

RecircSetter™ Life Cycle Testing

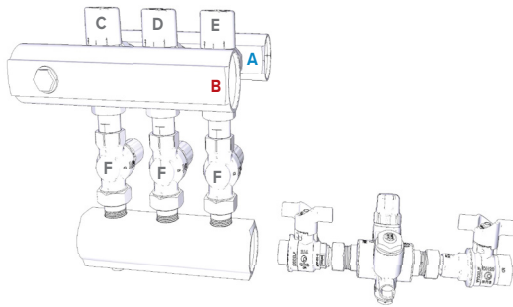


The RecircSetter™, Jomar’s thermostatic balancing valve engineered for efficient domestic hot water balancing, underwent rigorous life cycle testing to demonstrate its robust construction, durability, and usability.

SETUP & SCOPE

The RecircSetter™ was installed into a closed-loop recirculation system with temperature fluctuation from 95°F-150°F on scheduled 1-minute intervals. Testing was performed under rigorous water conditions, as indicated by the negative (-) Langlier Saturation Index (LSI) results notated herein. Such conditions mimic what one may encounter in a healthcare facility utilizing a high temperature flush.

Using proprietary software, samples were recorded at a rate of 1 sample per second. Once a month, a disinfecting flush was performed, where temperature was raised above 160°F to engage the bypass cartridge. Five months of testing yielded 25,000 cycles.



- A: Chilled Water Supply, 68°F
- B: Hot Water Supply, 180°F
- C: Mixing Valve: 104°F
- D: Mixing Valve: 126°F
- E: Mixing Valve: 140°F
- F: Isolation Valves + Actuator (QTY 3)

TESTING SETUP

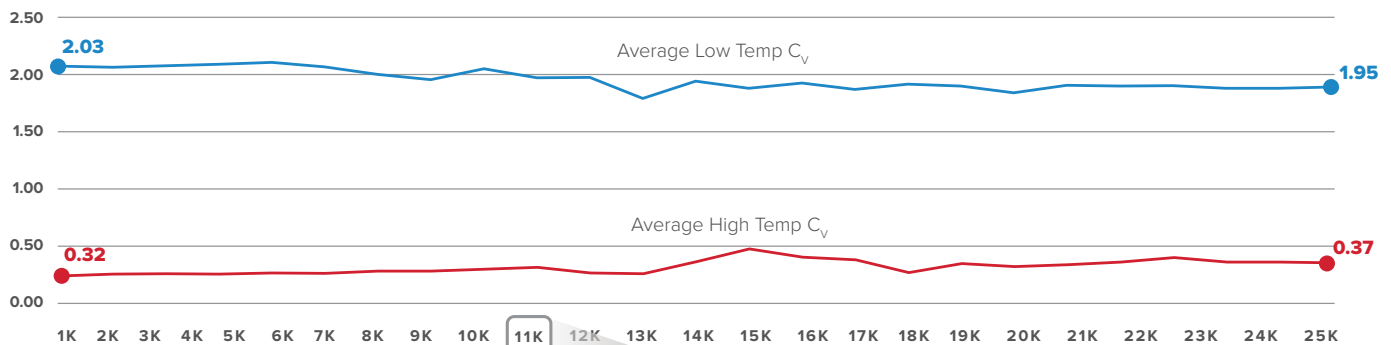


RESULTS

For the entirety of the 25,000 life cycles recorded in the dataset, and even beyond, the RecircSetter™ performed consistently and demonstrated a negligible impact of the hysteresis on the C_v . Visual inspection at the completion of 25,000 cycles also confirmed minimal impact to any RecircSetter™ component.

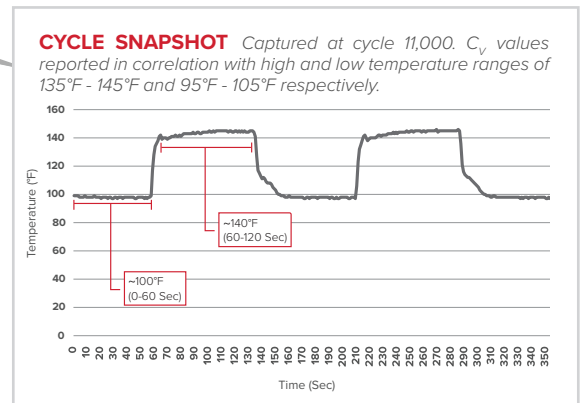
AVERAGE C_v VS. LIFE CYCLE TEST

C_v values reported in correlation with high and low temperature ranges of 135°F-145°F and 95°F-105°F respectively.



LSI Results: 68°F = -4.2, 104°F = -3.8, 140°F = -3.5

LSI	Indication
LSI < 0	Water is undersaturated with respect to calcium carbonate. Undersaturated water has a tendency to remove existing calcium carbonate protective coatings in pipelines and equipment.
LSI = 0	Water is considered to be neutral. Neither scale-forming nor scale removing.
LSI > 0	Water is supersaturated with respect to calcium carbonate (CaCO ₃) and scale forming may occur.
-2.0 < -0.5	Serious corrosion
-0.5 < 0	Slightly corrosion but non-scale forming
LSI = 0.0	Balanced, but pitting corrosion possible
0.0 < 0.5	Slightly scale forming and corrosive
0.5 < 2	Scale forming but not corrosive



SAMPLE BODY - PRE TESTING



SAMPLE BODY - POST TESTING



SPRING (PRE)



SPRING (POST)



CARTRIDGE (PRE)



CARTRIDGE (POST)



ADDITIONAL RECIRCSETTER™ RESOURCES

RECIRCSETTER™ PRODUCT LINEUP



RECIRCSETTER™ TECHNICAL BROCHURE



VIDEO: HOW THE RECIRCSETTER™ WORKS



VIDEO: RECIRCSETTER™ PRODUCT OVERVIEW

