

SECTION 23 56 13 {13610}

HEATING SOLAR COLLECTORS

{SOLAR FLAT PLATE COLLECTORS}

This section includes flat plate solar collectors, controls, pipe materials, fittings, valves, tanks, pumps.

Manufacturers listed in this section were identified as representative and not as an endorsement for meeting this specification. For additional product information, visit 4Specs at www.4specs.com, ARCAT at www.arcat.com, First Source at www.reedfirstsource.com, SpecSource at www.specsource.com, and Sweets Network at products.construction.com.

This section includes performance, proprietary, and descriptive type specifications. Edit to avoid conflicting requirements.

Contact the CSRF Support Center at supportcenter@csrf.org to submit comments or suggestions for improvements to this specification. Visit the SPECTEXT web site at www.spectext.com for current product announcements.

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes solar collectors, controls, pipe and fittings, valves, tanks, pumps, cabinet fans, cleaning and chemical treatment of systems.
- B. Related Sections:
 - 1. Section 08 31 13 - Access Doors and Frames: Product requirements for access doors for placement by this section.
 - 2. Section 23 05 13 - Common Motor Requirements for HVAC Equipment: Product requirements for pump motors for placement by this section.
 - 3. Section 23 31 00 - HVAC Ducts and Casings: Product requirements for collector connection to ductwork for placement by this section.
 - 4. Section 26 05 03 - Equipment Wiring Connections: Execution requirements for electric connections specified by this section.
- C. Related Sections:
 - 1. Section 08310 - Access Doors and Panels: Product requirements for access doors for placement by this section.
 - 2. Section 15810 - Ducts: Product requirements for collector connection to ductwork for placement by this section.
 - 3. Section 16150 - Wiring Connections: Execution requirements for electric connections specified by this section.
 - 4. Section 16227 - Common Motor Requirements for HVAC Equipment: Product requirements for pump motors for placement by this section.

1.2 REFERENCES

List reference standards included within text of this section. Edit the following for Project conditions.

- A. American Society of Mechanical Engineers:
 - 1. ASME Section VIII - Boiler and Pressure Vessel Code - Pressure Vessels.

- B. ASTM International:
 - 1. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
 - 2. ASTM B88 - Standard Specification for Seamless Copper Water Tube.
 - 3. ASTM B88M - Standard Specification for Seamless Copper Water Tube (Metric).
 - 4. ASTM D635 - Standard Test Method for Rate of Burning [and] [or] Extent and Time of Burning of Plastics in a Horizontal Position.
 - 5. ASTM D1785 - Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
 - 6. ASTM D1929 - Standard Test Method for Determining Ignition Temperature of Plastics.
 - 7. ASTM D2241 - Standard Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter.
 - 8. ASTM D2310 - Standard Classification for Machine-Made "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe.
 - 9. ASTM D2843 - Standard Test Method for Density of Smoke from the Burning or Decomposition of Plastics.
 - 10. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

- C. American Water Works Association:
 - 1. AWWA C105 - American National Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems.

1.3 SUBMITTALS

Only request submittals needed to verify compliance with Project requirements.

- A. Section 01 33 00 - Submittal Procedures {01330 - Submittal Procedures}: Submittal procedures.
- B. Shop Drawings: Indicate manufactured assembly's system and control schematics, solar collector installation, layout, weights, mounting and support details, and piping connections.
- C. Product Data: Submit data on specialties, including manufacturers catalog information. Indicate chemical treatment materials, chemicals, and equipment. Submit certified pump performance and NPSH curve. Submit performance ratings and rough-in details for solar collectors.
- D. Manufacturer's Installation Instructions: Submit mounting and other structural requirements.