



Technical Bulletin

How to Conduct a Proper Draw Test

1. Ensure water heater is satisfied.
 - a. The water heater should have been recently satisfied. If not, then turn on some hot water until the burner or element comes on. Allow the water heater to come up to thermostat setting and turn off. Electric heaters you will need to monitor the elements with a meter. Gas heaters you can check visually.
2. If you have a recirculation system, then isolate the recirculation loop by turning off the pump and turning the pump valve to off.
3. Note the temp setting on the thermostat.
4. Go to the closest tub faucet.
5. Place a 5 gallon bucket under the tub spout.
6. Turn on straight hot water.
 - a. You must catch the initial cold water from the faucet in this step because you are drawing an unknown quantity of hot water from the heater to fill the pipe leading to the tub faucet. This unknown quantity has to be included. If you draw the water to the tub faucet until it gets hot, before you start the test, then you have no clue how much water you have displaced from the tank.
7. Fill the bucket to the 5 gallon mark.
8. Test the temperature and write it down.
9. Keep repeating steps 6 & 7 until you have gone at least one to two 5-gallon buckets past 70% of the water heater capacity (example: 50 gallon heater you need to draw 40 to 45 gallons of water).
10. Examine your findings.
 - a. Your first and 70% buckets will have slightly lower temperatures than all the buckets in the middle. This is because the first bucket includes the cold water in the pipes and the 70% bucket includes the cooler water getting to the top of the tank. The 70% bucket should still be within 10° F of the thermostat setting.

See two example charts below (Next page) of draw test results. Set point of water heater is 120°F.

