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1.0 Executive Summary

Schneider Electric Start-Up Service for Aquaflair Chiller is a key part of a complete deployment of Cooling equipment in Data Centers, Server Rooms and Wiring Closets.

This service provides the certified Schneider Electric service engineers needed to verify proper installation of the equipment, per Schneider Electric installation documentation, and energize and check the functionality of the Aquaflair Chiller product in all modes of operation. This service provides the customer with the assurance that the Cooling Solution has been started up according to Schneider Electric service standards and specifications.

2.0 Features & Benefits

Features	Benefits
Start-up Service Provided 5x8 or 7x24 Scheduling	A flexible service program to meet customers varying business operations requirements.
Provide Qualified and Approved Service Personnel	Frees customer resources to concentrate on core business activities.
Installation Inspection	Verifies the installation and provides a report of any issues which may lead to equipment downtime or decreased system performance.
Factory Trained Technician	Provides assurance that the system start-up and operation will be performed by qualified service personnel.
Train Customer Support Staff On Basic Operation of The Equipment	Provides the customer with enhanced operation and maintenance Knowledge.

3.0 Details of Service

The specific activities of this service are listed below. For each item, Schneider Electric service will perform the work described and create and maintain a project summary document that contains the key data and information. A copy of this documentation will be provided to the customer upon completion of the service.

Pre-Start up Inspection	
Activities	Description
System/Environmental & Service Requirements Inspection	Schneider Electric service will check the Chiller installation to ensure there are no signs of damage and that the environment is suitable for operation and there will be sufficient clearance around the system for service.
Installation Check	Schneider Electric service will confirm the Chiller is properly grounded and electrical supply is installed per specifications. Perform a thorough check internal wiring, pumps and compressors rotation; field installed options, and customer controls and monitoring.
	Schneider Electric service will confirm chilled water piping, expansion tanks, storage tank, valves, air vents, freeze protection, and strainers are installed per specification.
	Schneider Electric service will confirm that field installed piping leak test was performed, air purged from the chilled water piping is complete and water or brine solution was filled per specifications.

Start Up Service	
Activities	Description
Refrigerant and Cooler Checks	Schneider Electric service will verify compressors and pumps mounting torque, leak check unit, locate repair and report any refrigerant leaks. Check refrigerant and oil charge. Record system pressures and temperatures.
	Schneider Electric service will verify flow rate and pressure drop against recommended specifications for equipment.
Electrical Checks	Schneider Electric service will measure and record system input voltages. Confirm voltage is within unit nameplate range, control transformer set for proper voltage, check for voltage imbalance, and record motor current for compressors, condenser fans, circulating and free cooling pumps motor. Verify proper operation of temperature and pressure sensors
System Test & Configuration Set-Up	Schneider Electric service will measure and record modes of operation for the refrigeration circuit, controls and hydronic package. Check that settings are appropriate and correct for your application and climate.
Optional Components Checks	Schneider Electric service will confirm options are field installed by the responsible contractor. These options may include a chilled water storage tank, wind baffle and low ambient controls, hail guard or security grill.

Start Up Service Continued	
Activities	Description
Final Inspection	Schneider Electric service will ensure the system is clean and free of debris, the events log is clear and all wires, bolts and panels are properly secured.
Operating Instructions	Schneider Electric service will provide operating instructions to owner's personnel and check that the technical documentation is available.

4.0 Assumptions

The successful performance of the tasks defined in the statement of work (SOW) is based on the following key assumptions, which are agreed to by Schneider Electric service.

- The scheduled-on site work time will be discussed and approved between Schneider Electric service and the customer.
- Schneider Electric service will provide the customer with authorized service personnel to start up the Chiller Equipment.
- Schneider Electric service will provide the customer with a Start-Up checklist indicating that the Cooling Solution was properly energized and the functionality of the system was checked in all modes of operation to ensure compliance with technical specifications.
- If the customer's Building Management System (BMS) is not available during Start-Up Schneider Electric service will not be able to:
 - Validate network address information.
 - Integrate BMS monitoring or control of the Air Cooled Modular Chiller.
 - Additional charges may apply.
- Geographical restrictions may apply. Please verify the service coverage and response time with your local APC by Schneider Electric office.
- Some aspects of the service definition presented in this document may vary by location. In the case of a conflict between the service definitions contained on this Statement of Work and the local service definitions the local service definitions will prevail. For more information, please refer to your Certified APC service sales representative.

Activities and items **outside the scope** of Start-Up service:

- Equipment rigging and physical installation.
- Chilled water piping and third party pump package installation.
- Concrete pad, building damage or specialized vibration isolation.
 - Internal cleaning chilled water loop
 - Strainers installation
- Filling chilled water loop with water, brine or glycol.
- Purging air from chilled water loop.
- Start-Up of third party components.
- Shipping expenses.
- Building Management System integration
- Any specialized testing or commissioning services.
- Water balance test and report.
- Site Coordination Services.

These activities can be integrated into a customized Statement of Work (SOW) at the customer's request. Please contact your certified service sales representative for more details. The items stated here are responsibilities of both Schneider Electric and the customer.

5.0 Scope of Responsibility

5.1 SCHNEIDER ELECTRIC SERVICE RESPONSIBILITIES

- Schedule certified engineers to perform service
- Manage and coordinate scheduling of Start-Up service
- Review installation confirm it was performed to manufacturer specifications
- Operate system in all modes of operation
- Perform basic operator training
- Identify and document open Schneider Electric service and/or customer issues
- Provide a signed copy of the Schneider Electric service Site Forms to the customer

5.2 CUSTOMER RESPONSIBILITIES

- Identify dates and times when the Start-Up service can be conducted
- Provide completed installation checklist validated by the installing contractor
- Provide network cable wiring to the customers BMS system and or interface wiring with the Precision Cooling equipment and those customers supplied interfaces
- Provide a named resource for scheduling of the service
- Provide a representative of the mechanical and electrical installation company to discuss any issues with the installation of the equipment and or obstacles preventing start-up of the equipment
- Notify Schneider Electric service engineers of any security clearance requirements prior to arrival on site
- Provide a point of contact at the completion of service to sign off on completed work
- Provide a safe method of service access to all Precision Cooling equipment indoors or outdoors. Customer is responsible to provide any ladders, staging, roof hatches, or catwalks necessary for service requirements.
- Have the parties responsible for operation of the equipment present for basic operator Training

6.0 Project Work Details

The information stated here are the details of the project performed by Schneider Electric service for the customer including the schedule, location and successful completion criteria.

6.1 SCHEDULE

Actual set dates will be discussed and approved between Schneider Electric service and the customer.

6.2 LOCATION

The location of this Network AIR Precision Room Air Conditioning equipment service will be on-site. It will be discussed and approved by Schneider Electric service and the customer.

6.3 COMPLETION CRITERIA

Schneider Electric service is expected to have finished its written duties when any of the following occurs:

1. Schneider Electric service completes all tasks described in Section 3.0 of this SOW.
2. This service and SOW are terminated for other reasons, within the Schneider Electric service Customer Agreement.

7.0 Terms and Conditions

Schneider Electric standard Terms and Conditions apply.

The information provided in this Scope of Work cannot be used or duplicated, in full or in part.

Other uses for this document are prohibited without written consent by Schneider Electric.

All documentation, photographs, imaging or other information provided by the customer, or gathered at the customer site, will be for internal use only and used solely for the purpose of report generation, analysis and recommendations.

All services' conditions included in this document apply (i) only between Schneider Electric and that organization that bought the Services Solutions; and (ii) only to those products and services ordered by the Customer at the time that the Schneider Electric Services information is current. Schneider Electric may change the Schneider Electric Services Information at any time. The Customer will be notified of any change in the Schneider Electric Services Information in the manner stated in the then current product ordering and/or services solutions related agreement between Schneider Electric and the Customer, but any such change shall not apply to products or service ordered by the Customer prior to the date of such change.

Schneider Electric will have no obligations to provide Services Solutions with respect to equipment and assets that are outside the Service Area. "Schneider Electric Service Area" means a location that is within (i) one hundred (100) miles or one hundred and sixty (160) kilometers radius of a Schneider Electric service location; and (ii) the country in which the Installation site is located, unless otherwise defined in the governing agreement with Schneider Electric, in which case the definition in the governing agreement prevails.

Products or services obtained from any Schneider Electric partner or reseller are governed solely by the agreement between the purchaser and the reseller. That agreement may provide terms that are the same as the Schneider Electric Services Solutions on this document. Please contact the reseller or the local Schneider Electric sales representative for additional information on Schneider Electric Services Solutions on Products obtained from a reseller.

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