



1300 278 226
38-44 Relentless Court
Park Ridge QLD 4125
www.aquachiller.com
care@aquachiller.com

Your Partner in Cool.

Aqua Chiller Industrial Chiller Warranty Policy, Installation Requirements and Commissioning Procedure

Prepared Dec 2024

Version 1.01

ABN: 88 151 215 351


A decorative graphic in the bottom right corner consisting of a light grey triangle pointing upwards and to the right, with a blue line along its bottom edge and a black area below that.

Table of Contents

Introduction.....	4
Warranty Coverage.....	4
Onsite Commissioning.....	4
Warranty Terms.....	4
Installation and Commissioning Compliance.....	4
Ongoing Maintenance	4
What the Warranty Does Not Cover	5
When the Warranty Is Void.....	5
Service Call Charges.....	6
Maintenance Packages.....	6
Additional Notes.....	6
Australian Consumer Law Compliance:.....	6
Aqua Chiller Industrial Chiller Installation Requirements	7
Inspection and Positioning	7
Inspection Upon Delivery	7
Confirm final position	7
Chiller mounting.....	8
Lifting and Moving.....	8
Water Circuit Installation Requirements.....	8
Valves and Fittings:.....	8
Water strainer Requirement:.....	8
Air-Bleeds and Make-Up Water:	8
Balancing valves to be installed at Chiller.	9
Power Supply Installation:.....	9
Pre-Commissioning Checklist	10
Site Details.....	10
Site Environment:.....	10
Site Information:.....	11
Mechanical installation:	11
Electrical Installation:	12



1300 278 226
38-44 Relentless Court
Park Ridge QLD 4125
www.aquachiller.com
care@aquachiller.com

Your Partner in Cool.

Sign-Off	12
Aqua Chiller Commissioning Checklist	13
Commissioning Checklist	13
General Information	13
Pre-Commissioning Checks.....	13
Electrical and Controls.....	14
Refrigerant System	15
Mechanical System.....	15
Operational Tests.....	16
Performance Testing	16
Final Adjustments and Handover	18
Sign-Off	19
Preventative Maintenance Procedures.....	20

Introduction

This document outlines the warranty terms and conditions of Aqua Chillers range of industrial chillers, including installation, commissioning and ongoing servicing requirements.

In short, for the warranty to be valid, the unit must be installed to our guidelines, commissioned by us or our representative, and all documentation must be completed in full and returned to us. Ongoing periodic maintenance must be completed on time and evidence documented and lodged with our office. Aqua Chiller offers installation, commissioning and ongoing maintenance service for your convenience.

Warranty Coverage

Aqua Chiller warrants that any defect in our industrial chillers caused by faulty materials or workmanship will be rectified without cost for both labour and materials, provided the defect occurs within the warranty period starting from the original date of purchase. Repairs will be carried out by Aqua Chiller or an authorised service agent during business hours.

Onsite Commissioning

Onsite commissioning is included in metro areas only. For areas outside metro regions, additional travel fees apply and will be specified in the quotation. Commissioning by Aqua Chiller will only be scheduled when the installation checklist has been completed, returned and approved.

Warranty Terms

Aqua Chiller provides a **3-year warranty** on all industrial chillers (except Gladiator range), subject to the following conditions:

Installation and Commissioning Compliance

- The unit must be installed in accordance with Aqua Chiller's specifications as found in this document.
- The installation checklist and supporting evidence must be returned to Aqua Chiller for review before a site commissioning is scheduled.
- Aqua Chiller must attend site and commission the chiller as per the commissioning procedure.

Ongoing Maintenance

- Maintenance must be performed every six months by qualified personnel and logged with Aqua Chiller. A list of maintenance items is included in this document.
- Annual water treatment and filter changes are required, with proof provided to Aqua Chiller in writing.

What the Warranty Does Not Cover

The warranty excludes the following:

- Failure to start due to voltage conditions, blown fuses, or other issues caused by an inadequate or interrupted electricity supply.
- Damage caused by accidents, misuse, alterations, tampering, or servicing by anyone other than qualified personnel.
- Issues arising from incorrect installation, commissioning, or use contrary to supplied instructions.
- Damage caused by operation in corrosive atmospheres or neglect of maintenance, such as filter cleaning.
- Replacement of consumables such as but not limited to filters and strainers.
- Normal weathering damage to external surfaces, coils, or components.
- Freight or travel charges for work performed outside Aqua Chiller's normal service area.
- Third-party accessories, including field wiring, refrigerant pipes, or condensation drainpipes.
- Consequential damage or financial loss due to equipment failure.
- Costs or labour associated with gaining safe service access to equipment, or positioning replacement parts for example crane to lift compressors onto roof tops.
- Damage caused by vermin, animals, foreign matter, misuse, or natural disasters such as fire, electrical/thunder storms, floods, or earthquakes.
- Problems caused by the use of non-Aqua Chiller-approved accessories.

When the Warranty Is Void

The warranty does not apply if:

- Operating conditions exceed those specified in Aqua Chiller's technical documentation.
- Issues result from misapplication of the equipment.
- The equipment has been modified or parts replaced with non-original components.
- Regular maintenance has not been conducted by an appropriately qualified technician and documentation lodged with Aqua Chiller office.
- The unit is used for applications other than its intended purpose without Aqua Chiller approval.
- The system is installed in mobile applications without our approval.

Service Call Charges

Aqua Chiller reserves the right to charge standard service rates if:

- The issue is not covered under this warranty or Australian Consumer Law guarantees.
- No defect is found (e.g., operational guidance is required).
- Proof of purchase validating the warranty period cannot be provided.

Maintenance Packages

Aqua Chiller offers installation and maintenance packages tailored to suit customer needs, ensuring compliance with warranty conditions and optimal equipment performance.

Additional Notes

Failure to meet the above requirements may void the warranty. For more details or to schedule a commissioning or maintenance package, please contact Aqua Chiller.

Australian Consumer Law Compliance:

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. Customers are entitled to a replacement or refund for major failures and compensation for any other reasonably foreseeable loss or damage. Repairs or replacements will be provided if the product fails to meet acceptable quality standards and the failure does not constitute a major issue.

Aqua Chiller Industrial Chiller Installation Requirements

The purpose of this document is to support the installation contractor and ensure that key installation requirements are understood and adhered to, which if overlooked may result in startup delays, voided warranty and long-term system reliability.

The site-specific information will be used by Aqua Chiller to confirm that the installation is complete and ready for commissioning, so to avoid unnecessary call-out charges to the customer for a technician attending site prematurely.

A site inspection checklist is included at the end of this manual to verify the suitability of the installation site.

This checklist should be completed by a qualified and experienced chiller installer and returned to Aqua Chiller for review if there are any concerns.

Onsite commissioning will not be scheduled unless this checklist has been returned completed. Any variances to the checklist which results in a futile visit (re-scheduling) from commissioning technician will incur additional fees.

This manual is designed to ensure safe and effective installation of your Aqua Chiller industrial chiller. For additional advice or support, please contact Aqua Chiller.

Inspection and Positioning

Refer to this installation manual and the specific installation guidelines provided with your chiller prior to installation.

Refer to user manual provided with Chiller and the installation guidelines below prior to installing Chiller

Inspection Upon Delivery

- Inspect the chiller immediately upon receipt for any transit damage.
- Note any visible damage on the carrier's delivery documents and file claims with the carrier or respective insurance company as required.
- Report hidden damage to Aqua Chiller as soon as possible.

Confirm final position

- Ensure each chiller unit maintains minimum clearances as per user manual and the installation guidelines.
- Service and performance clearances must be respected.
- There must be sufficient space around the unit to prevent hot air from the outlet bypassing to the condenser air inlet.

- The installation environment must be well-ventilated and away from sources of acids, bases, chemical solvents, dust, and smoke.
- Ensure no obstacles or structures, such as roofs, block the air inlet or outlet of the unit, as this can hinder proper and trouble-free operation.
- Be aware that the chiller imparts a significant heat load into the environment, requiring proper ventilation. Important: Do not attach ducting to the condenser fan outlet under any circumstances.

Chiller mounting

- The chiller needs to be fixed to a suitable structure and should be isolated from vibration. Consider airflow requirements, exposure to excessive heat loads, dirt and debris and wind chill/drafts. Noise should be considered if installed near residential areas.

Lifting and Moving

- Use a forklift or crane to lift the unit, taking care to avoid damage to the side panels.
- Pallet jacks can be used for mobility, and smaller indoor models come with castor wheels for easy movement.

Water Circuit Installation Requirements

Valves and Fittings:

- Install isolation valves at the units chilled water inlet and outlet.
- Install anti-vibration eliminators at the chilled water inlet and outlet.
- Install a strainer on the chilled water inlet.

Water strainer Requirement:

- A fine mesh water strainer (<600 microns) must be installed at the chiller's water inlet port. Failure to do so voids the warranty.

Air-Bleeds and Make-Up Water:

- Auto air-bleeds should be installed at high points in the chiller water pipework, depending on whether the system uses an open or closed-loop design. The installation contractor is responsible to ensure air can be bleed out of the pipework.
- Install a make-up water supply to the chiller in accordance with local industry standards.

Balancing valves to be installed at Chiller.

- STAD water balancing valve must be installed on the water inlet in order to adjust and measure flow and pressure of the water circuit. A bypass line should be installed on the water circuit that can be adjusted to control water flow to the process if required.

Power Supply Installation:

Power supply installation must adhere to Australian standards and be performed by a licensed electrician.

- Ensure the circuit capacity supports the unit's full load (FLA) amp draw, as specified in the technical data or chiller nameplate.
 - The cable should terminate directly at the isolator provided by others and installed to local standards.
-

Pre-Commissioning Checklist

Site Details

<i>Company name:</i>		<i>Contact name:</i>	
<i>Commissioning date:</i>		<i>Contact Phone Number:</i>	
<i>Chiller model n:</i>		<i>Chiller S/N:</i>	
<i>Site Address:</i>		<i>Site specific requirements:</i>	

Site Environment:

Area construction is complete	Y	N	N/A
Heat load is present to allow for proper unit operation	Y	N	N/A
The unit and accessories have been received in full, and free of damage	Y	N	N/A
The water to be used for filling the system has been tested for suitability	Y	N	N/A
Local water supply for make-up water connection has been tested for suitability	Y	N	N/A
Minimum clearances have been respected around Chiller and record distances below	Y	N	N/A

RHS: mm

BACK: mm

FRONT: mm

LHS: mm

Site Information:

Will the electrical contractor be present during the Start-Up?	Y	N	N/A
Will the mechanical contractor be present during the Start-Up?	Y	N	N/A
Required total chilled water supply flow rate	L/s		
Required chilled water supply temperature set-point	c		

Mechanical installation:

The installation complies with local and national building codes	Y	N	N/A
Number of chillers in group			
All pipe work is installed as per Australian standards, insulated, supported, flushed, etc...	Y	N	N/A
The chiller unit is level and mounted on a solid platform	Y	N	N/A
The chiller unit is installed on anti-vibration mounts	Y	N	N/A
Pipe diameter for Return and Supply lines of Chiller			
Schematic of the pipe work supplied	Y	N	N/A
Isolation valves installed Return and Supply lines of Chiller	Y	N	N/A
Balancing valves installed Return line of Chiller	Y	N	N/A
Strainers installed on Return line of Chiller	Y	N	N/A
Anti vibration eliminators installed on Return and Supply lines of Chiller	Y	N	N/A
Piping connections to all downstream heat exchangers / FCU's are completed and open	Y	N	N/A
The chilled water system has been pressurized for leak testing	Y	N	N/A
The chilled water system was successful in leak testing	Y	N	N/A
The system has been flushed, cleaned, and free of debris	Y	N	N/A
The system is connected to make-up water supply and has been filled with water	Y	N	N/A
All air has been bled from the water circuit	Y	N	N/A

Auto air-bleeds have been installed at high point(s) of chilled water pipework if and where required	Y	N	N/A
The system standing water pressure has been set to			
The system has been treated by water treatment company	Y	N	N/A
Installation is complete and all system valves open; the system is ready for Start-Up	Y	N	N/A

Electrical Installation:

The electrical installation is compliant with Local, State, and National codes	Y	N	N/A
The equipment is properly grounded	Y	N	N/A
All electrical components/connections are tight and free of damage	Y	N	N/A
Power connected and chiller crank-case heater(s) energized for at least 8hrs	Y	N	N/A
Incoming electrical power supply matches the equipment nameplate.	Y	N	N/A
Incoming Voltage A-B			
Incoming Voltage A-C			
Incoming Voltage B-C			
Confirmed phase rotation is clockwise	Y	N	N/A
Field installed circuit breakers are rated properly according to the equipment nameplate	Y	N	N/A
Circuit breaker amperage rating			

Sign-Off

Name: _____ Phone _____

Company: _____

Sign: _____ Date: _____

Aqua Chiller Commissioning Checklist

Before a technician is scheduled the pre-commissioning check list needs to be completed and returned to Aqua Chiller.

Commissioning Checklist

General Information

- [] Project Name: _____
- [] Location: _____
- [] Date of Commissioning: _____
- [] Chiller Model: _____
- [] Chiller Serial Number: _____
- [] Client: _____
- [] Commissioning Engineer: _____

Notes:

Pre-Commissioning Checks

a) Documentation

- [] User manual is available.
- [] Manufacturer's datasheets and specifications are provided.
- [] Electrical wiring diagrams are available and up to date.
- [] Pre-commissioning checklist reviewed and confirmed to be accurate.

b) Visual Inspection

- [] Chiller is installed in the correct location with adequate clearance.
- [] No visible damage to the chiller unit, panels, or piping.
- [] All fasteners, bolts, and connections are securely tightened.
- [] Electrical connections are secure and properly insulated.
- [] Piping and ductwork are correctly installed without leaks, sagging, or incorrect alignments.

c) Safety Check

- Electrical supply is disconnected during initial inspection.
- Protective covers and guards are installed and secure.

Notes:

Electrical and Controls

a) Power Supply

- Confirm voltage and phase match the chiller's specifications.
- Supply voltage checked, and FKR relay is on without alarm.
- Proper grounding of the unit is verified.
- Power connections are correct and secure.

b) Controls and Automation

- Control panel wiring inspected for proper connections.
- Unit setpoint adjusted according to design specifications.
- BMS integration and communication tested (if applicable)
- Local and remote start/stop functions tested.
- Safety and limit controls are operational, including high/low temperature cut-outs and flow switches.

Notes:

Refrigerant System

a) Refrigerant

- Inspect for leaks and oil residues on refrigerant lines, valves, and joints.
- Refrigerant piping is insulated properly.
- Refrigerant pressure measured and within the expected range.

Notes:

Mechanical System

a) Pumps, Piping, and Valves

- All pumps are installed and wired.
- Isolation and shutoff/bypass valves are correctly installed and labeled.
- Strainer installed at the inlet of the unit.
- Chilled water and condenser water piping inspected for leaks.

Notes:

b) Condensers and Evaporators

- Heat exchanger tubes inspected for cleanliness and proper installation.
- Condenser and evaporator water-side pressure drops match the design.
- Flow rates through the evaporator and condenser are within design specifications.

Notes:

Operational Tests

a) Start-Up

- Initial start-up performed following the manufacturer's manual.
- Correct rotation of compressors, fans, and pumps confirmed.
- Chiller starts and operates smoothly without unusual noise or vibrations.
- Oil level in the compressor crankcase checked.

b) Temperature and Pressure Readings

- Evaporator entering and leaving water temperatures measured and recorded.
- Condenser entering and leaving temperatures measured and recorded.
- Refrigerant pressures for suction and discharge recorded.
- Setpoints confirmed to match design requirements.

c) Safety Devices

- High and low-pressure safety cutouts tested.
- Temperature sensors calibrated and accurate.
- Flow switches tested and operational.

Notes:

Performance Testing

a) System Performance

- Chilled water temperatures measured at full and part-load conditions.
- Stable operation confirmed under all load conditions.

b) Efficiency Verification

- Running amperes for each motor recorded below:



1300 278 226
38-44 Relentless Court
Park Ridge QLD 4125
www.aquachiller.com
care@aquachiller.com

Your Partner in Cool.



1300 278 226
38-44 Relentless Court
Park Ridge QLD 4125
www.aquachiller.com
care@aquachiller.com

Your Partner in Cool.

c) Noise and Vibration

- No unusual noise levels observed
- Unusual vibrations during start-up and operation checked.

Notes:

Final Adjustments and Handover

a) Final Adjustments

- Temperature, pressure, and flow sensors calibrated.
- Control settings adjusted for optimal performance.
- Water flow rates balanced in the chilled water system.

b) Documentation and Training

- As-built drawings updated for any changes.
- User manuals provided to the client.
- Operator and maintenance staff training conducted.
- Client sign-off obtained indicating commissioning is complete.

Notes:





1300 278 226
38-44 Relentless Court
Park Ridge QLD 4125
www.aquachiller.com
care@aquachiller.com

Your Partner in Cool.

Sign-Off

[] **Commissioning Engineer:**

Name: _____

Company: _____

Sign: _____

[] **Client/Owner Representative:**

Name: _____

Sign: _____

[] **Date of Completion:** _____

General Notes for Filing:



Preventative Maintenance Procedures

Customer Requirements	<ul style="list-style-type: none">• Ensure chiller is accessible• Ensure chiller will be installed in position and have power connected• Provide details on any site access restrictions including hot works permits, induction course requirements etc.
------------------------------	--

Pre Check Procedure	<ul style="list-style-type: none">• Check the clearances around the chiller, ensuring they are adequate for service access and for free and unobstructed access for primary air to the chiller• Check for any obstructions above the condenser fans that may hamper free air flow, or may lead to air re-circulation through the condenser. Clean condenser fins.• Check that an isolation switch has been provided close to the chiller in a clearly visible location and that power has been supplied to the chiller• Check that there is adequate provision of drainage should the tank need to be emptied at any point• Isolate the chiller and check that all terminals within the electrical enclosure are tight. Re-apply power.• Tighten all electrical connections• Using leak detector search for evidence of gas leaks.• Connect refrigerant gauges to the chiller and confirm that the refrigerant charge has not been lost.
----------------------------	---

Check Chiller Operation:

- Measure line voltages on each phase entering the chiller
- Confirm water temperature is set to the desired level and operating at that level
- Measure the current draw on the fans. Check that the fan cycle control activates the 2nd fan by restricting air flow if necessary
- Note the ambient temperature
- Check the refrigerant sight glass for evidence of moisture or excessive bubbling.
- Check oil levels in compressor
- Monitor high and low pressure levels and superheat
- Check for any indication of a temperature difference across the drier
- Inspect refrigerant filter driers for blockages
- As the water temperature approaches the set point check the current draw on each compressor phase, note discharge and suction pressures then measure the Tx bulb temperature and the liquid line temperature between the drier and the Tx valve.
- Clean coils

Check Chiller Water Circuit:

- List down any relevant notes regarding the chilled water circuit noting any problems that could pose problems including susceptibility to condensation or poor workmanship.
- Note down the pipe size used and the approximate distance the pipe run travels from the chiller to the process (Do not add up the total length with the return run)
- Note down the approximate height difference between the process and the chiller.
- Check whether a balancing valve, or other suitable device, has been installed into the process line for controlling the flow rate
- Check that isolation valves have been provided adjacent to both the process and the chiller
- Note whether any water treatment is being used, or if provision has been made for water treatment. Check whether the customer or the customer's agent has proposed to use water treatment.
- Clean out return solenoid valve if fitted
- Check condition of filter if fitted – advise if replacement is required
- Clean strainer
- Check whether the make up water is directly connected to mains pressure
- Check if bleed valve points are in place on both supply and return lines
- If running, check the supply pressure and flow rate
- Check the pump current draw and list

On completion:	<ul style="list-style-type: none">• Re-fit and clean all panels• Ensure no rubbish is left around the outside of the chiller• Make any notes relevant to the installation or relevant to the design of the chiller• Discuss results of preventative maintenance with the customer, or the customer's agent. Detail basic operation of the chiller to the customer, or the customer's agent. Detail that any problems with the chiller should be referred directly to Aqua Cooler by calling 1800 278 226 per the service sticker on the chiller and quoting the serial number.• Ask the customer, or the customer's agent to sign the preventative maintenance report.• Service Report to be returned to Aqua Cooler and entered and copy forwarded to customer.
-----------------------	---

For service or assistance please contact Aqua Chiller on 1800 278 226 or care@aquachiller.com

You can also visit us at www.aquachiller.com