

**METHOD STATEMENT**

Installation, Testing and Commissioning of an Air-Cooled Screw Chiller

Project-submittal template | Mechanical, electrical, controls and commissioning scope

SCOPE CONTROL This procedure covers the complete packaged air-cooled screw chiller. It does not authorize opening, pressure-testing or evacuating the factory-sealed refrigerant circuit during routine installation.

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0	03-Aug-2026	Comprehensive issue for project adaptation and approval	_____	_____

Use of This Template

Replace every bracketed entry with project-specific information before submission. The approved equipment submittal, manufacturer installation/operation manual, lifting plan, coordinated shop drawings and project specifications remain the controlling documents. Where requirements conflict, stop work and obtain a written technical resolution before proceeding.

PRACTICAL LIMITATION This template is intentionally manufacturer-neutral. Values such as clearances, lifting weight, anchor torque, maximum water-side pressure, minimum system volume, acceptable flow range, electrical ratings, heater energization period and refrigerant safety requirements must come from the selected chiller submittal and current manufacturer instructions.

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1. Purpose and Objectives

This method statement defines the controlled sequence for receiving, lifting, positioning, connecting, inspecting, pre-commissioning and commissioning a packaged air-cooled screw chiller. The objective is to deliver a safe, accessible and maintainable installation without imposing unintended loads on the unit, contaminating the evaporator water circuit or compromising the factory refrigerant charge.

The method also identifies inspection hold points, acceptance criteria and the records required for handover. It is written for project execution and must be read with the approved project documents listed in Section 3.

2. Scope and Exclusions

2.1 Included work

- Receipt inspection, unloading, temporary storage and movement to the final location.
- Verification of plinth, steel support, access route, service clearance and condenser-air discharge arrangement.
- Installation of manufacturer-approved vibration isolation, restraints, anchors and accessories.
- Connection of chilled-water flow and return piping, valves, strainers, vents, drains, instruments and flow-proving devices shown on the approved drawings.
- Electrical power, local isolation, earthing/bonding, control cabling and BMS interface.
- Water-side cleaning, flushing, treatment, pressure testing and insulation, coordinated so that debris and excessive test pressure do not reach the evaporator.
- Pre-commissioning checks, manufacturer-authorized start-up, functional testing and handover records.

2.2 Excluded or separately controlled work

- Structural design of the plinth, roof steel, access platform, acoustic screen or lifting points.
- Opening, field pressure-testing, evacuation, charging or repair of the factory-sealed refrigerant circuit unless covered by a separate manufacturer-approved procedure and carried out by certified refrigerant personnel.
- Permanent changes to factory controls, safety settings or software outside the manufacturer commissioning procedure.
- System performance certification at design duty unless the required load, ambient and water conditions are available and the contract specifically calls for that test.
- Associated pumps, pressurization units, buffer vessels and plant controls except for interfaces necessary to prove safe chiller operation.

TERMINOLOGY A screw compressor is one component of the packaged chiller. Site handling and connection requirements apply to the complete chiller assembly, not to an isolated compressor.

3. References and Document Precedence

Use the latest approved or contractually adopted edition of each document. A code or guide listed below applies only where it is part of the contract or adopted by the authority having jurisdiction.

Priority	Reference	Application
1	Approved equipment submittal, certified drawings and manufacturer IOM	Model-specific dimensions, weights, lift points, clearances, water limits, electrical data, controls and start-up requirements.
2	Project specifications, coordinated shop drawings, approved material submittals and approved calculations	Project scope, installation details, interfaces and acceptance requirements.
3	Approved lifting plan, temporary-works design, risk assessment and permit-to-work	Safe logistics, crane operation and site controls.
4	Applicable authority requirements and adopted codes	Statutory safety, environmental, electrical and refrigerant obligations.
5	ANSI/ASHRAE Standard 15-2024 and Standard 34-2024, including adopted addenda	Refrigeration-system safety and refrigerant designation/classification, where applicable.
6	ASME B31.9-2025 or the project-specified piping code	Fabrication, installation, examination and testing of building-services piping, where applicable.
7	BuildMEP online installation guide and original downloadable method statement	Background reference; project documents and manufacturer instructions take precedence.

Online references: [BuildMEP article](#) | [ASHRAE Standard 15 committee page](#) | [ASME B31.9](#)

4. Definitions and Abbreviations

Term	Meaning
AHJ	Authority having jurisdiction.
BMS	Building management system.
CHW	Chilled water.
FAT	Factory acceptance test, where specified.
IOM	Manufacturer installation, operation and maintenance manual.
ITP	Inspection and Test Plan.
LOTO	Lockout/tagout or the approved isolation procedure.
MCC	Motor control centre.
OEM	Original equipment manufacturer or authorized representative.
P&ID	Piping and instrumentation diagram.
T&C	Testing and commissioning.
Hold point (H)	Work may not proceed until the stated inspection is accepted or formally released.
Witness point (W)	The notified party may attend; work may proceed after the agreed notice period if attendance is waived.

5. Responsibilities

Role	Minimum responsibility
Project Manager	Provide approved documents, resources, access, programme and coordination; ensure unresolved technical matters are escalated.
Construction / MEP Manager	Coordinate civil, mechanical, electrical and controls interfaces; confirm work fronts and releases.
HVAC Site Engineer	Brief the team, verify the model and approved details, supervise installation, close inspections and maintain records.
QA/QC Engineer or Inspector	Verify material approvals, inspection stages, measuring-equipment calibration, ITP compliance and final dossier.
HSE Officer	Verify risk assessment, permits, exclusion zones, LOTO, work-at-height and hot-work controls; monitor compliance.
Lifting Appointed Person / Supervisor	Prepare and execute the approved lifting plan using certified personnel and equipment; stop the lift if site conditions change.
Electrical Engineer	Verify supply, protective devices, isolator, cabling, earthing, phase sequence and safe insulation-resistance test boundaries.
Controls / BMS Engineer	Terminate and point-test approved interfaces; confirm interlocks, commands, status and alarms without changing OEM safeties.
OEM Commissioning Engineer	Check installation readiness, authorize first start, apply manufacturer settings, test safeties and issue the start-up report.
Technicians / Trades	Carry out the task to approved drawings and method, protect the unit, report deviations and complete check sheets.

6. Resources, Tools and Competence

6.1 Competence

- Only trained riggers, lifting operators, electricians, welders/pipefitters and refrigerant technicians may perform their respective controlled activities.
- Electrical energization and refrigerant-circuit work require the licenses or certifications applicable in the project jurisdiction.
- The OEM or authorized representative shall carry out or formally authorize initial start-up where required for warranty.

6.2 Typical resources

Category	Typical requirement / control
Lifting	Crane or suitable lifting appliance, spreader beam where required, certified slings/shackles, tag lines, load cells if specified, mats and barriers. Capacity and configuration to match the approved lifting plan.
Positioning	Skates, jacks, chain blocks, toe jacks and temporary steelwork only where included in the engineered movement plan.
Mechanical	Calibrated torque wrench, laser/spirit level, pipe tools, approved welding/grooving equipment, flange spreader, alignment tools and pressure-test equipment.

Category	Typical requirement / control
Water-side cleaning	Temporary bypass/spool where planned, flushing pump, temporary strainers/screens, sampling containers, water-treatment dosing and test kit.
Electrical	Approved multimeter, phase-sequence meter, clamp meter, earth tester and insulation-resistance tester with a test method that isolates electronic components.
Commissioning	Calibrated temperature and pressure instruments, flow measurement method, tachometer/sound meter only if specified, OEM service tools and commissioning sheets.
Safety	Task PPE, fall protection, spill kit, fire extinguishers, gas detection where required, LOTO equipment and communication devices.

CALIBRATION Record the instrument ID, range, calibration expiry and certificate reference for every measurement used as acceptance evidence.

7. Materials and Required Documents

Item	Verification before use
Packaged chiller and factory accessories	Model, serial number, duty, refrigerant, electrical characteristics, shipping sections and loose items match the approved submittal and delivery note.
Vibration isolators / restraints	Type, quantity, orientation, load rating, color code and adjustment details match the approved schedule and OEM drawing.
Hydronic components	Pipe, fittings, flanges/grooves, valves, strainer, vents, drains, gauges, thermometers, test points, flow switch and flexible connectors where specified are approved and pressure-rated.
Electrical materials	Cables, glands, lugs, local isolator, protective devices, earthing conductors and labels match the approved single-line diagram and schedules.
Controls materials	Approved cable type, screened/segregated routing, gateways, sensors and addressing schedule are available.
Consumables	Gaskets, jointing materials, welding consumables, coatings and insulation are compatible with the service and approved.

- Approved material inspection requests and delivery inspection report.
- Approved chiller submittal, OEM IOM, certified drawings and wiring/controls diagrams.
- Coordinated layout, sections, P&ID, electrical single-line diagram, BMS points list and builder-work drawings.
- Approved lifting plan, route survey, structural/plinth release and temporary-works design where required.
- Approved method statement, risk assessment, permits and ITP.

8. Pre-Installation Requirements

1. Confirm that the chiller model, shipping arrangement, operating weight, centre of gravity and certified lifting points agree with the approved documents.

2. Survey the access route and final location. Confirm road/roof load limits, crane standing, edge protection, overhead services, turning clearances and any temporary removal/reinstatement work.
3. Obtain structural release for the plinth or support steel. Check dimensions, elevation, flatness, anchor pockets/bolts, drainage, housekeeping access and load path.
4. Verify OEM service clearances and condenser air path. Screens, walls, parapets and adjacent units must not create hot-air recirculation or obstruct coil/fan removal.
5. Confirm coordinated CHW pipe locations, electrical entry, control interface, maintenance access and future replacement route.
6. Verify that upstream pipework can be flushed without carrying debris through the evaporator and that the unit can be isolated if the system hydrostatic test pressure exceeds its water-side rating.
7. Review weather, wind and daylight limits for the lift. Conduct a task briefing and confirm permits, communications and emergency arrangements.
8. Raise the pre-installation inspection and obtain the required release before moving the unit to the final position.

9. Delivery, Lifting and Storage

9.1 Receipt inspection

- Inspect packaging, frame, coils, fan guards, control panels, evaporator connections and accessories before unloading. Photograph all sides and record visible damage on the delivery note.
- Check nameplate data and serial numbers against the approved submittal. Quarantine the unit if identification, charge condition or shipping damage is uncertain.
- Confirm loose-shipped items, isolators, sensors, manuals, keys and commissioning accessories against the packing list.
- Keep protective caps on water connections and protect coils from impact, dust and site traffic.

9.2 Lifting and movement

1. Set barriers and the lifting exclusion zone. Confirm ground bearing, crane configuration, weather limits, certified gear and competent personnel.
2. Attach slings only to the OEM-designated lifting points. Use spreader bars and protective packing where shown so that slings do not contact coils, panels or pipe connections.
3. Carry out a trial lift just clear of the support, verify balance and rigging, then proceed under the lifting supervisor's signals. Use tag lines without placing personnel below or between the suspended load and fixed objects.
4. Land the unit on prepared supports or approved temporary packing. Never use chiller pipe connections, fan frames or panels as jacking or pulling points.
5. After positioning, reinspect the frame, panels, coils and factory joints; record any damage before installation continues.

9.3 Temporary storage

Store the chiller upright on a level, drained and secure base in accordance with the OEM instructions. Maintain factory weather protection without wrapping the unit in a way that traps moisture. Keep panels locked, openings capped and coils protected. If storage is prolonged, follow the OEM

preservation programme, including any required heater supply, inspections or shaft/compressor protection.

10. Installation Procedure

10.1 Foundation and support verification

- Confirm the as-built plinth/support dimensions, elevation and orientation against the certified chiller drawing.
- Check that concrete has achieved the required strength and that grout, anchor bolts, inserts and structural steel are accepted.
- Remove loose material and standing water. Do not correct structural discrepancies with improvised packing.
- Mark the unit centre lines and isolator locations. Confirm drainage and maintenance access around the final footprint.

10.2 Positioning, isolation and anchoring

1. Install isolators or isolation pads in the approved orientation and sequence. Keep adjustment bolts at a common starting position unless the manufacturer states otherwise.
2. Lower the chiller onto the supports, align centre lines and verify that each isolator is seated and loaded. Install seismic/wind restraints where specified without short-circuiting vibration isolation.
3. Level the unit at the OEM reference points and within the manufacturer tolerance. Adjust isolators, not the chiller frame, unless approved shimming is specifically detailed.
4. Install anchors and tighten to the approved torque after final alignment. Record torque where it is an acceptance requirement.
5. Remove shipping brackets, compressor restraints or transport locks only at the stage and in the manner stated by the OEM. Retain items where the maintenance manual requires future reuse.

NOZZLE LOAD The chiller must be level and stable before pipework is connected. Pipework shall be independently supported and aligned so that no weight, bending moment or forced misalignment is transferred to the evaporator nozzles.

10.3 Chilled-water piping

Install piping to the approved P&ID and coordinated shop drawings. The exact arrangement depends on whether the unit has an integral hydronic module; do not duplicate factory-fitted pumps, strainers, expansion vessels or flow devices.

- Verify flow and return orientation at the unit nameplate or certified drawing before making the connection.
- Provide isolating valves, strainer, vents, drains, pressure/temperature test points, gauges, thermometers and flow-proving device as shown on the approved design.
- Install flexible connectors only where specified and selected for pressure, temperature, movement and outdoor exposure. They do not replace correct pipe alignment or support.
- Locate the strainer and temporary start-up screen where they can be accessed and cleaned. Confirm mesh size with the OEM.

- Provide removable spool pieces or adequate dismantling space so the evaporator and valves can be serviced without cutting pipework.
- Use gaskets and jointing materials compatible with chilled water, glycol concentration and treatment chemicals. Tighten flanges/grooved couplings evenly to the manufacturer requirements.
- Complete welds away from the unit where practicable. Protect coils and panels from sparks and grinding debris. Connect the final joint without pulling the pipe into line.

10.4 Pressure testing, cleaning, flushing and treatment

1. Define the test boundary. Isolate or bypass the chiller whenever the project test pressure could exceed the evaporator or integral hydronic-module pressure rating.
2. Hydrostatically test the installed piping to the approved test pack. Use calibrated gauges and record pressure, duration, medium, ambient conditions and acceptance.
3. Clean and flush the system using the approved water-treatment method. Prevent debris, welding slag and chemical concentrations outside the OEM limits from entering the evaporator.
4. Inspect and clean temporary screens/strainers until the agreed cleanliness criterion is achieved. Record flushing velocity or flow, sample results and final water-treatment report as specified.
5. Fill with treated water or the approved water/glycol mixture. Vent trapped air and verify static pressure. Implement freeze protection suitable for the lowest expected ambient and shutdown condition.
6. After successful testing and flushing, make the final unit connections, clean the permanent strainer and perform a leak inspection at operating pressure.

DO NOT CONTAMINATE THE EVAPORATOR Do not use the chiller evaporator as a flushing dirt separator. A clean water circuit and verified flow are prerequisites to first start.

10.5 Insulation, weather protection and identification

- Insulate chilled-water components after pressure testing and accepted inspection. Maintain a continuous vapour barrier and seal terminations to prevent condensation.
- Use UV- and weather-resistant cladding outdoors. Keep access to strainers, vents, drains, sensors, unions and service panels.
- Identify flow direction, service, valve numbers, test points and equipment tag to the project standard.
- Fire-stop penetrations with the approved tested system; do not bury valves, flexible joints or inspection points in the fire-stop.

10.6 Electrical power and earthing

1. Confirm the supply voltage, frequency, fault level, protective device, cable size and local isolator against the approved electrical design and chiller nameplate.
2. Maintain LOTO until the mechanical installation, termination checks and energization authorization are complete.
3. Route cables without blocking coil airflow, service panels or lifting paths. Use approved outdoor glands, supports, segregation and mechanical protection.
4. Terminate conductors to the OEM torque values; verify phase identification, ferrules, lugs, gland sealing and bend radius.

5. Connect protective earthing/bonding and verify continuity. Record the applicable earth and protective-device tests.
6. Perform insulation-resistance testing only on isolated field cables and motors where approved. Disconnect electronic controls, VFDs, sensors and surge devices that could be damaged by the test voltage.
7. Check phase sequence and voltage balance before enabling the chiller. Do not rotate compressors merely to prove phase sequence.
8. Energize control/oil heaters for the OEM-specified period before first start, where required, and record the time energized.

10.7 Controls, BMS and interlocks

- Terminate remote enable, pump command/status, flow proof, common alarm, run status, demand limit, setpoint reset and communications only as shown on the approved controls diagram and OEM manual.
- Maintain cable screening, polarity, segregation and earthing in accordance with the controls specification.
- Confirm that the flow switch or differential-pressure proving device is located, oriented and set in accordance with the manufacturer requirements.
- Point-to-point test every command, status, alarm and analogue value. Record point name, commanded state, observed state and result.
- Do not bypass, defeat or permanently alter factory safety devices. Temporary test overrides may only be applied by authorized commissioning personnel and shall be removed and recorded immediately after the test.

10.8 Final installation inspection and protection

- Confirm all panels, fan guards, coil protection and service clearances are in place.
- Remove construction debris and metal filings. Clean coils only by an OEM-approved method and direction.
- Check that piping, cable trays, screens, barriers and other services do not restrict condenser airflow or maintenance access.
- Close open items on the installation checklist and protect the unit from subsequent trades until pre-commissioning.

11. Pre-Commissioning

Pre-commissioning establishes that the chiller is safe and ready for the OEM start-up visit. It does not include routine opening of the refrigerant circuit.

Discipline	Readiness checks
Documentation	Approved submittal/IOM available; punch items reviewed; model, serial, refrigerant and electrical data recorded; inspection releases complete.
Mechanical	Unit level and anchored; shipping restraints addressed; piping aligned and supported; valves in correct position; system full, vented and leak-free; strainer clean; water analysis accepted.
Hydronic	Pumps commissioned; design flow method agreed; minimum flow/system volume requirements satisfied; bypass/control valves set; freeze protection confirmed.
Electrical	Terminations torqued; field-cable IR complete with electronics isolated; earth tests complete; voltage, frequency, phase sequence and balance acceptable; heaters energized as required.

Discipline	Readiness checks
Controls	Sensors installed; flow proof available; pump/chiller interlock proven; BMS point-to-point test substantially complete; emergency and fire-alarm interfaces verified where specified.
Refrigeration	Visual inspection shows no damage, oil staining or alarm indication. Any suspected leak or charge issue is referred to the OEM and managed under a separate refrigerant-work procedure.
Site condition	Condenser air path clear; ambient within start-up range; exclusion/control area established; load or approved commissioning mode available; drainage and lighting adequate.

RELEASE TO START The HVAC Site Engineer, QA/QC representative and OEM commissioning engineer shall sign the readiness release before initial start. Electrical energization follows the project permit and LOTO procedure.

12. Start-Up and Commissioning

12.1 Initial start

1. Review the pre-start checklist, outstanding items and safe operating boundary with the OEM commissioning engineer.
2. Confirm the CHW circuit is filled, vented and circulating at an acceptable flow before enabling compressor operation.
3. Energize and start the unit strictly through the OEM procedure. Observe the controller for phase, flow, sensor, pressure, temperature and safety alarms.
4. Verify fan operation and unobstructed airflow. Check for abnormal noise, vibration, movement, leaks or hot connections. Stop and investigate any abnormal condition.
5. Allow operation to stabilize, then record the required electrical, water and refrigeration data from calibrated instruments and the controller.
6. Demonstrate capacity control and staging to the extent the available load and ambient conditions permit.

12.2 Functional tests

- Local start/stop and remote enable/disable.
- CHW pump command/status and flow-loss trip or inhibit.
- Leaving-water-temperature control and setpoint limits.
- Compressor/fan staging and demand limitation where specified.
- Common alarm, run status, availability and communications to BMS.
- Specified emergency, fire-alarm or plant-sequence interlocks.
- Alarm history, reset behavior and restart after normal power restoration, subject to the approved controls narrative.
- Lead/lag or plant sequencing where more than one chiller is installed.

12.3 Data to record

Category	Typical record
Identification	Unit tag, model, serial number, controller/software revision, refrigerant and

Category	Typical record
	commissioning date.
Electrical	Line voltage by phase, voltage imbalance, current by phase/compressor, control voltage and protective settings verified.
Water circuit	Entering/leaving CHW temperature, differential pressure or measured flow, pump status, strainer condition and system pressure.
Refrigeration / unit	Controller-reported suction/discharge pressures and temperatures, compressor loading, fan status, oil parameters where displayed, alarms and ambient temperature.
Functional	Interlock test result, BMS point result, setpoints, time delays and any approved deviations.

PERFORMANCE STATEMENT A successful functional start-up is not automatically a certified capacity test. State the available load and ambient conditions, and record any tests that could not be completed.

13. Inspection and Test Plan (ITP)

The following minimum ITP shall be aligned with the project inspection coding and consultant requirements. H = hold, W = witness, R = record review, S = surveillance.

No.	Activity / inspection	Acceptance basis	Point	Record
1	Material delivery and unit identification	Approved submittal, packing list, no unaccepted damage	W	MIR / delivery report
2	Access route, crane setup and lift readiness	Approved lifting plan, permits and certificates	H	Lift checklist / permit
3	Plinth / support and service clearance	Certified drawing, structural release and OEM clearance	H	Civil / pre-installation IR
4	Position, level, isolators and anchors	Approved details and OEM tolerances/torque	W	Installation IR / checklist
5	CHW piping before test	Approved P&ID/shop drawing; supported, aligned and clean	W	Mechanical IR
6	Hydrostatic pressure test	Approved test pack; no leakage/pressure loss	W	Pressure-test certificate
7	Flushing, treatment and water quality	Approved method and specified acceptance criteria	H	Flushing / laboratory report
8	Final pipe connection and insulation	No imposed nozzle load; vapour barrier complete	W	IR / insulation checklist
9	Power, earthing and controls termination	Approved SLD/wiring; OEM torque and electrical test criteria	W	Electrical IR / test sheets
10	BMS point-to-point and interlocks	Approved controls narrative and points list	W	Point schedule / test report
11	Pre-commissioning readiness	Section 11 and OEM checklist complete	H	Signed readiness release
12	Initial start and functional testing	OEM IOM and approved commissioning plan	W	OEM start-up / commissioning report
13	Final inspection and handover dossier	Contract close-out requirements complete	H	Final IR / dossier index

14. Health, Safety and Environmental Controls

The approved project risk assessment and permit system govern the work. The controls below are the minimum planning prompts and do not replace a task-specific assessment.

Hazard	Key controls
Heavy lift / suspended load	Approved lift plan; competent team; certified equipment; ground/roof capacity; weather limits; trial lift; barriers; no person below the load.
Crush and pinch points	Defined movement route; tag lines and push/pull tools; hands clear; banksman; controlled landing; no personnel between load and fixed object.
Work at height / roof edge	Approved access, guardrails or fall-arrest/restraint, rescue plan, secured tools and controlled material storage.
Electrical energy	LOTO; prove dead; controlled energization; arc-flash controls where applicable; insulated tools; competent electrician; panels closed during operation.
Pressurized water system	Approved test boundary and pressure; rated fittings; calibrated gauges; exclusion area; controlled depressurization; isolate unit if its rating is lower.
Hot work and fumes	Hot-work permit, fire watch, ventilation, extinguishers, removal/protection of combustibles and coil/panel protection.
Refrigerant release	Do not open the factory circuit routinely; use certified personnel, recovery equipment, ventilation, SDS, gas monitoring and emergency procedure where intervention is authorized.
Rotating fans / moving parts	Guards in place; isolation before access; loose items removed; safe boundary during functional test.
Noise and heat / weather	Hearing protection where required; hydration, rest and heat-stress controls; stop work in unsafe wind, lightning or visibility.
Chemicals and water treatment	Approved SDS/COSHH assessment, gloves/eye protection, bunding, dosing control, spill response and authorized disposal.

14.1 Environmental requirements

- Prevent release of refrigerant. Recover, label and account for refrigerant if authorized service work is required; do not vent.
- Collect and dispose of flushing water, treatment chemicals, oils, packaging and damaged insulation through approved waste routes.
- Control noise, dust, welding fumes and work lighting in accordance with site limits.
- Protect drains from chemical discharge and keep spill response materials at the work area.
- Record the refrigerant type and factory charge from the nameplate for asset and regulatory records.

15. Quality Records and Handover

Record	Minimum content
Approved documents register	Current submittal, drawings, method statement, ITP, risk assessment, lifting plan and OEM IOM.
Delivery and material records	MIR, delivery note, serial numbers, photographs, damage/NCR closure and accessory list.

Record	Minimum content
Installation records	Plinth release, lift checklist, level/alignment, isolator/anchor check, piping and electrical IRs.
Test records	Pipe pressure test, flushing/water treatment, electrical tests, earth continuity, BMS point test and interlock results.
Commissioning records	Signed readiness release, OEM start-up sheet, operating data, alarms, settings, deferred tests and final commissioning report.
Close-out records	As-built drawings, approved O&M manuals, training attendance, warranty certificate, spare parts/tools and final snag closure.

15.1 Acceptance and handover

ACCEPTANCE BASIS Accept the installation when the chiller is correctly identified, accessible, level and free from unaccepted damage; the clean water circuit, electrical supply, protection, controls and BMS interfaces are proven; and OEM start-up is complete with no unresolved safety alarm. Record every deferred seasonal/full-load test and close the dossier, as-builts, training and warranty requirements before handover.

Appendix A - Pre-Installation Checklist

No.	Check	Status	Initial	Remarks / reference
1	Approved chiller submittal, certified drawings and current OEM IOM available at site.	☐ Y ☐ N ☐ N/A		
2	Model, serial number, refrigerant, electrical data and shipping sections match the approved submittal.	☐ Y ☐ N ☐ N/A		
3	Unit inspected on delivery; damage and missing items resolved or formally controlled.	☐ Y ☐ N ☐ N/A		
4	Access route, crane location, roof/road capacity and temporary works accepted.	☐ Y ☐ N ☐ N/A		
5	Approved lifting plan, permits, competent personnel and certified lifting gear available.	☐ Y ☐ N ☐ N/A		
6	Plinth/support steel released; dimensions, elevation, anchors and concrete strength accepted.	☐ Y ☐ N ☐ N/A		
7	OEM service clearances, condenser airflow and future replacement route verified.	☐ Y ☐ N ☐ N/A		
8	CHW piping, electrical entry, control interfaces and maintenance access coordinated.	☐ Y ☐ N ☐ N/A		
9	Vibration isolators/restraints and loose-shipped accessories identified and approved.	☐ Y ☐ N ☐ N/A		
10	Flushing and hydrostatic-test boundaries prevent debris or excessive pressure reaching the evaporator.	☐ Y ☐ N ☐ N/A		
11	Task risk assessment, LOTO, work-at-height and emergency arrangements briefed.	☐ Y ☐ N ☐ N/A		
12	Pre-installation hold point released.	☐ Y ☐ N ☐ N/A		

Release	Name	Signature	Date
HVAC Site Engineer			
QA/QC			
HSE / Lifting Supervisor			
Client / Engineer (if required)			

Appendix B - Installation Inspection Checklist

No.	Check	Status	Initial	Remarks / reference
1	Chiller position and orientation match the approved layout.	☐ Y ☐ N ☐ N/A		
2	Unit level is within OEM tolerance and frame is not distorted.	☐ Y ☐ N ☐ N/A		
3	Isolators/restraints are correctly located, seated and adjusted.	☐ Y ☐ N ☐ N/A		
4	Anchors are installed and tightened to the approved requirement.	☐ Y ☐ N ☐ N/A		
5	Shipping restraints/transport locks addressed in accordance with OEM instructions.	☐ Y ☐ N ☐ N/A		
6	CHW flow and return connections are correct.	☐ Y ☐ N ☐ N/A		
7	Pipework is independently supported and does not impose load on unit nozzles.	☐ Y ☐ N ☐ N/A		
8	Valves, strainer, vents, drains, instruments and flow proving match the approved P&ID.	☐ Y ☐ N ☐ N/A		
9	Hydrostatic test and flushing/water-treatment reports are accepted.	☐ Y ☐ N ☐ N/A		
10	Permanent strainer is clean and the system is filled and vented.	☐ Y ☐ N ☐ N/A		
11	Insulation and outdoor weather protection are complete; access points remain serviceable.	☐ Y ☐ N ☐ N/A		
12	Power cabling, glands, lugs, local isolation and earthing are complete.	☐ Y ☐ N ☐ N/A		
13	Control/BMS wiring is terminated, identified, segregated and point-tested.	☐ Y ☐ N ☐ N/A		
14	Service panels, coils, fan guards and airflow clearances are unobstructed.	☐ Y ☐ N ☐ N/A		
15	Equipment tag, flow arrows, valve labels and warning labels are installed.	☐ Y ☐ N ☐ N/A		
16	Construction debris removed and unit protected for commissioning.	☐ Y ☐ N ☐ N/A		

Inspection	Name	Signature	Date
HVAC Site Engineer			
Electrical / Controls Engineer			
QA/QC			
Client / Engineer (if required)			

Appendix C - Pre-Commissioning Readiness Checklist

No.	Check	Status	Initial	Remarks / reference
1	All installation inspections and material NCRs are closed or formally accepted.	☐ Y ☐ N ☐ N/A		
2	CHW system is filled, vented, treated and free from leakage.	☐ Y ☐ N ☐ N/A		
3	Permanent strainer is clean; pump and flow-proving device are operational.	☐ Y ☐ N ☐ N/A		
4	Minimum/maximum water flow and minimum system volume requirements are satisfied.	☐ Y ☐ N ☐ N/A		
5	Valves are in start-up position and freeze protection is available.	☐ Y ☐ N ☐ N/A		
6	Electrical terminations are torqued; cable and earth tests are accepted.	☐ Y ☐ N ☐ N/A		
7	Supply voltage, frequency, phase sequence and voltage balance are acceptable.	☐ Y ☐ N ☐ N/A		
8	Control/oil heaters have been energized for the OEM-specified period, where required.	☐ Y ☐ N ☐ N/A		
9	Sensors, remote enable, pump interlock, alarms and BMS points are ready.	☐ Y ☐ N ☐ N/A		
10	Condenser air path is clear and ambient conditions are within the start-up range.	☐ Y ☐ N ☐ N/A		
11	No visual evidence of refrigerant or oil leakage; any concern has been referred to OEM.	☐ Y ☐ N ☐ N/A		
12	OEM commissioning engineer, test instruments and approved commissioning plan are available.	☐ Y ☐ N ☐ N/A		
13	Permits, LOTO transition and safe commissioning boundary are agreed.	☐ Y ☐ N ☐ N/A		
14	Pre-start hold point released.	☐ Y ☐ N ☐ N/A		

Release to initial start	Name	Signature	Date / time
HVAC Site Engineer			
QA/QC			
OEM Commissioning Engineer			
Client / Engineer (if required)			

Appendix D - Commissioning Data Record

Identification	Entry	Identification	Entry
Unit tag		Date / time	
Manufacturer		Model	
Serial number		Refrigerant / factory charge	
Controller / software		Ambient temperature	
OEM engineer		Available load condition	

Electrical data

Parameter	L1 / A	L2 / B	L3 / C	Limit / reference	Result
Voltage (V)					
Current (A)					
Voltage imbalance (%)					
Earth / protection check					

Hydronic and operating data

Parameter	Reading	Unit	Acceptance / reference
Entering CHW temperature		deg C	
Leaving CHW temperature		deg C	
CHW differential temperature		K	
Evaporator differential pressure		kPa	
Measured / calculated flow		L/s or m3/h	
System pressure		kPa / bar	
Compressor loading / stage		% / stage	
Controller suction pressure		kPa / bar	
Controller discharge pressure		kPa / bar	
Noise / vibration observation		Pass / comment	
Active alarms		None / list	

Functional test summary

Test	Pass / Fail / N/A	Observation / record reference
Local start / stop		
Remote enable / disable		
Pump interlock and flow-loss response		
BMS run, common alarm and availability		
Setpoint / demand limit		
Plant lead-lag / sequence		
Power-failure and restart behavior, where approved		
Safety and alarm reset demonstration		

Commissioning acceptance	Name	Signature	Date
OEM Commissioning Engineer			
Main Contractor / MEP			
QA/QC			
Client / Engineer			

Source Note

This revision was developed from the BuildMEP webpage and the three-page Air-Cooled Chiller Method Statement_BuildMEP.pdf supplied with the task. Technical controls were strengthened against current manufacturer-neutral installation practice and the official standard sources listed in Section 3. Accessed 03 August 2026.

END OF METHOD STATEMENT