

# GEW111-14

## 607.7

**Proponent:** John Williams, CBO, Chair, representing ICC Adhoc Health Care Committee (AHC@iccsafe.org)

### Revise as follows:

**607.7 Circulating hot water systems.** Controls that allow continuous, timer, or water temperature-initiated (aquastat) operation of a circulating pump are prohibited. Gravity or thermosiphon circulation loops are prohibited. Pumps on circulating hot water systems shall be activated on demand by either a hard-wired or wireless activation control of one of the following types:

1. A normally open, momentary contact switch.
2. Motion sensors that make momentary contact when motion is sensed. After the signal is sent, the sensor shall go into a lock out mode for not less than 5 minutes to prevent sending a signal to the electronic controls while the circulation loop is still hot.
3. A flow switch.
4. A door switch.

The controls for the pump shall be electronic and operate on the principal of shutting off the pump with a rise in temperature. Electronic controls shall have a lock-out to prevent operation at temperatures greater than 105°F (41°C) in the event of failure of the device that senses temperature rise. The electronic controls shall have a lock out mode for not more than 5 minutes that prevents extended operation of the pump if the sensor fails or is damaged.

**Exception:** Group I-2 Condition 2 and ambulatory care facilities shall not be required to comply with this section.

**Reason:** The "Guidelines for Design and Construction of Health Care Facilities" from the Facility Guidelines Institute (FGI) require a continuous circulating hotwater system in hospitals and ambulatory care facilities. This document is adopted by most states and used as licensing requirements for these facility types. It is also used by third-party healthcare accreditation companies, such as the Joint Commission. Restricting it here would be a potential rules conflict when states adopt both IgCC and FGI. Additionally, maintaining hot and cold water temperatures within prescribed ranges throughout a hospital water system has been shown to reduce the proliferation of Legionella. Cold water should be distributed and delivered at temperatures below 77°F (25°C). If cold water temperatures exceed 77°F (25°C) in any part of the system, the potential for proliferation of Legionella increases significantly. Hot water should be consistently above 130°F (55°C) throughout heating and storage vessels. If temperatures cannot be maintained and documented to be consistently at or above 130°F(55°C) —e.g., due to stratification—then hot water should be stored at or above 140°F (60° C). However, storage at 140°F (60°C) does not guarantee Legionella control in tanks, especially if there are significant issues with stratification or residence time. Not allowing a circulating hot water system will reduce the ability to control the water temperature exposing the at risk population within hospitals to life threatening bacteria.

This proposal is submitted by the ICC Ad Hoc Committee for Healthcare (AHC). The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April, 2011, the AHC has held 11 open meetings and over 162 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: <http://www.iccsafe.org/cs/AHC/Pages/default.aspx>

**Cost Impact:** Will not increase the cost of construction.

GEW111-14: 607.7-PAARLBERG647