

Industrial Chiller Planned Preventative Maintenance (PPM)

12-Month Checklist – UK Sites

A practical maintenance checklist for process and comfort cooling systems

Daily – Operator Checks

- ☐ Record leaving fluid temperature
- ☐ Record return fluid temperature
- ☐ Check suction pressure (where visible)
- ☐ Check discharge pressure (where visible)
- ☐ Check for alarms, trips or fault codes
- ☐ Confirm pumps are running smoothly
- ☐ Confirm fans are running smoothly
- ☐ Listen for unusual noise or vibration
- ☐ Inspect for refrigerant leaks or oil stains
- ☐ Ensure air paths and intake areas are clear

Monthly – Routine Site Checks

- ☐ Visual refrigerant leak inspection completed and logged
- ☐ Condenser coils inspected for fouling
- ☐ Evaporator coils inspected where accessible
- ☐ Strainers inspected and cleaned if required
- ☐ Pump inlets checked for restriction
- ☐ Buffer tank or header fluid level checked
- ☐ Flow, HP, LP and frost alarms tested
- ☐ Insulation and lagging inspected for damage

Quarterly – Engineer Maintenance

- ☐ F-Gas leak testing carried out (as required by charge)
- ☐ Electrical terminals and contactors inspected
- ☐ Control panel and safety circuits checked
- ☐ Sensors and controllers checked for accuracy
- ☐ Strainers removed and cleaned
- ☐ Hydraulic performance verified
- ☐ Oil level and condition checked
- ☐ Refrigerant sight glass inspected
- ☐ Superheat and subcooling measured
- ☐ Condenser coils deep cleaned where required

Seasonal Commissioning

Pre-Summer

- ☐ Condenser coils fully cleaned
- ☐ Airflow paths confirmed clear
- ☐ Fans and fan controls tested
- ☐ High-pressure cut-outs tested
- ☐ Intake and discharge zones confirmed unobstructed

Pre-Winter

- ☐ Glycol concentration and freeze protection verified
- ☐ Inhibitor levels and pH checked (where applicable)
- ☐ Low ambient fan controls tested
- ☐ Crankcase heaters checked
- ☐ External pipework insulation inspected
- ☐ **Frost protection alarms tested**

Annual – Condition & Compliance

- ☐ Oil analysis completed (critical systems)
- ☐ Refrigerant analysis completed (where required)
- ☐ All critical sensors calibrated
- ☐ F-Gas records reviewed and updated
- ☐ Refrigerant leak history reviewed
- ☐ Water system flushed and treated if required
- ☐ Spare parts and critical components reviewed
- ☐ Maintenance KPIs reviewed and reset

Key KPIs to Track

- ☐ Mean Time Between Failures (MTBF)
- ☐ Energy use (kWh per kW of cooling)
- ☐ Compressor starts per hour
- ☐ Refrigerant loss per year
- ☐ Planned vs reactive maintenance hours