

# 3D 打印振镜系统安装使用环境要求

## 1- 振镜系统工作条件

- I、振镜系统工作环境温度：15℃ ~ 35℃
- II、振镜系统高精度稳定工作温度波动：±2℃
- III、振镜系统稳定工作电源要求：±15VDC，≥5A 或 +30 ~ 48VDC，≥5A
- IV、振镜冷却方式：水冷/气冷

## 2- 振镜系统水冷条件

- I、冷水机设定温度：25℃，波动范围：±0.1℃
- II、振镜系统进水压力：≥4bar
- III、振镜系统流量要求：≥2L/min

### 注意：

- ◎振镜系统冷却水要求使用蒸馏水或去离子水
- ◎要求 3 个月更换一次滤芯和循环水

## 3- 振镜系统气冷条件

- I、气体符合标准：ISO 8573.1: 2010class 1.4.1
- II、固体颗粒：最大颗粒尺寸≤5μm,
  - 0.1 ~ 0.5μm 颗粒数≤20000 个/m<sup>3</sup>,
  - 0.5 ~ 1μm 颗粒数≤400 个/m<sup>3</sup>,
  - 1.0 ~ 5.0μm 颗粒数≤10 个/m<sup>3</sup>
- III、水分：压力露点≤+3℃
- IV、油分：总含油量（液态油、油雾及油蒸汽）≤0.01mg/ m<sup>3</sup>
- V、气体温度 23±0.1℃，进气压力≥0.02MPa，气体流量≥7L/min

## 4- 振镜系统安装环境

- I、振镜系统工作环境温度：15℃ ~ 35℃
- II、振镜系统工作环境湿度：10% ~ 80%
- III、振镜系统使用水冷时，避免在下图红色凝露凶险区域工作，具体控制标准如下：

| 温度、湿度、露点温度-对照表 |         |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 相对湿度%          | 30      | 35   | 40   | 45   | 50   | 55   | 60   | 65   | 70   | 75   | 80   | 85   | 90   | 95   |
| 环境温（℃）         | 露点Td（℃） |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 10             | -7.0    | -5.0 | -3.0 | -1.3 | 0.0  | 1.5  | 2.5  | 3.6  | 4.8  | 5.8  | 6.7  | 7.6  | 8.4  | 9.2  |
| 11             | -6.5    | -4.0 | -2.0 | -0.5 | 1.0  | 2.5  | 3.5  | 4.8  | 5.8  | 6.7  | 7.7  | 8.6  | 9.4  | 10.2 |
| 12             | -5.0    | -3.0 | -1.0 | 0.5  | 2.0  | 3.3  | 4.4  | 5.5  | 6.7  | 7.7  | 8.7  | 9.5  | 10.9 | 11.2 |
| 13             | -4.5    | -2.0 | -0.2 | 1.4  | 2.8  | 4.1  | 5.3  | 6.6  | 7.7  | 8.7  | 9.6  | 10.5 | 11.4 | 12.2 |
| 14             | -3.2    | -1.0 | 0.7  | 2.2  | 3.5  | 5.1  | 6.4  | 7.5  | 8.6  | 9.6  | 10.6 | 11.5 | 12.4 | 13.2 |
| 15             | -2.3    | -0.3 | 1.5  | 3.1  | 4.6  | 6.0  | 7.3  | 8.4  | 9.6  | 10.6 | 11.6 | 12.5 | 13.4 | 14.2 |
| 16             | -1.3    | 0.5  | 2.4  | 4.0  | 5.6  | 7.0  | 8.3  | 9.5  | 10.6 | 11.6 | 12.6 | 13.4 | 14.3 | 15.2 |
| 17             | -0.5    | 1.5  | 3.2  | 5.0  | 6.5  | 8.0  | 9.2  | 10.2 | 11.5 | 12.5 | 13.5 | 14.5 | 15.3 | 16.2 |
| 18             | 0.2     | 2.3  | 4.0  | 5.8  | 7.4  | 9.0  | 10.2 | 11.3 | 12.5 | 13.5 | 14.5 | 15.4 | 16.4 | 17.2 |
| 19             | 1.0     | 3.2  | 5.0  | 7.2  | 8.4  | 9.8  | 11.0 | 12.2 | 13.4 | 14.5 | 15.4 | 16.5 | 17.3 | 18.2 |
| 20             | 2.0     | 4.0  | 6.0  | 7.8  | 9.4  | 10.7 | 12.0 | 13.2 | 14.4 | 15.4 | 16.5 | 17.4 | 18.3 | 19.2 |
| 21             | 2.8     | 5.0  | 7.0  | 8.6  | 10.2 | 11.0 | 12.9 | 14.2 | 15.3 | 16.4 | 17.4 | 18.4 | 19.3 | 20.2 |
| 22             | 3.5     | 7.8  | 8.8  | 9.5  | 11.0 | 12.5 | 13.8 | 15.2 | 16.3 | 17.3 | 18.4 | 19.4 | 20.3 | 21.2 |
| 23             | 4.4     | 6.8  | 8.7  | 10.4 | 12.0 | 13.5 | 14.8 | 16.2 | 17.3 | 18.4 | 19.4 | 20.4 | 21.3 | 22.2 |
| 24             | 5.3     | 7.7  | 9.7  | 11.4 | 13.0 | 14.5 | 15.8 | 17.0 | 18.2 | 19.3 | 20.4 | 21.4 | 22.3 | 23.1 |
| 25             | 6.2     | 8.6  | 10.5 | 12.3 | 14.0 | 15.4 | 16.8 | 18.0 | 19.1 | 20.3 | 21.3 | 22.3 | 23.2 | 23.9 |
| 26             | 7.0     | 9.4  | 11.4 | 13.2 | 14.8 | 16.3 | 17.7 | 19.0 | 20.1 | 21.2 | 22.3 | 23.3 | 24.2 | 25.1 |
| 27             | 8.0     | 10.3 | 12.2 | 14.0 | 15.8 | 17.3 | 18.7 | 19.9 | 21.1 | 22.2 | 23.2 | 24.3 | 25.2 | 26.1 |
| 28             | 8.8     | 11.2 | 13.2 | 15.0 | 16.7 | 18.0 | 19.6 | 20.9 | 22.0 | 23.0 | 24.2 | 25.2 | 26.2 | 27.1 |
| 29             | 9.7     | 12.0 | 14.0 | 15.9 | 17.6 | 19.2 | 20.5 | 21.3 | 23.0 | 24.1 | 25.2 | 26.2 | 27.2 | 28.1 |
| 30             | 10.5    | 12.9 | 14.9 | 16.8 | 18.5 | 20.0 | 21.4 | 22.8 | 23.9 | 25.1 | 26.2 | 27.2 | 28.2 | 29.1 |
| 31             | 11.4    | 13.8 | 15.9 | 17.8 | 19.4 | 20.9 | 22.4 | 23.0 | 24.8 | 26.0 | 26.9 | 28.2 | 29.2 | 30.1 |
| 32             | 12.2    | 14.7 | 16.8 | 18.6 | 20.3 | 21.9 | 23.3 | 24.6 | 25.8 | 27.0 | 28.1 | 29.2 | 30.1 | 31.1 |
| 33             | 13.0    | 15.6 | 17.6 | 19.6 | 21.3 | 22.9 | 24.2 | 25.6 | 26.8 | 28.0 | 29.0 | 30.1 | 32.1 | 32.1 |
| 34             | 13.9    | 16.5 | 18.6 | 20.5 | 22.2 | 23.8 | 25.2 | 26.5 | 27.7 | 29.0 | 29.5 | 31.1 | 32.1 | 33.1 |
| 35             | 14.9    | 17.4 | 19.5 | 21.4 | 23.0 | 24.6 | 26.2 | 27.5 | 28.7 | 29.9 | 31.0 | 32.1 | 33.1 | 34.1 |
| 36             | 15.7    | 18.1 | 20.3 | 22.2 | 24.0 | 25.0 | 27.0 | 28.4 | 29.0 | 30.9 | 32.0 | 33.1 | 34.1 | 35.2 |
| 37             | 16.6    | 19.2 | 21.2 | 23.2 | 24.9 | 26.5 | 27.9 | 29.5 | 30.7 | 31.8 | 33.0 | 34.1 | 35.2 | 36.2 |
| 38             | 17.5    | 19.9 | 22.0 | 23.9 | 25.8 | 27.4 | 28.9 | 30.3 | 31.5 | 32.0 | 33.9 | 35.1 | 36.0 | 37.0 |
| 39             | 18.1    | 20.8 | 23.0 | 24.9 | 26.6 | 28.3 | 29.8 | 31.2 | 32.5 | 33.8 | 34.9 | 36.2 | 36.8 | 38.1 |
| 40             | 19.2    | 21.6 | 23.8 | 25.8 | 27.6 | 29.2 | 30.7 | 32.1 | 33.5 | 34.7 | 35.8 | 36.8 | 38.1 | 39.1 |