

SPECIFICATION

Product: Free Piston Stirling Cooler (FPSC)

Model No.: RS100 (100W)



Specification		File No.	
		Version	A/1
Model	RS100 FPSC	Page	1/4
No			

1. Applications

1-1: This specification applies to Rigid RS100 Free Piston Stirling Cooler (FPSC)

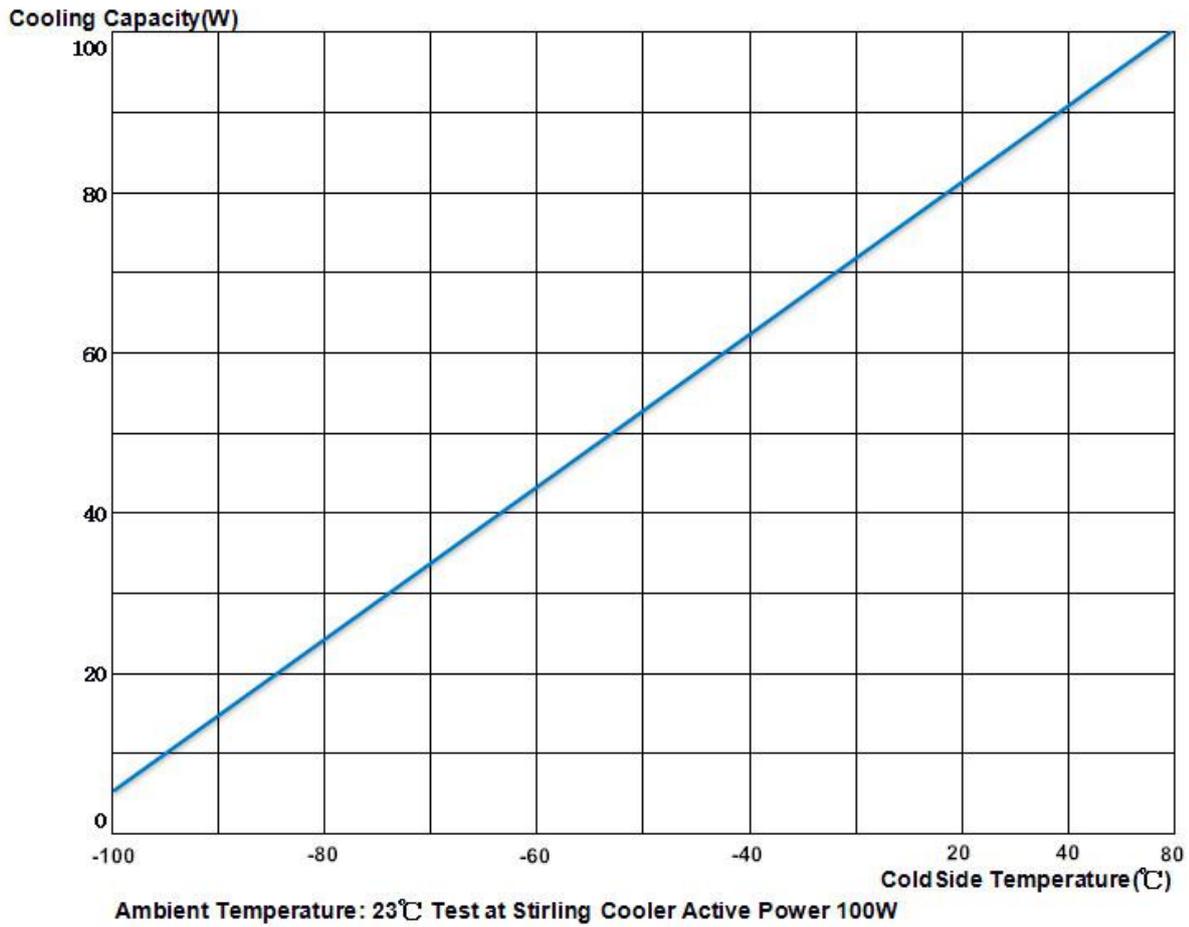
1-2: RIGID reserves all the rights for amendment and the final explanation.

2. Major Specifications

Item	Specs
2-1: Cooling type	Free Piston Stirling Cooler (FPSC)
2-2: Refrigerant	Helium 3.0g
2-3: Cooler Size	167*156*291mm (LxWxH)
2-4: N.W.	3.3kg
2-5: Pressure for refrigerant injection	3.0Mpa(20°)
2-6: Power Source Voltage	DC 24~30V
2-7: Rated Current	5A
2-8: Maximum Current	10A
2-9: Low Temp Range	-100℃~-20℃
2-10: Maximum Capacity	100W (Maximum)
2-11: Cooling Capacity	≥23W @Cold Side Temp.: -80℃ ≥80W @Cold Side Temp.: 23℃
2-12: Installation	Any direction is workable
2-13: Working Life	≧ 10000 hours
2-14: Noise	≤48dB
2-15: Temp in Cold Fin (Cold part)	-140℃~0℃

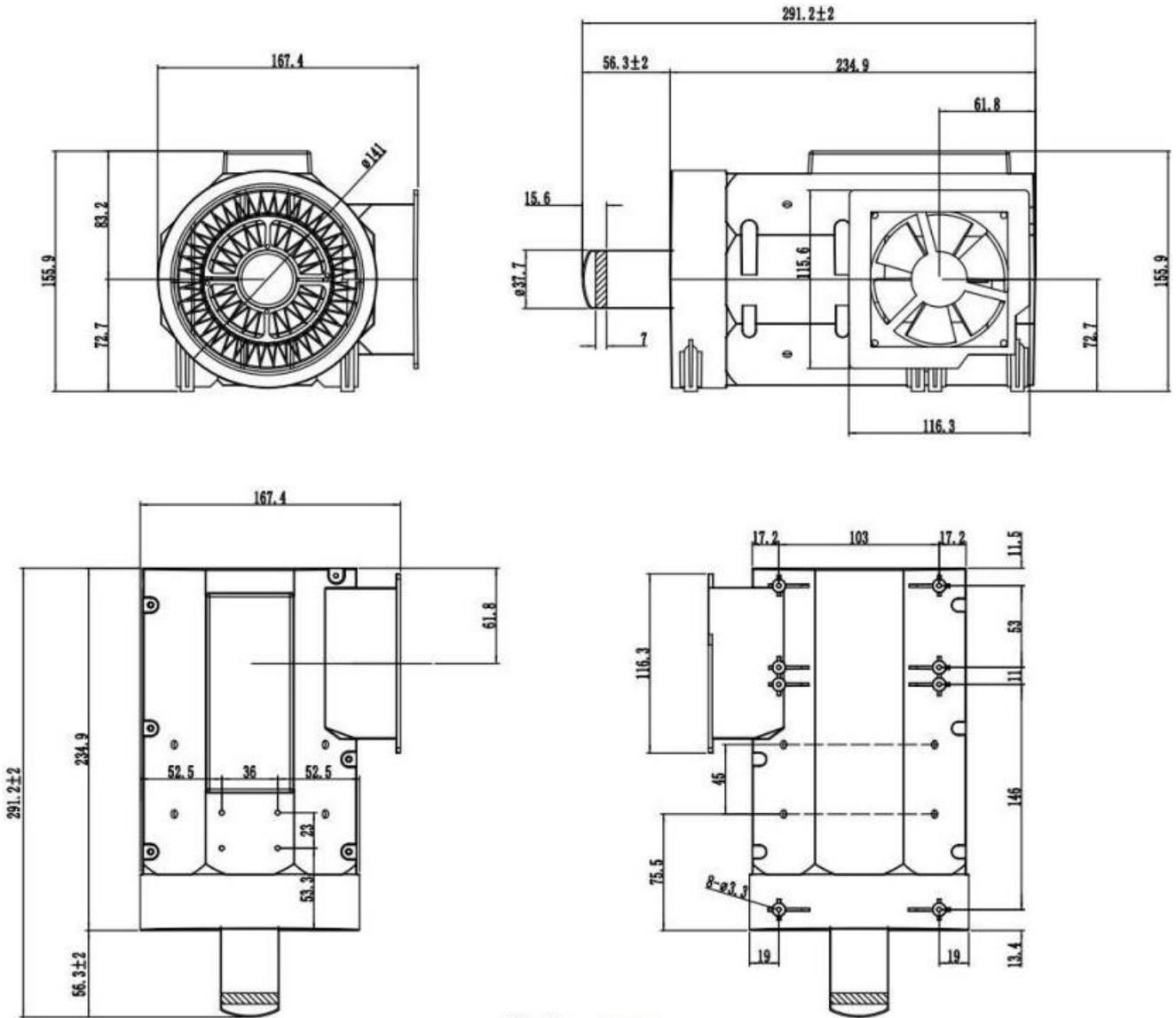
Specification		File No.		
		Version	A/1	
Model	RS100 FPSC		Page	2/4
No				

3.Cooling Capacity



Specification		File No.	
		Version	A/1
Model	RS100 FPSC	Page	3/4
No			

4. External Dimension



Unit: mm

Specification		File No.	
Model	RS100 FPSC	Version	A/1
No		Page	4/4

9. Attentions

- (1) Disassemble this product is forbidden.
- (2) Prevent burns and scratches when taking the heat sink, it tempts to be prone to accidents and injuries. Be aware to avoid heat sink deformation and damage at the same time.
- (3) When the Stirling cooler has abnormal sound, adjust the rated voltage to reduce the output power of the cooler. Second, check bolts if they are loose; If problem can not be solved, it is faulty cooler and should be replaced.
- (4) Do avoid strong impact on Stirling cooler, which will cause motor failure; It also causes coolant helium leakage if cooler falling to floor, especially cause copper tube leaks.
- (5) Do not spray water on the electric circuit board of Stirling refrigerator.
- (6) Close to the furnace or any fire source is forbidden, which may cause trouble.
- (7) Do not put the Stirling cooler in the fire. It may explode due to the expansion of the internal gas.
- (8) Do not pull hard on the power cord, or it may cause short circuit.
- (9) The heating parts and the circuit board are at state of a high temperature during or after the operation. Do not touch these parts with your hands, it may burn.
- (10) The cooling parts/evaporator is at state of a ultra low temperature during or after the operation. Do not touch these parts with your hands, it may cause frostbite.
- (11) Please make sure better insulation for cooling part, as the evaporator of Stirling cooler is easy to get frozen. If evaporator get frozen, please turn the cooler off and wipe evaporator with a soft cloth. Frosting or dewing will reduce cooler's cooling performance. Moreover, condensate flows into power lines may cause a short circuit, or lead to rust.
- (12) The cooling part (evaporator) of the Stirling refrigerator is made of light steel. It has precise internal structure. Therefore, do not take the cooling part by force.
- (13) The high-pressure gas is sealed inside Stirling cooler, please take good care of waste gas or returned to the supplier.

10. Stirling RS100 & Parts



10. Application Examples

