	Title: YALE OFFICE OF FACILITIES PROCEDURE MANUAL Chapter: 01 - Yale Design Standard Division: Plumbing Standards	Section: 22 11 22 Domestic Water Circulation Pumps
		Date: 08/05/2017
		Author: Office of Facilities
CC: Project Folder		

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PART 1 - INTRODUCTION

1.1 This section applies to the domestic hot water recirculation pumps.

PART 2 - GENERAL DESIGN REQUIREMENTS

- 2.1 Design considerations specific to components in this section:
- A. Provide isolation valves at inlet and outlet of pump.
 - B. Pump connections between isolation valves shall be flange or union type.
 - C. Provide thermal well for aqua stat controller.
 - D. Pump operating sequence shall be capable of intermittent or constant operation, user selectable.

PART 3 - MINIMUM PRODUCT REQUIREMENTS

3.1 ACCEPTABLE MANUFACTURER

- A. Bell and Gossett Co
- B. Goulds
- C. Armstrong

3.2 HOT WATER CIRCULATING PUMPS

A. EQUIPMENT


1. Hot water circulating pumps shall be all bronze, centrifugal and equal to Bell and Gossett Co. 100 Series, or size required to meet flow and water change rate requirements.
2. Wetted pump area shall be in compliance with most current NSF 61 no-lead requirement for potable water.

B. EQUIPMENT REQUIREMENTS

- C. Provide a local disconnect for each pump. Disconnect shall be mounted on wall accessible without the use of a ladder, and mounted no higher than 60 inches AFF..
- D. Provide flow and temperature control monitoring of supply and recirculation circuits. Refer to DHW Generator Standard for requirements.

PART 4 - INSTALLATION REQUIREMENTS:

4.1 Quality:

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- A. Assurance requirements beyond standard 1 year warranty: Provide full 2 year warranty from date of factory witnessed start-up and acceptance testing.
- 4.2 Commissioning:
- A. A start-up report shall be issued at turn-over to the owner. The start-up report shall include testing of all equipment, and confirmation of sequence of operation. Each item will be itemized and indicate testing was completed and passed. Additionally, all critical set-points will be logged. See Section Plumbing General Requirements for additional requirements.