



THERMAL BALANCING VALVE THERMOSETTER™

CALEFFI
Hydronic Solutions



Plumbing

Protecting the system to protect your water



FUNCTIONS AND FEATURES

- The 116 series is designed for domestic hot water recirculation systems, to speed hot water delivery, reduce water waste and save energy. Matches perfectly with variable speed recirculation pumps for efficient energy usage.
- For systems using thermal disinfection as Legionella growth protection, a model with second thermostatic by-pass cartridge opens at 160°F to allow system flushing during thermal disinfection cycle.
- Installed on each return branch of the recirculation circuit, the self modulating valves balance the recirculation circuits to prevent uneven temperature distribution.
- Alternately, thermal disinfection can be achieved by a model with a second by-pass valve activated with an electric actuator mounted and controlled by the thermal disinfection system.
- Field adjustable from 95°F through 140°F for precise temperature control with locking knob to prevent tampering.
- Valve is complete with dry well for temperature gauge or temperature probe for remote measurement and control of disinfection cycle.

PRODUCT RANGE



CODE	CONNECTIONS
116140A	½" NPT female without gauge
116150A	¾" NPT female without gauge
116141A	½" NPT female with gauge
116151A	¾" NPT female with gauge

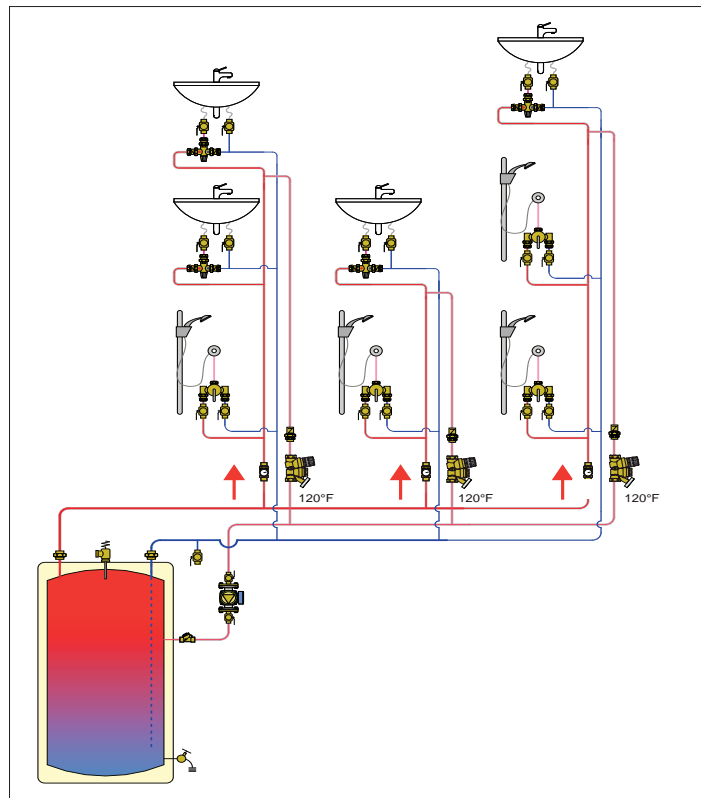
CODE	CONNECTIONS
116240A	½" NPT female with gauge
116250A	¾" NPT female with gauge
With second thermostatic by-pass cartridge for thermal disinfection function	

CODE	CONNECTIONS
116340A	½" NPT female with gauge
116350A	¾" NPT female with gauge
With by-pass valve for thermal disinfection with optional 656 series actuator.	

TECHNICAL SPECIFICATIONS

BODY	low lead dezincification resistant brass CW724R
MAX. WORKING PRESSURE	230 psi (16 bar)
TEMPERATURE ADJUSTMENT RANGE	95-140°F (35-60°C)
DISINFECTION TEMPERATURE	160°F (70°C)
CV MAX	2.1
CV DISINFECTION	1.2
CV MIN	0.23

APPLICATION DIAGRAM



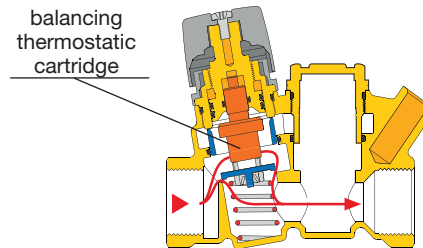
REFERENCE DOCUMENTS:

116 series - Technical brochure 01325

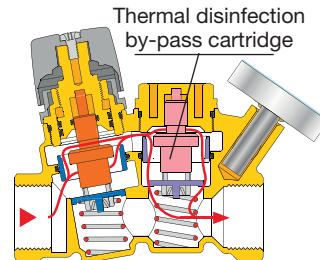
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OPERATING PRINCIPLE

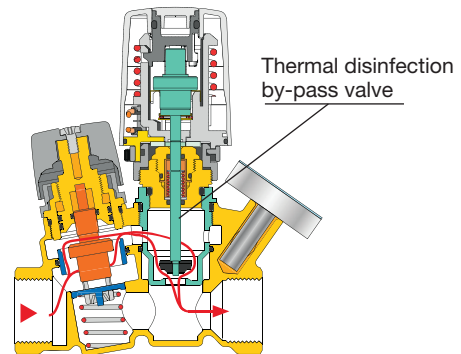
The balancing cartridge modulates the valve opening in response to changing water temperature, and when near the desired temperature setting, closes the valve to minimum position. This allows hot water supplied by the circulator to be distributed to the other branches resulting in effective automatic thermal balancing. The automatic response allows each hot water branch to quickly deliver hot water to each fixture.



When thermal disinfection is used for legionella growth protection, the function is activated by a second thermostatic by-pass cartridge that opens at 160°F, opening to allow flow for the disinfection process independent of the almost-closed balancing thermostatic cartridge.



Alternately, thermal disinfection can be achieved by a model with a by-pass valve controlled with an optional electric actuator, code 656 series.



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