

Common Plumbing Terms

Bleed: to release excess air in a pipe by opening a valve at the end.

Brass: generic slang term for any faucet or fixture.

Branch Drain: fixture drain which leads to the main drain pipeline.

Effluent: liquid waste in a septic system.

Fitting: term used to describe any part that connects two sections of pipe.

Flow Rate: how much water flows through a plumbing system; measured in either gallons per minute (GPM) or per hour (GPH).

Gallons per Flush (GPF): measurement of water needed to flush; used to regulate toilets and flush valves; 1.6 GPF is the current legal maximum permitted for new toilets.

Gray Water: water waste from non-toilet fixtures.

KiloPascal (kPa): metric unit of pressure equaling 1/100th of an atmosphere.

Maximum Containment Level (MCL): maximum amount of a contaminant permitted in a water supply by law.

Non-Ferrous: contains no iron.

Potable: water which is safe to consume.

Pressure Head: unit of measure for pressure in a plumbing system describing the vertical force caused by water at a depth of one foot.

Riser: vertical supply pipes which bring water from the branch to a fixture or to a higher floor.

Sediment: debris that settles at the bottom of water tanks.

Soil Pipe: pipe carrying waste from a toilet.

Trap Seal: the water in a trap which serves as a liquid seal.

Trap Weir: the highest point for water before it drains in both P-traps and S-traps.

Water Hammer: a loud banging sound caused when the water supply is suddenly cut off from a fixture, causing hydraulic shock.

Plumbing Components and Fixtures

Aerator: insert screwed onto a faucet nozzle that reduces splashing by mixing air into the flowing water.

Ball Check Valve: valve which employs a ball which can seal against a seat to stop the flow in one direction.

Closet Bend: curved fitting located under the toilet connecting it to the drain.

Closet Flange: ring used to anchor a toilet and connects to the closet bend; sometimes called a floor flange.

Flow Control Valve: device which can reduce costs and improve efficiency by reducing the water flow to a plumbing fixture.

Gasket: flat rubber or fiber ring used to create a watertight seal between metal fixtures.

Interceptor: device which separates oil and grease from drain systems.

Main: the main pipeline in a supply or drain system to which all branches connect.

Manifold: fitting that connects multiple branches to the main, acting as a distribution point.

O-Ring: round rubber washer used to make valve stems watertight.

Scald Guard: valve that maintains the balance between hot and cold water pressure in your shower by shifting back and forth behind the shower handle in response to sudden pressure drops.

Shutoff Valve: valve under toilet or sink to stop water supply for repairs.

Tee: T-shaped fitting used where three pipes intersect.

Trap: a curved portion of plumbing designed to hold enough water to block, or seal, the section of pipe from gasses, odors, and pests.

Valve Seat: the stationary section of a valve.

Vent: sloped or vertical section of drainpipe designed to allow sewer gasses to escape and be replaced by outdoor air so pressure is not lost during the venting.

Water Hammer Arrestor: device which prevents the banging sound known as water hammer by absorbing the hydraulic shock caused from suddenly cutting the water supply to a fixture.

Wye Fitting: drain fitting which connects two sections of pipe at a 45 degree angle.

Plumbing Tools and Materials

ABS: short for Acrylonitrile Butadiene Styrene, this black plastic pipe is rigid and commonly found in drains, vents, and waste lines.

Auger: flexible rod with a curved end used to pull clogs from a toilet trap.

Blowbag: tool with a nozzle and rubber bladder attached to a hose and inserted into a clogged drain where it swells to fill the pipe and releases water in bursts to force a path through the obstruction.

CPVC: chlorinated polyvinyl-chloride; black PVC pipe treated to withstand high temperatures; often used in water supply systems.

Dope: plumbing lubricant used on pipe threads.

Polybutylene (PB): bendable tubing used in some supply lines for bathroom fixtures.

Polyethylene (PE): flexible pipes often used in supply lines.

PEX: crossed-linked polyethylene; stronger than normal PE.

Plumber's Putty: putty with dough-like consistency used to seal the joints between fixture settings and metal pieces.

Plunger: AKA "plumber's helper"; six inch rubber suction cup with a wooden handle commonly used to unclog drains and toilets.

PVC: rigid white pipe made of polyvinyl-chloride plastic; often used for drains and waste or vent pipes.

Snake: thin, flexible cord of spiral-wound metal that fits down a drain and is rotated to dislodge clogs.

Teflon Tape: fluorocarbon polymer tape with non-stick properties that is wrapped around the threads of a pipe to create a tighter joint seal.

Septic System-Specific Components

Absorption Field: seeping field designed to filter and disperse the liquid waste from a septic tank; also referred to as a leach field.

Leach Line: pipes which carry the liquid waste from the septic tank to an absorption/leach field.

Septic Tank: large underground tank used mainly in rural settings where sewers are not available; temporarily stores waste as bacteria and gravity separates it into solids, liquids, and sludge before the liquids drain into an absorption field.

Common Plumbing Materials and Their Uses

Common plumbing materials have different properties and are used for different purposes in plumbing systems. Knowing the properties and uses of these materials can help professionals and DIY enthusiasts choose the right materials for their plumbing projects.

- **Copper:** Used for water supply pipes, both inside and outside the house, as well as for drainage systems.
- **PVC (Polyvinyl chloride):** Commonly used for drainage pipes and venting systems, as well as in irrigation systems.
- **PEX (Cross-linked polyethylene):** Used for water supply pipes, particularly in residential plumbing.
- **Galvanized steel:** Commonly used for water supply pipes, particularly in older homes.
- **Cast iron:** Used for drainage pipes, particularly in older homes.
- **Lead:** Used for water supply pipes in the past, but has since been phased out due to health concerns.
- **Brass:** Commonly used for valves and fittings, as well as for some water supply pipes.
- **Chrome:** Used for decorative plumbing fixtures such as faucets and shower heads.
- **Stainless steel:** Used for some water supply pipes and drainage systems, as well as in commercial kitchens and other high-use areas.
- **CPVC (Chlorinated polyvinyl chloride):** Used for hot and cold water supply pipes, particularly in residential plumbing.

Pipe Sizing and Measurement Terms

When working with pipes in plumbing, it's important to have a good understanding of pipe sizing and measurement terms, as it will help you to properly size and install pipes for optimal performance.

- **Nominal Pipe Size (NPS):** This refers to the internal diameter of a pipe, and is not necessarily the same as the actual measurements of the pipe.
- **Outside Diameter (OD):** The measurement of the exterior of the pipe, including the thickness of the pipe walls.
- **Inside Diameter (ID):** The measurement of the interior of the pipe, and is typically smaller than the outside diameter.
- **Schedule (SCH):** This refers to the thickness of the pipe walls, with a higher schedule indicating thicker walls.
- **Pressure Rating:** The maximum pressure that a pipe can withstand without leaking or bursting.
- **Flow Rate:** The amount of water or other liquid that can flow through a pipe in a given amount of time.
- **Friction Loss:** The loss of pressure in a pipe due to the friction of the liquid flowing through it.
- **Pipe Roughness:** The surface roughness of a pipe, which can affect the flow rate and friction loss.
- **Velocity:** The speed at which liquid flows through a pipe.

- **Head Loss:** The loss of pressure in a pipe due to the elevation difference between the inlet and outlet.

Valve and Fitting Terminology

Valves and fittings are used in plumbing systems to control the flow of water and other liquids. Some common valves include ball valves, gate valves, and check valves. Fittings, on the other hand, are used to connect pipes and other components in a plumbing system, and include elbows, tees, couplings, and adapters.

Valve terminology includes:

- Ball valve: a valve that uses a ball to control the flow of liquid.
- Gate valve: a valve that uses a gate or wedge to control the flow of liquid.
- Check valve: a valve that prevents liquid from flowing in the opposite direction.
- Globe valve: a valve that uses a globe-shaped disc to control the flow of liquid
- Butterfly valve: a valve that uses a disc shaped like a butterfly to control the flow of liquid
- Diaphragm valve: a valve that uses a flexible diaphragm to control the flow of liquid
- Needle valve: a valve that uses a needle shaped spindle to control the flow of liquid.

Fitting terminology includes:

- Elbows: used to change the direction of flow in a pipe
- Tees: used to split the flow of liquid into two or more directions
- Couplings: used to connect two pipes together
- Adapters: used to connect pipes of different sizes or materials
- Union: used to connect and disconnect pipes quickly and easily.
- Nipple: short piece of pipe used to connect fittings.
- Flange: a circular fitting that connects to a pipe with bolts and is used to connect or disconnect a piping system.

Understanding valve and fitting terminology is important for plumbing professionals and DIY enthusiasts to properly install, maintain, and troubleshoot plumbing systems.

Drain and Sewer System Vocabulary

The drain and sewer system is responsible for removing waste and wastewater from buildings and homes. Understanding the vocabulary associated with this system is important for proper installation, maintenance, and troubleshooting.

- **Drain:** a pipe that carries wastewater away from a building or home.
- **Sewer:** a system of pipes that carries wastewater and other waste away from buildings and homes to a treatment facility.
- **Trap:** a device that prevents sewer gases from entering a building or home.
- **Vent:** a pipe that allows air to enter the drain and sewer system, to help prevent blockages.
- **Main sewer line:** the large pipe that carries waste and wastewater away from a building or home to the municipal sewer system.
- **Lateral sewer line:** the pipe that connects a building or home to the main sewer line.
- **Sewer cleanout:** a pipe or cap that allows access to the sewer line for cleaning and maintenance.
- **Grease trap:** a device that separates grease and oil from wastewater to prevent blockages in the drain and sewer system.
- **Sewage ejector:** a pump that is used to move waste and wastewater from a basement or low-lying area to the main sewer line.

It is important to know these terms in order to understand how the drainage and sewer system works, and to identify and troubleshoot any issues that may arise.

Water Heater and Boiler Terms

Water heaters and boilers are essential components in most buildings and homes, providing hot water for various uses. Understanding the vocabulary associated with these systems is important for proper installation, maintenance, and troubleshooting.

- **Water heater:** a device that heats water for use in a building or home.

- **Boiler:** a device that heats water or steam for use in heating systems, hot water, and other purposes.
- **Tankless water heater:** a water heater that heats water on demand, rather than storing it in a tank.
- **Storage tank water heater:** a water heater that stores hot water in a tank for later use.
- **Gas water heater:** a water heater that uses gas as the primary fuel source.
- **Electric water heater:** a water heater that uses electricity as the primary fuel source.
- **Heat exchanger:** a device that transfers heat from one fluid to another.
- **Expansion tank:** a tank that is used to accommodate the expansion of water as it is heated.
- **Thermostat:** a device that controls the temperature of the water in a water heater or boiler.
- **Pressure relief valve:** a valve that releases pressure in a water heater or boiler to prevent damage.

Plumbing Maintenance and Troubleshooting

Plumbing systems require regular maintenance and occasional troubleshooting to ensure proper function and longevity. Understanding the vocabulary associated with these tasks is important for both professionals and DIY enthusiasts.

- **Flushing:** the process of cleaning and removing buildup from a plumbing system, typically done by running water through the pipes.
- **Leak detection:** the process of identifying and locating leaks in a plumbing system.
- **Hydro jetting:** the process of using high-pressure water to clean and clear clogs in a plumbing system.
- **Rooter service:** a service that uses a device called a roofer (or auger) to remove clogs in a plumbing system.
- **Snake:** a long, flexible device that is inserted into a pipe to remove clogs.
- **Repiping:** the process of replacing old or damaged pipes in a plumbing system.
- **Water hammer:** a loud banging noise that can occur in a plumbing system due to a sudden stop of water flow.
- **Backflow:** the flow of water or other liquids in the opposite direction that they should be flowing.
- **TPR (temperature pressure relief) valve:** a valve that releases pressure in a water heater or boiler to prevent damage.
- **Water pressure:** the force of water flowing through a pipe, measured in psi (pounds per square inch)

Knowing these terms can help you identify potential issues and understand the procedures required to maintain and troubleshoot plumbing systems.

Plumbing Safety and Compliance

Plumbing systems involve the use of potentially hazardous materials, and it is important for professionals and DIY enthusiasts to understand the safety and compliance terms associated with the industry.

- OSHA (Occupational Safety and Health Administration): a government agency that sets and enforces safety standards for workplaces, including plumbing sites.
- PPE (Personal Protective Equipment): the equipment and clothing worn by workers to protect themselves from hazards, such as hard hats, safety glasses, and steel-toed boots.
- GFCI (Ground Fault Circuit Interrupter): an electrical safety device that cuts off power to a circuit if it detects an imbalance in the current.
- Lead: a toxic metal that was commonly used in pipes and fixtures before it was banned due to health concerns.
- Asbestos: a fibrous mineral that was once used in insulation and other materials but is now banned due to health concerns.
- Backflow preventer: a device that prevents water from flowing in the opposite direction that it should be flowing, to prevent contamination of the water supply.
- Permit: A legal document that allows a person or company to perform specific work, such as plumbing, in accordance with local and national building codes and regulations.
- Inspection: A process of reviewing the work done to confirm that it meets the standards and regulations set by the authorities.
- National Plumbing Code: sets guidelines, standards and regulations for plumbing systems installation, repairs and maintenance in the US.

Plumbing Industry Standards and Regulations

The plumbing industry is regulated by a variety of standards and regulations, which are put in place to ensure the safety and proper function of plumbing systems. These standards and regulations are set by different organizations at different levels of government, and it is important for professionals and DIY enthusiasts to be familiar with them.

- UPC (Uniform Plumbing Code): a model plumbing code that has been adopted by many municipalities in the United States.
- IPC (International Plumbing Code): a model plumbing code that has been adopted by many municipalities in the United States and internationally.
- NEC (National Electric Code): a set of safety standards for electrical systems, including those that are connected to plumbing systems.
- ASME (American Society of Mechanical Engineers): a professional organization that sets standards for various mechanical systems, including plumbing.
- EPA (Environmental Protection Agency): a government agency that sets standards for the safe disposal of hazardous materials, including those used in plumbing systems.
- NSF (National Sanitation Foundation): a non-profit organization that sets standards for the safety and performance of plumbing products.

Glossary of Terms - Plumbing

- ASTM (American Society for Testing and Materials): an international organization that sets standards for materials, including those used in plumbing systems.
- ANSI (American National Standards Institute): an organization that coordinates the development and use of voluntary consensus standards in the United States, including plumbing industry standards.