

BULLETIN

Cleaning and Flushing Steel Piping Chilled Water System

(04/10)

This bulletin is to advise you of the fees and responsibilities associated with Tenant's cleaning and flushing of a steel piping chilled water system.

Tenant Responsibility:

1. Submit check payable to Brandt Engineering in order to schedule work.
2. Tenant shall provide Brandt with ten (10) working days minimum notice when tenant space is ready for this procedure.
3. Provide valve outlets at the lowest point in the loop and provide a permanent high point vent at the highest point in the system to release air as the lines are filled with water during the cleaning and flushing process.
4. Provide a 120 volt power supply for equipment.
5. Provide access to a sanitary drain outlet for draining and side stream flushing.
6. Provide reasonable access to equipment.
7. Have a representative available during this procedure.
8. Valves to be manually moved to open position before flushing.
9. Tenant needs to perform cleaning and flushing of the system before the permanent ceiling is in place.

Brandt Engineering Responsibility:

1. Provide Austin Energy (AE) Domain Chilled Water Plant (512-505-7022) and Austin Water Utility Industrial Waste Division (512-972-1060) with eight (8) working days minimum notice prior to any proposed cleaning and flushing.
2. Acquire AE approval for all chemicals used to clean piping. Provide Material Safety Data Sheets (MSDS) from chemical vendor.
3. Schedule pre-cleaning walk through with AE. Tenant piping should be isolated from retail loop. Lines should be filled with City water. Circulate water and open high point vent(s) to demonstrate that air has been bled from chilled water lines.
4. Add cleaning solution to the tenant loop using a pump and chemical feeder.
5. Circulate the chemical cleaning solution through the loop for 24 hours at a velocity of 4-8 feet per second.

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Brandt Engineering Responsibility (continued)**

6. Take samples every 6 hours and analyze. Provide AE with the analytical results.
7. Acquire AE written approval before submission of third party sample.
8. Collect third party sample for Austin Water Utility Industrial Waste. Run pump continuously until approval for discharge to the sanitary sewer has been provided by Austin Water Utility Industrial Waste.
9. Drain and simultaneously refill the tenant loop with City water and flush at 4-8 feet per second until water characteristics match City water.
10. After flushing is complete, chilled water lines should remain filled with City water.
11. Contact AE to schedule sampling by AE Designee.
12. Acquire written approval from AE of final water sample before opening the new piping to the AE chilled water system.
13. Supply tenant GC with a copy of test results.

Simon Property Group Responsibility:

- Collect a copy of the test results

Fees:

For fee schedules contact:

**Brandt Engineering
P.O. Box 18748
Austin, TX 78760
512-491-9100 office
Contact: Jennifer Morton
jmorton@brandteng.com**

Fees exclude 24 hour monitoring during circulation. If 24 hour monitoring is required, additional fees will apply.

The following items are not included:

1. Overtime or accelerated time
2. Cost of bid, performance, and/or payment bond
3. Electrical work
4. Balancing of tenant chilled water system
5. Moving of any items to access the mechanical system for the chemical cleaning procedure
6. Repairs to any mechanical equipment
7. Cleaning, mopping, or sweeping after the chemical cleaning process is completed
8. Responsibility for any mechanical system before, during, or after chemical cleaning procedure

Air and Water Balance

This bulletin is to advise you Landlord will require a designated contractor to complete Tenant air and water balancing. Tenant is responsible for:

- Hiring a TAB or AABC Certified Balance Contractor from the list provided below
- Verifying chilled water flow GPM and balance air distribution.
- Faxing reports to Pat Dietz @ (317) 685-7269. This is part of the GC's closeout requirements prior to release of damage deposit.

Please note the chilled water valve GPM setting is set at the factory and it is based on approved Tenant plans.

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