

Guide Specifications for Swimming Pool Solar Heating Systems

Contractor to supply and install _____ Aquatherm Industries Collectors, nominal size (4x12, 4x10, 4x8) with overall frontal area of (47.3, 39.3, 31.4) square feet each manufactured by Aquatherm Industries, Inc. Collectors shall be fabricated from a propylene copolymer with stabilizer combination providing long term resistance to heat and light. The weight of collector when filled with water shall be no more than 1.3 pounds per square foot of frontal area.

The collectors shall be capable of withstanding an internal static test pressure of 100 psi and working pressure of 50 psi per ANSI/NSF 50, Annex B.3.; shall pass a 20,000 cycle pressure test per Annex B.1. and shall be resistant to corrosion, the effects of freezing, and internal scale accumulation. Pressure head loss of a single panel must not exceed 0.14 feet water at recommended flow rate. Maximum flow rate per collector may not exceed 10 gpm.

Collectors shall be capable of thermal performances of at least 85% efficiency when inlet fluid temperature equals ambient temperature and be rated at a minimum of 1,000 BTU's per square foot per day at an inlet temperature of 95° F with a daily insolation of 1,600 BTU's.

Collector shall be vented to allow for moisture ventilation of the mounting surface and wind relief during adverse weather conditions. Venting shall not be visible unless collector is exposed to high winds.

Collector mounting shall consist of 18-8 chromium-nickel stainless steel mounting hardware with a minimum of two continuous transverse straps having a minimum yield/tensile strength of 47,000/90,000 psi coated with black polypropylene.

Water connections shall be made with dual-durometer hose connections molded from EPDM with a minimum 70/80 hardness and must withstand a minimum pressure of 100 psi at 140° F as designated under IAPMO PS-33 2010b. Hose clamps shall be all stainless worm gear type with 18-8 chromium-nickel stainless band and shall be IAPMO listed.

The collectors shall meet or exceed the minimum standards established by SRCC, FSEC, IAPMO, CSA, The City of Los Angeles as well as other applicable nationally recognized standards and shall be manufactured in the U.S.A. All hydraulic components including the collectors must be NSF-50 listed for use with commercial swimming pools.