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Mcquay hsa screw compressor service manual

A person is seeking technical information on a compressor model HSA232QS17YA and HSA215QS17YA used in a chiller unit AWS250BDSEWNN-ER11. They are looking for detailed documentation, including solenoid functions, cross-sectional views, troubleshooting guides, and service information. Several people respond to the original post, asking for clarification or providing links to manuals, but the person seeking information persists in their request. It is later revealed that the person is searching for a specific manual related to the HSW compressor, specifically looking for information on the slide valve actuator. They ask if the documentation they have been given covers this model and request a copy. A user responds by providing links to various McQuay compressor manuals, but it is unclear whether these are relevant to the person's original request. McQuay, a US-based climate technology brand, was founded in 1933. The company initially focused on air conditioning, heating, and ventilation systems, as well as manufacturing radiators and heat exchangers. In 1965, McQuay expanded by opening an European division in Italy, which began producing chillers in 1969. McQuay later merged with Snyder General (1984) and OYL Industries (1994), expanding its research capabilities. A merger between Daikin and OYL Industries in 2006 resulted in McQuay becoming part of the Daikin brand portfolio, making it one of the world's top HVAC equipment producers by the end of 2006. The provided documents cover installation manuals for various McQuay products, including chillers, air conditioners, and heat exchangers, among others. These documents offer technical information and guidelines for installing and maintaining these systems, emphasizing the importance of following instructions and manufacturer guidelines to ensure proper operation and longevity. Please find below a rewritten version of the original text: Unit Verification and Installation The unit should be verified to ensure it is compatible with the available power supply. Physical damage to the unit after acceptance is not the responsibility of McQuay International. Installation Warning Sharp edges and coil surfaces can pose an injury hazard. Avoid contact with them. Note: Installation and maintenance must only be performed by qualified personnel familiar with local codes and regulations and experienced with this type of equipment. Start-up by McQuayService is included on all units sold in the USA and Canada, and it must be performed by them to initiate the standard limited product warranty. Unit Placement Carefully locate the unit to provide proper airflow to the condenser (see Figure 2 on page 6 for required clearances). Due to the shape of the condenser coils, it is recommended that the unit be oriented so that prevailing winds blow parallel to the unit length, minimizing wind effect on condensing pressure and performance. Clearance Requirements Figure 2, Clearance Requirements, AGS 120C – AGS 210C: - No obstructions are allowed. - Recommended area required for unit operation, air flow, and maintenance: 5ft (1.5m) if open fence or 50% open wall access. - 6ft (1.8m) if solid wall (see note 3). - 4ft (1.2m) for electric panel access. Special Considerations Occasionally, these clearances cannot be maintained due to site restrictions such as units being too close together or a fence or wall restricting airflow. The McQuay AGS chillers have several features that can mitigate the problems attributable to restricted airflow: - Case 1: Building or Wall on One Side of One Unit - Case 2: Two Units Side By Side - Case 3: Three or More Units Side By Side - Case 4: Open Screening Walls Before installation, review the McQuay sales office for airflow characteristics and ensure the design engineer approves the work. Initially, install the unit on shims or blocks at its "free height" (6 inches) for the McQuay isolators shown. After completing all piping, wiring, flushing, and charging, adjust the springs upward to load them and provide clearance to remove the blocks. The following specifications are provided in tables: * Table 1: Dimensions for various models of chillers * Table 4: Lifting and mounting weights for remote evaporators with aluminum fins * Table 6: Spring vibration isolators with aluminum fins * Table 8: Spring vibration isolators with copper fins The specifications include information on model numbers, kit numbers, weights, and dimensions. Regarding chilled water pumps, it is recommended to wire them to and control them by the chiller's microprocessor. The controller will energize the pump when at least one circuit on the chiller is enabled to run, regardless of a call for cooling. Additionally, McQuay chillers are designed for variable water flow, provided that the rate of change in water flow is slow and the minimum and maximum flow rates for the vessel are not exceeded. The evaporator heaters on AGS chillers can protect against freeze-up down to -20°F (-28°C). **Operating Temperature Limits** * Maximum non-operating inlet fluid temperature: 90°F (32°C) * Maximum operating ambient temperature: varies depending on model number, with standard efficiency models designed to operate up to 125°F. **Switch Installation and Electrical Connections** * The switch is a paddle-type switch that can be adapted to any pipe size from 1" to 8". * Minimum flow rates are required to close the switch, as listed in Table 13. * Electrical connections should be made at terminals 60 and 67 from switch terminals Y and R. **Chiller Performance with Glycol** * The use of glycol reduces cooling capacity; a capacity correction factor must be applied to find the reduced value (Table 14 for propylene glycol, Table 15 for ethylene glycol). **Physical Data and Dimensions** * Standard efficiency models have various physical data, including unit capacity, weight, and operating charge, listed in Tables 16-20. * Dimensions are listed in Figures 18-22. **Important Notes** * Consult local McQuay sales office for operation outside recommended temperature limits. * The procedure does not specify the type of glycol; use derate factors from Tables 14 and 15 to correct performance. For the installation of the McQuay compressor unit, follow these electrical requirements: * The "D" disconnect box in the power panel must be accessed at the locations shown in the dimension drawings (page 29). * Separate disconnects are needed for each electrical circuit if the optional factory-mounted disconnects are not ordered. * Refer to Table 21 and 22 on pages 33-34, which provide information on field fuse sizes or minimum power HACR breaker sizes, as well as circuit supply unit voltages and amperage ratings. For electrical circuits 1 (COMP 1) and 2 (COMP 2), follow the guidelines outlined in Table 35 on page 36. This includes minimum field fusing, supply unit voltages, and circuit size. Additionally, refer to Table 23 on pages 36-37 for information on compressor and condenser fan motor amp draw ratings, as well as rated load amps, L/R/A values, and number of motors per unit. Wiring requirements are outlined in Tables 25 and 26 on pages 39-40. This includes information on wiring to the unit power block, connector wire ranges, terminal sizes, and amperage ratings. The figure provided (Figure 23) shows a typical field wiring diagram, while Figure 24 provides a unit controller schematic with additional details such as shielded outside air temperature limits and demand limits. Please note that the complete notes and table references are on pages 47 and onwards. **Unit Controller Schematic** The unit controller schematic shows various components, including sensors and pumps, connected to a terminal block with specific lead numbers. The schematic also includes labels for different parts, such as evaporator pump 1 and 2. **Circuit Controller Schematic** A separate circuit controller schematic is provided, showing connections between transducers and other devices. The schematic includes labels for various components, including the evapor pressure transducer and discharge press transducer. **Remote Operator Interface Panel** The optional remote operator interface panel comes with installation instructions, which can also be downloaded from a website. This section contains data unique to AGS-CM/B remote evaporator models. **Remote Evaporator Data** This section provides data specific to AGS-CM/B remote evaporator models, including refrigerant piping and dimensions. Common data between packaged and remote evaporator models is also included, such as liquid line connection sizes. **Fitting Equivalent Feet of Pipe Line Size** A table lists equivalent feet of pipe for different line sizes and fittings, which can be used to plan the installation of the unit. **Dimensions with Remote Evaporator** The dimensions of the unit with remote evaporator are provided in various figures, including height, length, and width. The liquid connections, suction connection, and field control connections are also labeled. Note: I've tried to preserve the original meaning and content of the text while rephrasing it in a clearer and more concise manner. Let me know if you'd like me to make any further changes! **Evaporator Design** The document describes various evaporators, including those for AGS 120C-140C (Figure 32) and AGS 145C (Figure 34). The evaporators have specific components, such as heaters, leads, flanges, and liquid lines. Detailed dimensions are provided for mounting and lifting the evaporators. **Lifting and Mounting** The document outlines the lifting and mounting weights and dimensions for remote evaporators, including aluminum fins and vibration isolators. Specific models and kit numbers are listed in tables (e.g., Table 31, Lifting and Mounting Weights). **Vibration Isolators** The document provides information on spring vibration isolators for various AGS models, including those with aluminum and copper fins. The isolators' specific locations and kit numbers are indicated. **Physical Data** The document presents physical data for various evaporator models, including operating charge weights, cabinet dimensions, and SCR power section specifications (Tables 37-41). **Motor Starter** A custom-designed motor starter is described, which allows a motor to be brought up to speed with a reduced initial voltage that increases over time. The motor thermal overload content is monitored, and the motor will stop when it reaches 100% capacity. Note: I removed the technical specifications and diagrams from the paraphrased text to focus on providing an overview of the document's main sections and content. Troubleshooting Guide for Solid State Starter Errors Error codes listed include CPU Error – Software Fault, CPU Error – Parameter Storage Fault, and others. Possible causes of errors: - Missing or low line voltage - Power breaker or fuse issues - Interlock circuit problems - High source wiring issues - Ambient temperature problems Trouble shooting guide suggests checking: - Fuses and power line voltage - Circuit breaker status - Solid state starter settings, including motor load amps and overload class Component locations for the unit are also provided, including: - Power panel components - Control panel components and architecture - Compressor oil filter Given article text here McQuay Part Number 735030446 is a synthetic polyolester oil with anti-wear additives and high hygroscopic properties, recommended to be used in non-caustic, non-acidic coil cleaners. It's essential to flush the coil from the inside out. The Lead-Lag feature on McQuay AGS chillers balances compressor starts and run hours through automatic refrigerant circuit switching via MicroTech II controller. For warranty information, consult your local McQuay Representative at www.mcquay.com. During service, follow standard pumpdown procedure to avoid overcharging or undercharging the system. A full pumpdown is required when a unit pumpdown setting of 20 psig (138 kPa) suction pressure is reached. To spot errant behavior, record normal refrigerant pressures and temperatures during startup. Overcharging can raise condenser pressure and subcooling. The MicroTech II controller has more details in the Operation Manual OM AGS (page 81). Address: Facility and Location of Unit: Service Technical Information: - Software Identification: - Operating Hours: Compressor Details: - Compressor #1: - Number of Starts: - Follow-up Service Required: General Actions to be Taken: Fill in above... Page 85 IMM AGS-2... Page 86 IMM AGS-2... Page 88 IMM AGS-2 Note: For the most up-to-date product information, please visit www.mcquay.com or call (800) 432-1342.

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