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**BUILDINGS BULLETIN 2010-009**  
**OTCR**

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**Supersedes:** None

**Issuer:** Alan Price, P.E.  
Director, Office of Technical Certification and Research

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**Purpose:** This bulletin establishes acceptance criteria and test methods for solar collectors as addressed in the 2008 NYC Construction Codes.

<b>Related Code</b>	BC 1704.15	MC 1401	MC 1404
<b>Section(s):</b>	BC 2606.12	MC 1402	FC 504
	MC 926	MC 1403	

**Subject(s):** Solar systems, solar collectors

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**Description:** Solar collectors absorb thermal energy from the sun and convert it into usable heat. This bulletin covers the following types of solar collectors:

1. Flat-plate collectors including liquid flat-plate collectors and air flat-plate collectors (insulated metal boxes with a glass or plastic cover).
2. Evacuated-tube collectors (parallel rows of transparent glass tubes).
3. Integral collector storage systems (one or more black tanks or tubes in an insulated, glazed box).

Other types of solar collectors not addressed in this bulletin shall be subject to the evaluation of the Office of Technical Certification and Research ("OTCR").

**Evaluation Scope:** 2008 NYC Construction Codes

**Evaluation Criteria:** Pursuant to section AC 28-113, the Office of Technical Certification and Research recognizes Solar collectors tested and evaluated in accordance with ISO-9806-2 "Test methods for solar collectors Part 2"<sup>1</sup>. Acceptable solar collectors shall be:

1. Tested and evaluated in accordance with ISO-9806-2
2. In accordance with section MC 1404.1, listed by Solar Rating & Certification Corporation (SRCC)<sup>2</sup>; and
3. In compliance with the conditions of this bulletin.

**Uses** Solar collectors can be used for domestic water heating, space heating, swimming pool heating and process heating.

**Restrictions:**  
Flammable liquids or gases shall not be used as a heat transfer fluid as per section MC 1403.2.

**Conditions and  
Acceptance:**

Solar collector systems shall be designed and installed in accordance with the 2008 NYC Construction Codes including but not limited to the following code sections:

**A. Design**

1. Solar collectors covered with light-transmitting plastic shall comply with section BC 2606.12.
2. Solar collector equipment constructed on roof tops shall comply with applicable noise output limitations as per section MC 926.
3. Potable water supplies to solar systems shall be protected against contamination as per section MC 1401.2.
4. Water piping within and connection to solar collectors shall comply with the New York City Plumbing Code (see sections PC 601.2 and 605).
5. Heat exchangers used in domestic water-heating systems shall be approved for the intended use as per section MC 1401.3.
6. The array and supporting construction for solar collectors shall be constructed of noncombustible materials as per section MC 1402.4.1.
7. Heat transfer fluids shall comply with section MC 1403.
8. An application for the installation of a solar collector system shall include a work permit and an electrical permit where applicable. All relevant existing conditions shall be evaluated to ensure that the building can sustain the additional loads due to the installation of the solar collector, including but not limited to dead load, live load, and wind load of supporting structures, anchorage, solar collector systems and equipment. Such evaluation shall be submitted with the construction document for approval.
9. The application for the solar collector system shall comply with the New York City Construction Codes, the New York City Electrical Code, the New York City Fire Code and the New York City Zoning Resolution.

**B. Installation Requirements**

1. Solar collector equipment and appliances shall be installed in accordance with the manufacturer's installation instructions as per section MC 1401.4 and the conditions of this bulletin.
2. Solar collector equipment shall meet installation requirements as per section MC 1402.
3. Pursuant to section BC 1704.15, solar collectors shall be subject to special inspection requirements of Chapter 17 of the Building Code and Department rules covering special inspection. Special Inspectors of solar collector systems shall:
  - a. Maintain the same qualification requirements for the mechanical system and heating system categories as defined in 1 RCNY section 101-06, Appendix A.
  - b. Complete the statement of special inspection by referencing this bulletin under the Special Inspection Item for "Alternative Materials" in section 3.0 of the TR1 form.
4. The collectors shall be labeled as per sections AC 28-113.4 and MC 1404.1.
5. All shipments and deliveries of materials shall be accompanied by a certificate or label certifying that the materials shipped or delivered are equivalent to those tested and approved.

**Reference  
Standards:**

1. ISO-9806-2:1995 (E) *"Test methods for Solar Collectors – Part 2"* (<http://www.ISO.org/>)

**Accepted Evaluation  
Agency:**

2. Solar Rating & Certification Corporation (SRCC), 1679 Clearlake Road, Cocoa, FL 32922-5703  
(Tel. 321-638-1537) <http://www.solar-rating.org/>