

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