Plumbing Inspection Checklist

	I. Administrative			II. Underground *(Continued)*	
1.1	Plumbing License and Contractor Registration Required. **L/L Sec. 1**		2.12	Proper Bedding or Support **890.1320 (a)**	
1.2	Building Drain and Building Sewer Defined **L/L Sec.2- Definitions**		2.13	Maximum Fixture Unit Load **890.1340 (a)**	
1.3	Plumbing, Plumber, Plumbing Apprentice Defined **L/L Sec.2- Definitions**		2.14	Minimum Size Building Drain **890.1340 (b- 1)**	
1.4	Plumbing Contractor and Irrigation Contractor Defined **L/L Sec.2- Definitions**		2.15	Pressure Building Drains **890.1340 (b-2)**	
1.5	Apprentice Supervision **L/L Sec.2- Definitions**		2.16	Horizontal Gravity Building Drain Sizes **890.Appendix A- Table H**	
1.6	Irrigation Contractor Requirements and Registration **L/L Sec.2.5**		2.17	Minimum Size Drain Below Ground **890.1340 (b- 4)**	
1.7	Planning, Designing and Performing Plumbing **L/L Sec.2.5**		2.18	Future Fixtures **890.1340 (e)**	
1.8	Advertising and License Number Listing **L/L Sec.6**		2.19	Changes of Direction- Long Sweeps Where Required **890.1320 (i)**	
1.9	Plumbing Contractor Registration **L/L Sec.13.1**		2.20	Cleanouts, Where Required **890.420 (a)**	
1.10	Grounds to Revoke or Suspend a Plumbing License **L/L Sec.20**		2.21	Full Size Cleanout Within Five (5) Feet of Foundation, Either Inside or Outside **890.420 (a)**	
1.11	Unlicensed Practice; Violation, Civil Penalty **L/L Sec.29.5**		2.22	Floor Drains Accessible and Visible **890.1370 (c)**	
1.12	Compliance with Code **L/L Sec.40**		2.23	Floor Drains Where Required **890.1370 (a)**	
1.13	Applicability and Authority **890.110 (a, b)**		2.24	Floor Drain Vent Within Allowed Distance **890.Appendix A Table I**	
1.14	Existing Buildings- Compliance **890.140 (a, b)**		2.25	Sanitary Waste Below Sewer **890.1360 (a-d)**	
1.15	New Buildings- Compliance **890.140 (b)**		2.26	Duplex Pumps **890.1360 (e)**	
1.16	Health and Safety- Compliance **890.140 (c)**		2.27	Elevator Pits	
1.17	Workmanship **890.150 (a-c)**		2.28	Dead Ends **890.1320 (d)**	
1.18	Used Plumbing Material, Equipment and Fixtures **890.160 (a, b)**		2.29	No Storm or Ground Water to Sanitary Sewer **890.200 (b)** and **890.1360 (a-2)**	
1.19	Sewer and Water Required **890.170 (a, b)**		2.30	Storm Water within a Building **890.1380**	
1.20	Public and Private Water Supply Interconnection **890.170 (c-1)**			**III. Rough**	
1.21	Potable and Non-Potable Physical Connection **890.140 (c-2)**		3.1	Material - - Drain, Waste, Vent and Water Piping Code Compliance (Plumbing Code or Local Amendments) **890.210 and Appendix A- Table A**	
	II. Underground		3.2	Material - - Drain, Waste, Vent and Water Piping Compliance with Approved Job Specifications	
2.1	Material-Code Compliance Plumbing Code or Local Amendments **890.210 and Appendix A- Table A**		3.3	Change Direction- Horizontal to Horizontal and Vertical to Horizontal **890.1320 (i)**	
2.2	Material- Specification Compliance Approved Job Specifications, Per Issued Permit		3.4	Proper Pitch or Grade on Drains or Branches **890.1320 (e-g)**	
2.3	Trenching and Bedding **890.180 (a)**		3.5	Proper Pitch or Grade on Vents **890.1450 (a)**	
2.4	Backfilling **890.180 (b)**		3.6	Vertical Rise off Horizontal- Above Center Line **890.1450 (b)**	
2.5	Breakage and Corrosion **890.180 (c)**		3.7	Horizontal Vents 6" Above Fixture Spill Line **890.1450 (c)**	
2.6	Sleeves **890.180 (d)**		3.8	Horizontal Kitchen Sink Vents **890.1450 (d)**	
2.7	Buried Piping Parallel to Footings **890.180 (e)**		3.9	Cleanouts (All) **890.420**	
2.8	Depth- Bearing Plane **890.180 (f)**		3.10	Individual Vent Size **890.1580 (b)**	
2.9	Piping Measurements **890-190**		3.11	Maximum DFU and Vent Size **890.1580 (e) and Appendix A- Table K**	
2.10	Groundwater- Roof Drainage **890.200 (b)**		3.12	Maximum DFU and Drain Size **890.1340 (a, b) and Appendix A- Tables G, H**	
2.11	Proper Pitch or Grade **890.1320 (e-h)** Filled Ground **890.1320 (a)**			***(Continued on Reverse Side)***	

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Plumbing Inspection Checklist

	III. Rough *(Continued)*				
3.13	Future Fixtures **890.1340 (e) and 890-1320 (d)**		3.37	Control Valves Installed on Each Side of the Water Meter **(Local Ordinance Only)**	
3.14	Full Size Stack Required (3" Min.) **890.1420 (d)**		3.38	Drain Valve Installed on Discharge Side of Water Meter *Repealed- Not Required by Illinois Plumbing Code*	
3.15	Vent Terminal Size **890.1440 (a)**		3.39	No band or Saddle on Water Supply System **890.1130 (c-5)**	
3.16	Increasers **890.1440 (b)**		3.40	Correct Size Water Distribution Piping to All Openings, As Required **890.1210 a-c) and Tables M, N**	
3.17	Maximum Number of Installed Water Closets and DFU Per Stack or Branch Interval **890.1340 (a) and Appendix A- Tables G and H**		3.41	Proper Hangers, Anchors or Supports on Water Piping, Per Correct Spacing **890.920 and 890.930**	
3.18	Minimum Size of Soil or Waste Stack **890.1340 (c)**		3.42	Correct Size and Length of Air Chambers for Fixtures or Risers, If Installed **890.1210 (f-1)**	
3.19	Prohibited Traps **890.410 (k)**		3.43	Hot, Cold or Tempered Water to All Fixtures That Require It **890.630 (e)**	
3.20	Required Size of Vents for Fixture Traps, Relief Vents and Circuit Vents **890.1580 (a-d)**		3.44	Anti-Scald Valves on Showers or Tub/shower Combinations set at 115 ° at the Time of Installation **890.690 (b)**	
3.21	Vent to Trap Distance/Length of Trap Arm **890.1470 (a) and Appendix A- Table I**		3.45	Shower Compartments or Stalls Have Slip Resistant Floors (Bottom) **890.690 (d)**	
3.22	Maximum Length of Horizontal Vents (20% Rule) **890.1580 (e) and Appendix A- Table K**		3.46	Water Pipe in Outside Wall- Protect from Freezing **890.1150 (a-4)**	
3.23	Proper Hangers, Anchors or Supports on Drains and Vents Per Correct Spacing **890.920 and 890. 930**		3.47	Dead Ends- Water System **890.1200 (c)**	
3.24	Tub and Shower Units Set and Tied In- Traps Installed Directly Below Units **890.410 (g-3) and 890.630**		3.48	Mechanical Devices (Water Hammer Arrestors) **890.1210 (f-2)**	
3.25	Access for Whirlpool **890.200 (a) and MFG. Recommendations**		3.49	Sanitary Waste Below Sewer **890.1360 (a-1), (a-2)**	
3.26	Protection from Freezing- Soil or Waste **890.1320 (c)**		3.50	Duplex Pumps Required **890.1360 (d)**	
3.27	No Dead Ends (Drainage) **890.1320 (d)**		3.51	Elevator Pits **890.1360 (g)**	
3.28	No Drilling, Tapping or Saddle on Drainage or Vent Piping 890.1320(d) and 890.1320 (j)		3.52	Floor Drains Required **890.1370**	
3.29	No Cellular Core Pipe on Drainage and Vent Piping **890.Appendix A- Table A - Agency Notes**		3.53	Sump or Hub, 2" Above Floor **890.1370 (a-3)**	
3.30	Check Valve and Gate Valve on Sanitary pump Discharge **890.1360 (a) and Appendix , Illustrations K and L**		3.54	Floor Drain Size **890.1370 (b)**	
3.31	Full Size Cleanout on Building Drain- Within 5 Ft. of Foundation- Either Inside or Outside **890.420 (a-4)**		3.55	Floor Drain Accessibility **890.1370 (c)**	
3.32	Top Edge of Storm Pit is 2 Inches Above Finished Floor **890.1370 (a-2)**		3.56	Floor Drain Evaporation **890.1370 (d)**	
3.33	Air or Water Test **890.1920 and Local Requirement**		3.57	Floor Drains in food Establishments **890.1370 (e)**	
3.34	Inspections Required **890.1910 and Local Amendments**		5.58	Storm Water Drainage Within a Building **890.1380**	
3.35	Correct Size Water Service Installed- Per Calculated WSFU **890.1200 and Appendix A Tables M, N ,O, P and Q**		3.59	Laundry Station Drain **890.790 (c) and 890.410 (b)**	
3.36	Meter or Meter Spread Installed- Meter Number, If Required #_____ **(Local Ordinance)**				

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Plumbing Inspection Checklist

	IV. Final				
4.1	Required Fixtures for Occupancy are Installed **890.Appendix A- Table B**		4.32	Protective Strainer on Devices **890.1130 (g-3)**	
4.2	Sewer and Water Services Tied-in and Operational **890.170 and Local Ordinances**		4.33	Backflow Devices- Height Above Floor **890.1130 (g-5)**	
4.3	All Fixtures and Equipment Constructed of Approved Materials **Appendix A, Table A and 890.210**		4.34	Backflow Devices- Flooding or Freezing **890.1130 (g-5)**	
4.4	All Fixtures Set Level and True **890.630 (d)**		4.35	Backflow Inspection Before Initial Operation **890.1130 (g-5)**	
4.5	All Fixtures Secured **890.630 (b)**		4.36	Expansion Tank Required on Closed Systems **890.1130 (g-7)**	
4.6	Hot, Cold or Tempered Water Supplied to All Fixtures that Require Hot, Cold or Tempered Water 890.630 (e)		4.37	No Shutoff or Other Device Between the Water Heater and Expansion Tank **890.1130 (g-7)**	
4.7	Fixtures Installed in Proper Location and as Per Illinois Plumbing Code **890.630 (f)**		4.38	Exceptions to Expansion Tanks **890.1130 (g-7)**	
4.8	Minimum Number of Fixtures per Occupancy Use **890.Appendix A- Table B**		4.39	Height of Flushometer Valves **890.1140 (b)**	
4.9	Ball Cocks for Flush Tanks to be Anti-Siphon **890.650 (c)**		4.40	Lawn Sprinklers Require RPZ Device **890.1140 (d)**	
4.10	Bidets- Equipped with Hot and Cold Water and an Atmospheric Vacuum Breaker (4" Above Overflow Rim) **890.650 (i)**		4.41	All Threaded Valve Outlets (Hose Connections) Require Backflow Protection **890.1140 (e-1)**	
4.11	Food Waste Disposal Units Trapped Separately **890.710 (a)**		4.42	Yard Hydrants **890.1140 (e-2-A)**	
4.12	Dishwasher Shall not Discharge into Food Waste Disposal Units **890.710 (a)**		4.43	Commercial Laundry Machines **890.1140 (f)**	
4.13	Whirlpool Pump Located Above Trap **890.750 (a)**		4.44	Commercial Dishwashers **890.1140 (g)**	
4.14	Whirlpool Bathtub to Comply with all Applicable Standards as Listed in the Plumbing Code **890.750 (b)**		4.45	Aspirators **890.1140 (h)**	
4.15	Domestic Dishwashing (Private Residence) Drain Carried to Underside of Counter Top **890.770 (a)**		4.46	Carbonated Beverage Dispensers Water Supply **890.1140 (j)**	
4.16	Dishwashing Machines Drain Separately- Discharge to Trap or Tailpiece **890.770 (a)**		4.47	Sewer and Water Separation **890.1150 (a-1, a-2)**	
4.17	Water Supply on Commercial Dishwashing Machines to Connect Through Air Gap or by Means of Proper Backflow **890.770 (b)**		4.48	Water Supply Valves or Valves **890.1190 and Local Ordinance**	
4.18	Commercial Dishwashing Machines Discharge to a Proper Receptor, Per Code **890.770 (c)**		4.49	Drip Valve Required at Meter ***(Not Required)***	
4.19	Commercial Dishwasher Water Temperature **890.770 (d)**		4.50	Water Heater Shutoff Valve **890.1190 (d)**	
4.20	Showers and Shower/Bath Combinations Require Automatic Safety Mixing Device Set at a Maximum of 115° at Time of Installation **890.690 (b)**		4.51	Prohibited Dead Ends--Water System **890.1200 (c)**	
4.21	Fixture Traps to be Set Level **890.410 (h)**		4.52	Water Pipe in Outside Walls **890.1210 (a)**	
4.22	Sanitary Pit- Gas Tight Cover Secured, Vented **890-1360 (a)**		4.53	Correct Size Water Distribution System **890.1210 (b)**	
4.23	Gate Valve and Check Valve Installed on Sanitary Pump Discharge **890.Appendix J, Illustrations K, L**		4.54	Excessive Water Pressure **890.1210 (g)**	
4.24	No Cellular Core PVC on Pressurized Drain, Waste or Vent (Sanitary Pump) **890.Appendix A- Table A Note #4**		4.55	No Shutoff or Check Valves Between Safety Equipment and the Water Heater **890.1230 (c-2)**	
4.25	Backflow at Service Connection, If Required by **Local Ordinance**		4.56	No Relieve Valve Discharge Located as to Create a Safety Hazard **890.1230 (d-1)**	
4.26	Hand Held Shower on Tub or Shower **890.1130 (f)**		4.57	Relieve Valve Piping to b Metallic and of Water Quality **890.1230 (d-3)**	
4.27	No Connection Between Potable Water and Sewage (Only Protection Allowed is a Minimum Air Gap, as Outlined in **Section 890.1140 (a) 890.1130 (e-1)**		4.58	Relief Valve Discharge Pipe Installed to Within Six (6) Inches of the Floor or Receptor **890.1230 (d-2)**	
4.28	No Water Supply Pipe Drilled or Tapped **890.1130 (e-5)**		4.59	Relief Valve Discharge to a Floor Drain, Hub Drain, Service Sink, Sump or Trapped and Vented P-Trap in the Same Room **890.1230 (d-4)**	
4.29	No Water Supply to Have Band or Saddle **890.1130 (e-5)**		4.60	Vacuum Relief Valve Required on Elevated or Bottom Fed Water Heaters or Storage Tanks **890.1230 (f)**	
4.30	All Backflow Devices Installed to be Accessible for Observation, Maintenance and Replacement **890.1130 (g-1)**		4.61	Storage Tanks Require Drain Cocks **890.1240**	
4.31	In-line Backflow/Back Siphonage Assemblies Shut off Valves **890.1130 (g-2)**		4.62	Correct Venting of Island Sinks **890.1600 (a, b) and Appendix K- Illustration GG**	

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Water Heater Safety Tank

Please read the entire Owner's Manual and Installation Instructions for your water heater safety tank before installing the tank!

How Your Water Heater Safety Tank Works

Your water heater safety tank is a specifically designed pressure absorbing device. It protects your entire plumbing system, including your water heater, form over pressurization caused by thermal expansion. As water is heated, it expands, and since water is not compressible, a rapid increase of pressure in the water heater and throughout the entire plumbing system results. This increase in pressure is known as thermal expansion, occurring every time your water heater heats water, when the expanded water is not allowed to return to the supply line.

Common problem signs of high pressure caused by thermal expansion:

- High surges when opening faucets
- Relief valve on water heater opening to release high pressure **~Danger: Never Plug Relief Valve.**
- Frequent faucet washer failure rate.
- Short water heater life.
- Problem deformities with pipes and fittings.

Your water heater safety tank operates as a collection point to accept thermally expanded water (figure 1). As water enters the tank (figure 2), the diaphragm is pressed downward, compressing the captures aircushion in the tank. The air volume is specifically engineered to control pressure well below the water heater pressure relief valve setting. As water is used (figure 3), the thermally expanded water is expelled from the tank back into the piping system by the compressed air cushion.

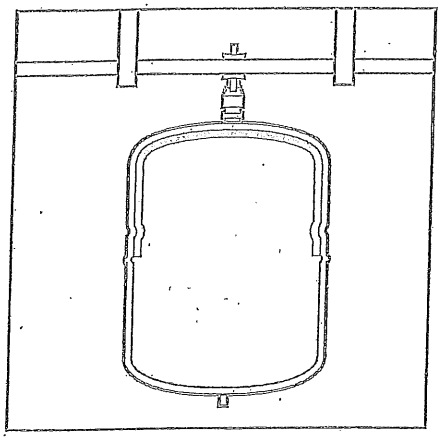


Figure 1

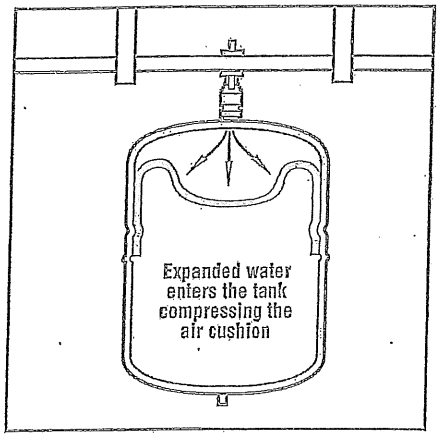


Figure 2

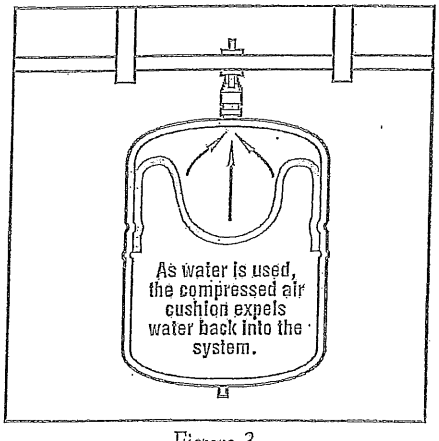
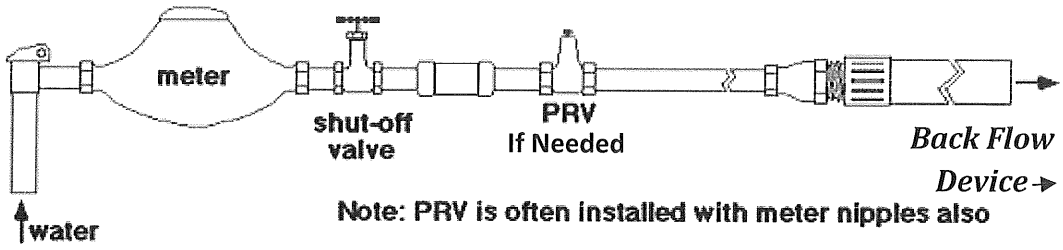


Figure 3

Pre-Installation Check List

1. Remove tank from box and inspect for any damage. If damage is evident return immediately to place of purchase.
2. Use pressure gauge or tire to verify pre-charge pressure in the tank. Pre-charge should measure (+5 psi above line pressure coming into home).
3. Locate position in piping system to install your water heater safety tank. The ideal position is anywhere on the cold water line leading to the water heater after the shut-off valve.
4. Utilize proper pipe hangers and supports to handle a possible future waterlog condition of the tank. This support must handle a weight of approximately 40 lbs.



Water Heater Installation

An important consideration when a water heater is installed, whether new or replacement is the need for an expansion tank. Under normal circumstances, when the water in a water heater expands the volume can be absorbed by some of the water in the cold water piping and back flowing into the municipal water system. In the case where a backflow preventer (check valve) has been installed, the house water system cannot release the excess volume by back flowing to the municipal water system. This situation could result in damage to the house water system. Illinois State Plumbing Code requires the installation of an "expansion tank" on the cold water side of the water heater in this situation. ***Important! Expansion tank pressure must be 3Lbs above house pressure or it will not work.*** **See the illustration below:**

Thermal Expansion Tank