

System name	Parts name	Amount	Standard Parameter	Manufacturer
Optical System	Main Control Box	1set	BPC-01A	Beijing Boao laser
	laser chamber	1 set	BO-2.0	Shenzhen WSX
	Microscope	1 set	30 times	China
	Beam Expander	1	3X/4X	USA
	Output mirrors	1	1064nm	Shenzhen WSX
	Focusing lens	1	1064nm	Shenzhen WSX
	Protective lens	1		China
Control System	Laser power supply	1	JPT	Shenzhen JPT
	Control panel	1		Taiwan
	Control Software	1 set	WSX SystemVer2.0	Shenzhen WSX
	Laser Control Card	1	BCC-A, RS232	laser
	D/A Control Card	1	16 bite D/A output, 4input/4output I/O	laser
water cooling system	S&A	1 Set		Guangzhou S&A

Description of parameter setting:

Laser frequency Hz): 1-1000Hz

Laser duty cycle (%): 10-100%

Power(V): 0-100V

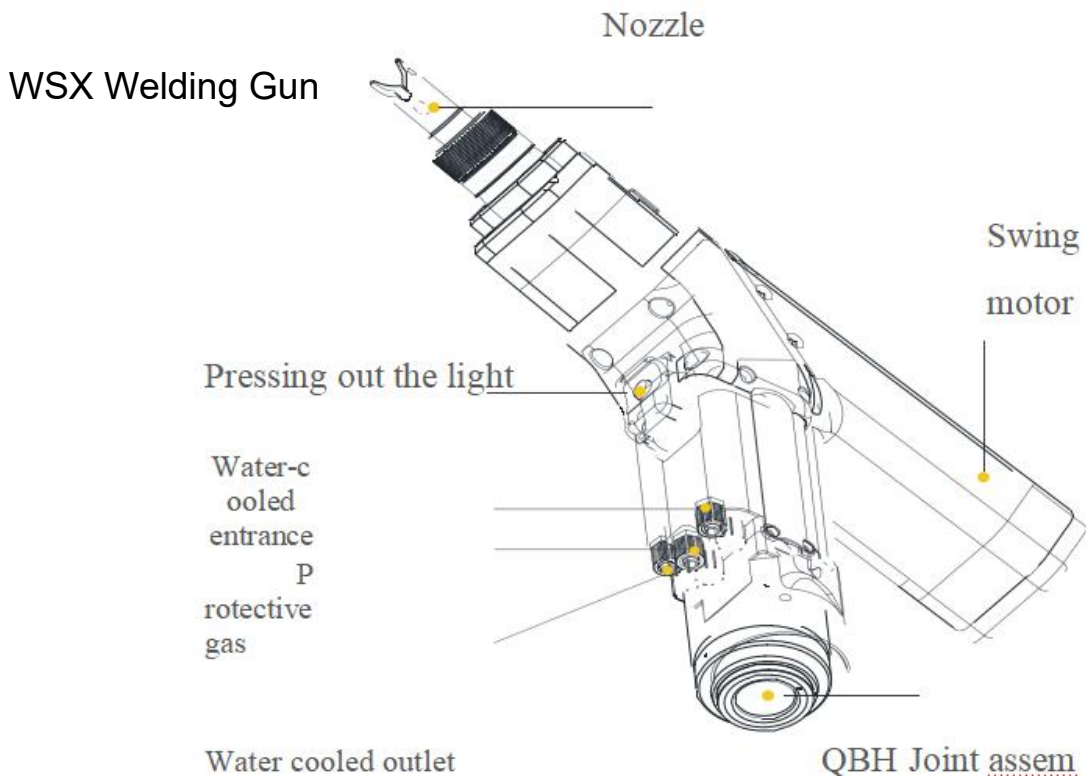
Galvanometer swing speed (mm/s): 10-1000mm/s

Galvanometer swing amplitude(mm): 0.1-5mm

Gas valve: 100-300



Number	Characteristic parameter	Test condition	Minimum value	Typical value	Maximum value	unit
1	Operating mode	Continuous				
2	polarization state	random				
3	Output Power MFSC-1000W	100%continues		1000		W
4	Power adjustment range		10		100	%
5	central wavelength	100%continues	1070	1080	1090	nm
6	spectral bandwidth (3dB)	100%continues		3	4	nm
7	Short-term power stability	100%continues >1h		1	3	%
8	Long-term power stability	100%continues >24h		3	5	%
9	Beam quality M ²	100%continues (20u-QBH)			1.3	
		100%continues (50u-QBH)			2.8	
10	Laser turn-on time	10%-90% Output		50	80	μs
11	Laser off time	90%-10% Output		30	50	μs
12	Modulation frequency	100% output		20	50	KHz
13	Indicating red light power	100% output	150			μw
14	Fiber cable length	MFSC-1000W		15		m
15	Output fiber core diameter	50 (25、30、100 for choose)				μm
16	Fiber cable bending radius		200			mm
17	output method	standard QBH (LOC)				



The laser welding head uses WSX fiber optic hand-held laser welding head.

Its characteristics are as follows:

1. Unique laser control box with QCW (quasi-continuous), PWM (pulse) CW (continuous) 3 emission modes
2. Ergonomically designed, compact and easy to use.
3. Welded head with blow control and safety lock.

Nozzle: The appropriate nozzle can be replaced according to different angles, and the nozzle can adjust the distance from the spot to the metal surface. Can make the welding surface more fused and smoother.

Gas inlet water inlet: Two intake pipes with an outer diameter of 6mm and an inner diameter of 4 mm and inlet and outlet pipes, To ensure that the focus lens inside the gun body guarantees a certain temperature.

QBH connector: A special connector for the laser. Non-professionals are prohibited from disassembly.



ShenZhen S&A Chiller operating interface

parameter name	Factory setting	Adjustable range	
temperature setting	25°C	-50 ° C - 150 ° C	
Ultra high temperature setting	35°C	-50 ° C - 150 ° C	
Ultra low temperature setting	7°C	-50 ° C - 150 ° C	
Over temperature output mode	Normally closed	Normally closed	Normally open
Temperature difference	5 ° C	0.1 ° C	20 ° C
Heating temperature difference setting	5 ° C	0°C	10 ° C
Pump protection temperature	10 ° C	0°C	10 ° C
Flow output mode	Normally closed	Normally closed	Normally open
Press protection time	3 minutes	1 - 10 minutes	
Press output mode	Normally closed	Normally closed	Normally open
Press working mode	continuous	continuous	Intermittent
Temperature correction value	0°C	-20 ° C	20 ° C
Conductance display setting	display	display	shield
Conduction alarm setting	99.9uS/cm	0-99.9	



4.2 Display and processing method when the device runs abnormally:

1. There is no alarm output when the low temperature water level switch is turned on. Only when the water level switch is turned off, there is a water level alarm output and there is a display alarm indicator;

2. There is no alarm output when the low temperature flow switch is turned on. Only when the water level switch is off, there is a water level alarm output and there is a display alarm indicator;

3, low temperature current temperature > & < over temperature set temperature when there is over temperature alarm output and there is a display output alarm indicator;

4. There is no alarm output when the low temperature water level switch is turned on. Only when the water level switch is turned off, there is a water level alarm output and there is a display alarm indicator;

5. There is no alarm output when the low temperature flow switch is turned on. Only when the water level switch is turned off, there is a water level alarm output and there is a display alarm indicator;

6. Low temperature current temperature > & < Over temperature setting temperature has over temperature alarm output and display output alarm indicator;

7. There is no alarm output when the normal temperature water level switch is turned on. Only when the water level switch is off, there is a water level alarm output and there is a display alarm indicator;

8. There is no alarm output when the normal temperature flow switch is turned on. Only

when the water level switch is turned off, there is a water level alarm output and there is a display alarm indicator;

9. Normal temperature current temperature > & < Over temperature setting temperature has over temperature alarm output and display output alarm indicator;

10. When the conductance value exceeds the limit alarm, it indicates that the conductivity is faulty.

11. The conductivity sensor is faulty, indicating that the signal input of the conductivity sensor is not connected or connected to the negative pole.

Note: If there is a fault in the signal in the low temperature zone and the normal temperature zone, the corresponding output will have a signal output.