

SECTION 232129

AUTOMATIC CONDENSATE PUMPS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. This Section includes installation requirements of condensate removal pumps for Ductless and Ducted Mini-Split Air Conditioning and Heating systems.

1.2 RELATED SECTIONS

- A. Section – 230716 HVAC Equipment Installation

1.3 REFERENCES

- A. Testing Standards:
 - 1. UL-778

1.4 SYSTEM DESCRIPTION

- A. Automatic condensate removal pumps designed for use with Ductless Mini-Split Air Conditioning Systems to remove condensed water from evaporative coil condensate tray through drain line provided with equipment. Pumps are to be universal in application for all Ductless Mini-Split Air Conditioning equipment, and powered directly from the Ductless Mini-Split equipment. Condensate pump shall provide an integrated high water level cut off switch that will shut down the Ductless Mini-Split Equipment prior to condensate water overflowing pump reservoir. Pump must be capable of breaking power and communication terminals on equipment and be equipped with a fused link in power lead. Condensate pump will be equipped with a filter screen in pump reservoir.

1.5 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Pump capacity.
 - 2. Installation instructions.
 - 3. Wiring diagrams.
 - 4. Voltage requirements.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing automatic condensate pumps designed and tested for use with ductless mini split and VRF HVAC equipment, with a minimum of five years of documented experience.
- B. Pre-Installation Meeting: After approval of submittals, prior to installation, conduct a

meeting at project site attended by Architect, Contractor, Authority Having Jurisdiction, and equipment installer.

1. Meeting is to describe in detail the installation process and to establish agreement, coordination, and responsibilities for each party.
2. Prepare detailed meeting report and distribute copies to the Architect and all attendees.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver all materials to project site in manufacturer's original packaging, marked with manufacturer's name, product model names and catalog numbers, identification numbers, and other related information.
- B. Store materials protected and under cover until needed for installation.

1.8 PROJECT CONDITIONS

- A. Do not install products in locations where environmental conditions fall outside manufacturer's recommended limits.
- B. Do not install pumps until all dust and debris are completely removed from equipment evaporator and drain pan, if equipment has dust or debris pumps will be damaged during operation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Aspen Pumps from The RectorSeal Corp., 2601 Spenwick Dr.; Houston, TX 77379; Toll Free Tel: 800-231-3345; Tel: 713-409-1695; Fax: 800-441-0051; Email: aspen@rectorseal.com; Web: www.rectorseal.com
- B. Substitutions: Not permitted.

2.2 MINI AND MAXI CONDENSATE PUMPS

- A. Condensate pumps shall provide a minimum flow rate of 3.2 gallons per hour at 0 feet of head for mini pumps and 6.9 gallons per hour at 0 head for maxi pumps. A published maximum head rating of at least 33 feet for mini pumps and 49 feet for maxi pumps with a flow rate of 0.8 GPH and 3.8 GPB respectively, will be provided for condensate pumps. A minimum suction lift of 5 feet from condensate source is required for condensate pump. Pumps must be powered directly by equipment using either evaporator or condenser terminal block as power source or from the condensing unit. Power requirements shall be 115 volt AC 0.18 Amps 15 Watts 60 Hertz, 230 volt AC 0.11 Amps 15 Watts 60 Hertz, 24 volt AC 0.7 Amps 16 Watts 60 Hertz, 100-250 volts AC .11-.18 Amps 16 Watts 60 Hertz.
- B. Product: Aspen Mini Condensate pumps.
 1. Mini Aqua- 115 volt, 230 volt, Univolt (100-250 volt) and Silent+.
 2. Mini Lime- 115 volt, 230 volt, Univolt (100-250 volt) and Silent+.
 3. Mini Orange- 115 volt, 230 volt, Univolt (100-250 volt) and Silent+.
 4. Mini White- 115 volt, 230 volt, Univolt (100-250 volt) and Silent+.
 5. Maxi Orange- 115 volt, 230 volt, Univolt (100-250 volt) and Silent+.
 6. Maxi Lime- 115 volt, 230 volt, Univolt (100-250 volt) and Silent+.
 7. Peristaltic- 115 volt and 230 volt.
 8. Diaphragm- 115 volt and 230 volt.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify the proper pump selection for equipment.
- B. Ensure sound level is acceptable for installation location.

3.2 PREPARATION

- A. Clean evaporator and equipment surfaces and condensate tray to receive pump.
 - 1. Remove debris, dirt, dust, oils, and other foreign materials.
- B. Ensure not to damage pump or equipment during installation

3.3 INSTALLATION

- A. VRF, Ductless Mini Split and HVAC Equipment Systems:
 - 1. Follow all manufacturer's written instructions and wiring parameters.
 - 2. Ensure pump is operational prior to finishing.
 - 3. Do not alter or change any pump system components.

3.4 FIELD QUALITY CONTROL

- A. A factory-trained representative of the manufacturer shall visit the site while the work is in progress to assure that the installation conforms to the design requirements and the manufacturer's installation requirements.

3.5 CLEANING AND PROTECTION

- A. Remove all packaging, and other installation materials from the project site.
- B. Protect work as necessary to guarantee undamaged condition at the time of substantial completion.

END OF SECTION