

液冷调试与验收清单

每一项应记录日期、责任人、仪器、工况、结果和问题关闭编号，避免只留下“已完成”结论。

01 安装前

☐	图纸、版本、设备铭牌和接口方向一致	Owner / Date: _____
☐	管路支撑、软管弯曲半径和快速接头状态	Owner / Date: _____
☐	系统清洁度、盲板和异物检查	Owner / Date: _____

02 压力与介质

☐	冲洗方案和排放判定	Owner / Date: _____
☐	压力保持、泄漏测试和记录	Owner / Date: _____
☐	冷却液批次、水质、过滤与补液	Owner / Date: _____
☐	充液、排气和膨胀空间	Owner / Date: _____

03 控制与异常

☐	温度、压力、流量、差压和液位校准	Owner / Date: _____
☐	泵阀方向、变频范围和控制回路	Owner / Date: _____
☐	凝露、泄漏、失流、堵塞、失电和通信中断	Owner / Date: _____
☐	冗余切换、联锁、降载与恢复	Owner / Date: _____

04 带载与交付

☐	分级加载、稳定判定和热平衡	Owner / Date: _____
☐	支路流量、总压降和残余空气热	Owner / Date: _____
☐	告警历史、最终参数和原始数据归档	Owner / Date: _____
☐	备件、维护周期、应急步骤和培训	Owner / Date: _____

说明：本清单用于项目输入和评审，不构成产品容量、性能或交付承诺。最终参数以批准的项目规范、产品版本和测试记录为准。

Liquid-cooling commissioning checklist

Record date, owner, instrument, condition, result and issue-closure reference for every item instead of a simple complete mark.

01 BEFORE STARTUP

☐	Drawings, versions, nameplates and port direction agree	Owner / Date: _____
☐	Pipe supports, hose bend radius and quick connects are acceptable	Owner / Date: _____
☐	Cleanliness, blanks and foreign-material inspection complete	Owner / Date: _____

02 PRESSURE AND FLUID

☐	Flushing plan and discharge acceptance	Owner / Date: _____
☐	Pressure hold, leak test and records	Owner / Date: _____
☐	Coolant batch, quality, filtration and make-up	Owner / Date: _____
☐	Filling, venting and expansion volume	Owner / Date: _____

03 CONTROLS AND FAULTS

☐	Temperature, pressure, flow, differential pressure and level calibrated	Owner / Date: _____
☐	Pump-valve direction, variable-speed range and loops	Owner / Date: _____
☐	Condensation, leakage, loss of flow, blockage, power and communications	Owner / Date: _____
☐	Redundancy changeover, interlocks, derating and recovery	Owner / Date: _____

04 LOADED ACCEPTANCE

☐	Staged load, stability criteria and heat balance	Owner / Date: _____
☐	Branch flow, total pressure drop and residual air heat	Owner / Date: _____
☐	Alarm history, final settings and raw-data archive	Owner / Date: _____
☐	Spares, service intervals, emergency steps and training	Owner / Date: _____

Note: this checklist supports project definition and review. It is not a product capacity, performance or delivery commitment. Final parameters depend on approved project specifications, product versions and test records.