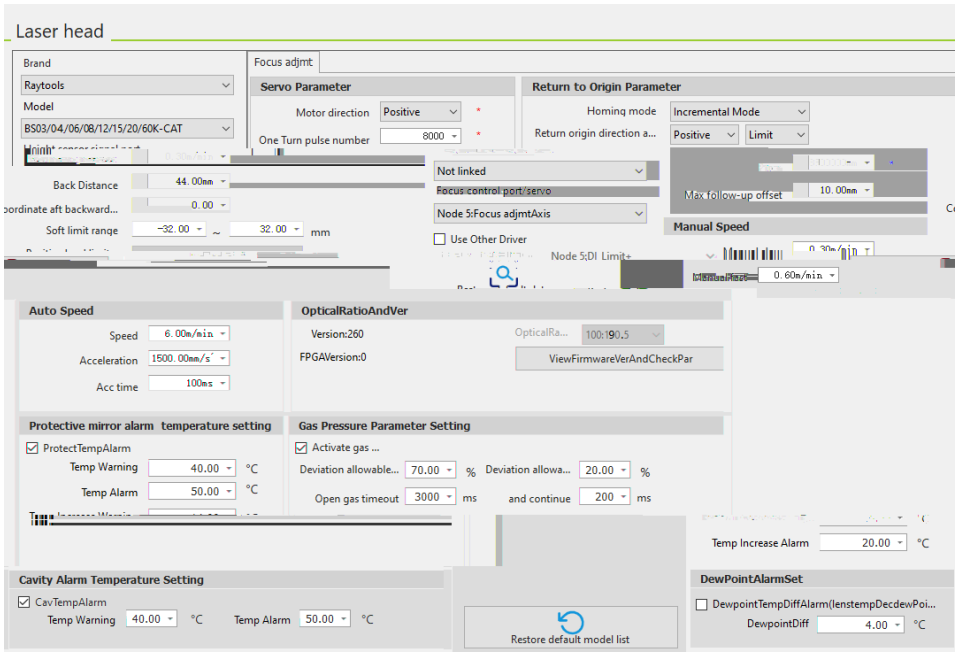
Water Out: W6

	≤

System Installation and Commissioning

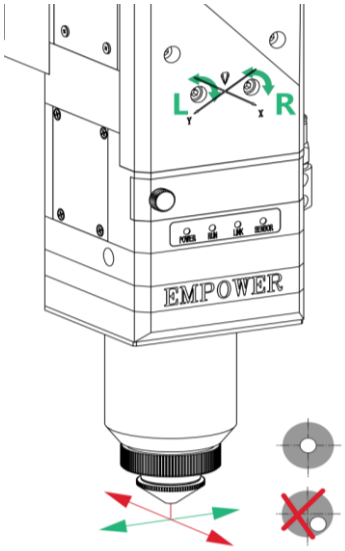



Laser head
Brand
Focus adjmt
Model
Motor direction
Positive
Homing mode
Incremental Mode
One Turn pulse number
8000
Return origin direction a...
Not linked
Focus control port/servo
Node 5:Focus adjmtAxis
Use Other Driver
Manual Speed
Manual slow
0.30m/min
Manual fast
0.60m/min
Soft limit range
Positive hard limit...
Restore default data
FPGAVersion:0
ViewFirmwareVerAndCheckPar
Speed
Acceleration
Acc time
Gas Pressure Parameter Setting
Activate gas ...
Deviation allowable...
70.00
Deviation allowa...
20.00
Open gas timeout
3000
and continue
200
Protective mirror alarm
ProtectTempAlarm
Temp Warning
Temp Alarm
Temp Increase Warning
Temp Increase Alarm
40.00
50.00
14.00
20.00
DewpointTempDiffAlarm(lenstempDecdewPoi...
DewpointDiff
4.00
CavTempAlarm
Temp Warning
40.00
Temp Alarm
50.00
Restore default model list


Laser head
Brand
Raytools
Focus adjmt
Model
BS03/04/06/08/12/15/20/60K-CAT
Servo Parameter
Motor direction
Positive
One Turn pulse number
8000
Return to Origin Parameter
Homing mode
Incremental Mode
Return origin direction a...
Positive
Limit
Back Distance
44.00mm
Soft limit range
-32.00
32.00
mm
Not linked
Focus control port/servo
Node 5:Focus adjmtAxis
Use Other Driver
Max follow-up offset
10.00mm
Manual Speed
Node 5:DI Limit+
0.60m/min
Auto Speed
Speed
6.00m/min
Acceleration
1500.00mm/s²
Acc time
100ms
OpticalRatioAndVer
Version:260
FPGAVersion:0
ViewFirmwareVerAndCheckPar
Protective mirror alarm temperature setting
ProtectTempAlarm
Temp Warning
40.00
Temp Alarm
50.00
Gas Pressure Parameter Setting
Activate gas ...
Deviation allowable...
70.00
Deviation allowa...
20.00
Open gas timeout
3000
and continue
200
Temp Increase Alarm
20.00
Cavity Alarm Temperature Setting
CavTempAlarm
Temp Warning
40.00
Temp Alarm
50.00
Restore default model list
DewPointAlarmSet
DewpointTempDiffAlarm(lenstempDecdewPoi...
DewpointDiff
4.00

Beam Alignment and Zero Focus Correction

Beam Alignment



Maintenance

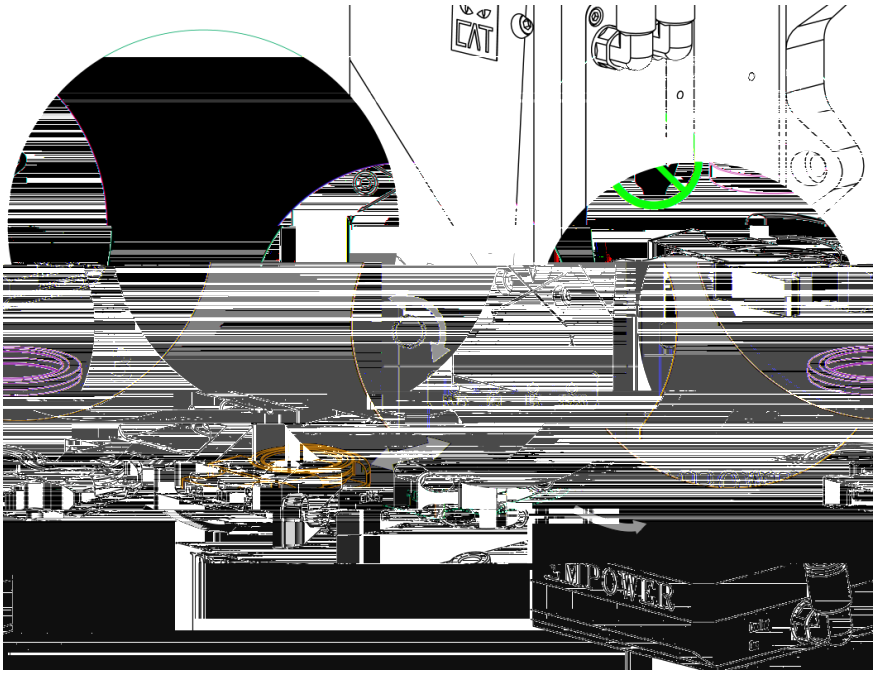
Cleaning Lens

Tools: Dust-proof gloves or fingertip, polyester swab, absolute ethanol, rubber gas blow (purely compressed air).

Cleaning instruction:

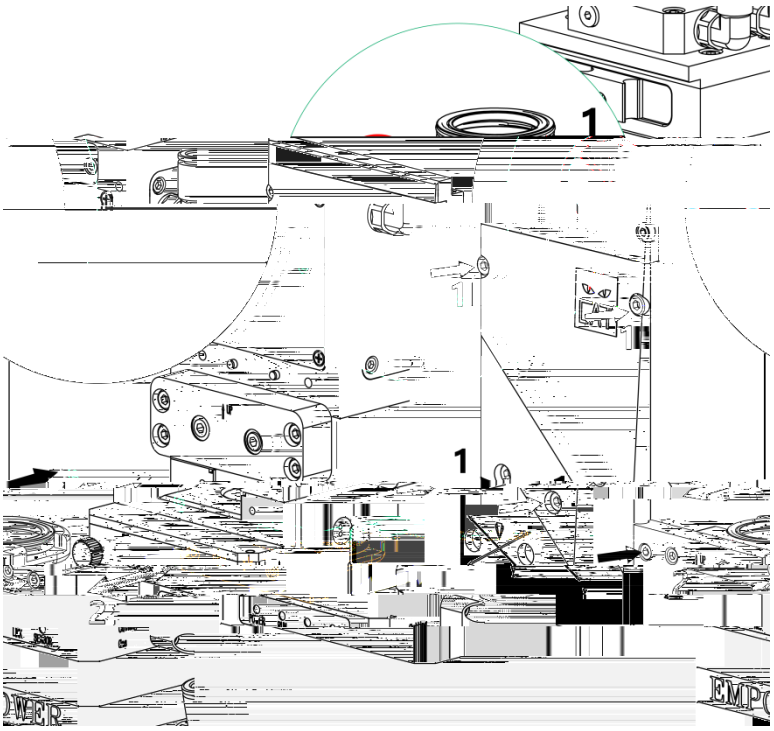
Removal and Installation of Bottom 1 and 2 Cover Glass/Protection Glass

Removal and Installation of Bottom 1 Cover Glass/Protection Glass



It is not allowed to pull out the edge of seal ring directly as it is very easy to damage the seal ring. Please wear the clean gloves or fingertips.

Removal and Installation of Bottom 2 Cover Glass/Protection Glass



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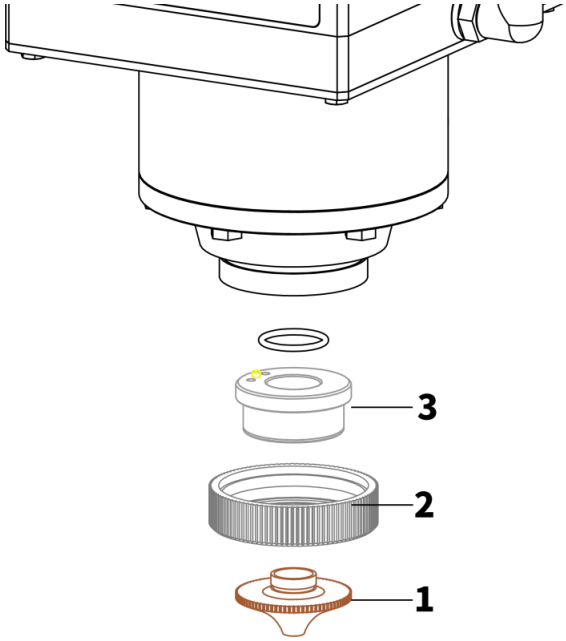
Replace Ceramic Body and Nozzle