



1245 West Hwy 96, Arden Hills, MN 55112

651-792-7800

www.cityofardenhills.org

Gas & Electric Water Heaters

Q. Do I need a permit to install a water heater?

A. YES, ([1300.0120](#)). New installations of this equipment require a plumbing permit, However a homeowner or licensed plumber can get the permit and install the equipment. *A permit and inspections may be waived by local authority having jurisdiction when replacing existing Water Heater that does not involve altering the existing water supply line.* ([1300.0215](#))

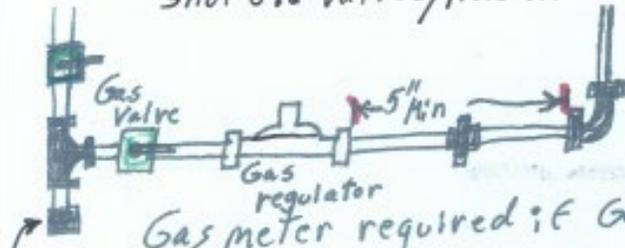
Inspection Checklist - Typical water Heater Installation

1. The 2020 Minnesota State Plumbing Code became effective on 12-17-2021
2. The Authority Having Jurisdiction has required Dielectric insulators ([MNPC 507.1](#))
Dielectric nipples do meet the separation requirements of the 2022 MN Plumbing code
3. A gas shutoff valve shall be located within 6 feet of the gas water heater, ([MNFGC 409.5.1](#))
4. Union is required in the black iron at the water heater - ([MNFGC 411.1.6 Unions](#))
A soft copper flare is not a union and should be re-flared before reconnecting
5. Separation of dissimilar metals is required ([MNPC 605.15 dielectric unions](#))
6. ([MNPC 605.16.1](#)) **Dissimilar metals shall be separated** - in one of four ways:
Copper alloy adapters, 6" Copper alloy nipples, Dielectric fittings or Dielectric unions.
7. Temperature Pressure Relief Valve (TPRV) shall be less than 18" from the floor ([608.5 MNPC](#))
8. Water shut off valve is required in cold water supply to water heater ([MNPC 606.5](#))
9. Disaster pan shall be required on all water heaters above the basement floor ([MNPC 507.5](#))
pans must be a least 1½" deep - minimum ¾" drain to an approved plumbing fixture.
10. A sediment trap shall be installed downstream of the appliance shutoff valve as close to the inlet of the appliance as practical. The sediment trap shall be a tee fitting having a capped nipple of any length installed vertically in the bottommost opening of the tee. ([MNFGC 408.4](#))
11. Power vented water heaters require schedule 40 solid core pvc per manufacturer's instructions
12. Gravity vent pipe shall have a rise of one ¼" min pitch from Water Heater ([803.10.5 MNFGC](#))
13. Max venting horizontal length 3" pipe is 4 ½ feet, 4" pipe is 6' feet ([T504.3.2 MNFGC](#))
14. Uninsulated gravity vent pipe clearance to combustibles shall be 3" ([308.4.2 MNMC](#))
15. B vent insulated pipe clearance to combustibles shall be 1" ([308.4.2 MNMGC](#))
16. Gas piping support: ½" copper tubing every 4', ½" steel or 5/8" copper 6' ([T415.1 MNFGC](#))
17. A properly sized tee is required at the gravity exhaust venting discharge ([803.3 MNMC](#))
18. The power source shall be by an approved receptacle per manufacture requirements.



409.1.3 Access to shut off Valves/protection

409.5.1 Shut off Valve Required in the same Room as Appliance.

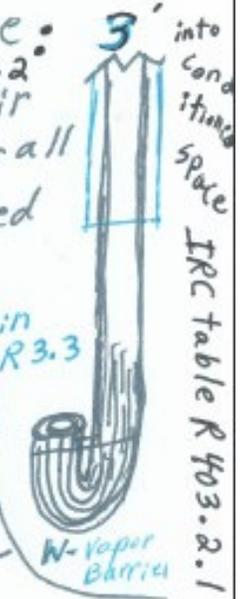


Gas meter required if Gas Main Regulator is over 6-8 water volume

408.4 Sediment trap required - Any length

(MNMC) 305.2 Materials Vent strapping is required to keep Long horizontal Vents from sagging

Note: (MNFGC) 304.6.2 Combustion Air is Required for all Gravity Vented Appliances Insulated Min R3.3



Bvent Min 1" clearance Req. Venting uninsulated Pipe 3" Min clearance Required

Separation of dissimilar metals MN. state Plumbing Code

605.16.1 (Required)

- Dielectric unions
- Copper alloy adapters
- Copper alloy nipples 6" Min.
- Dielectric fittings OR
- Dielectric fittings

Note: Laundry Vents are to be Flapper type Not slatted Bath Fan Vents.

Dielectric Nipples **do not satisfy** the separation of dissimilar metal requirements of the 2020 MN State Plumbing code.

Gravity Vent Through a chimney requires a Metal Liner (MNFGC) 501.12



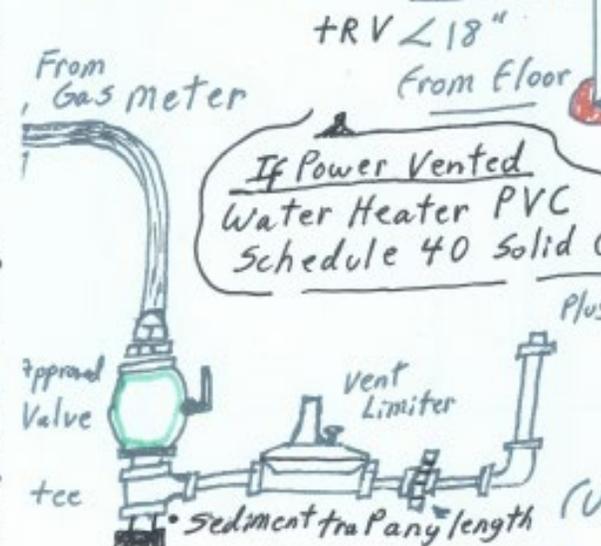
Gas Copper Pipe to be Labeled GAS when leaving the Room of Appliance. Gas shut off Valve < 6' from appliance

411.1.6 union required in black iron sediment trap of ANY Length 408.4

disaster pan required on upper floors. Required to drained to an approved plumbing fixture.

Min 6-AUG CSST pipe must be grounded

If Power Vented Water Heater PVC Schedule 40 Solid Core.



3/8" Copper + 1/2" Steel support 6' max 1/2" Copper 4' Max (MNFGC) 415.1

Gas leak test required on new connections - this can be done by smell