



### Glossary and Abbreviations

Terms	Definitions
Absorber	A device containing liquid for absorbing refrigerant vapor
ABW / Orbital Welding	Automatic butt weld. Often used with fittings to indicate if they are sized to fit the weld head of an orbital welding machine
AC (Alternating Current)	An electric current that reverses directions at regularly occurring intervals
Accumulator	A storage chamber for low-side liquid refrigerant, also known as surge drum or surge header; A pressure vessel where its volume is used in a refrigerant circuit to reduce pulsation
Actuator	A fluid-powered or electrically-powered device that supplies force and motion to a valve or damper
Aerator	A part at the end of a faucet spout that mixes air into the dropping water, thereby aerating the water
Air conditioner	An assembly of equipment for a simultaneous control of air temperature and relative humidity
Air gap	Air-filled space allowing contaminated water to discharge freely preventing the contaminated water from ever siphoning back into the potable water supply
Air-cooled air conditioner	A refrigerating system that has an air-cooled condenser
Air-cooled, refrigerant condenser	A refrigerant condenser that removes heat entirely by heat absorption of air flowing over condensing surfaces
Alarm	A real time indication or a signal of an abnormal situation or event. Usually includes a priority or severity code
Area drain	A device designed to collect rainwater from an open area
Autogenous weld	Weld made by fusion of base material / without additional filler materials
B&s gasket	Bell & spigot gasket joint
Back siphonage	The flow of water which is opposite to the intended direction of flow due to negative pressure in the pipe
Backflow	When a potable water supply in a water supply system tends to flow in an opposite direction to the intended flow
Beaded and crevice free	An IR welding using air bladder to keep the interior surface of the piping smoother at the joint than regular IR welding
Bimetal	Two dissimilar types of metal fastened together. When heated, they bend to open or close a circuit
Bleeder	Pipe attached to a unit, as a condenser, to draw off liquid refrigerant parallel to the main flow
Boiler horsepower	One boiler horsepower equals 33,475 BTU/HR
Brine	Any liquid cooled by a refrigerant and used for heat transmission without a change in its state, having no flash point or a flash point above 150 F (66 degrees C)
British thermal unit (BTU)	Is a precise measure of energy. It is the amount of energy required to raise the temperature of 1 pound of water 1 degree Fahrenheit when the water is near 39.2 degrees Fahrenheit. The mechanical equivalent energy of a BTU is approximately 778.262 ft lb.



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Building drain	The horizontal sewer pipe inside the house that receives the sewage soil stacks. It extends 3 to 5 ft. outside the house
Building sewer	The horizontal sewer line that connects from the building drain and is connected to the public sewer
Building storm drain	A draining system used to receive rain water, surface water and ground water connecting to the house sewer 5 ft. outside the building
Building storm sewer	The piping that connects to the end of a building storm drain to receive and convey the contents to a public sewer or combined sewer
Bunny suit	Term used to describe full cleanroom suit
Capillary	A hollow tube used to allow a liquid or gas to flow in a temperature control
Catch basin	A cast iron, concrete, or wooden receptacle into which the water from a roof, floor, etc. will drain. It is connected with a sewer or drain tile
Cubic Feet per Minute (CFM)	Measurement of air volume by an air handling device
Charging connection	A device to enable a refrigeration system to be charged with refrigerant
Chiller, absorption	A refrigerating machine that uses heat energy input to generate chilled water
Chill-room cooler	A room refrigerated to lower the temperature of a product without freezing it
Clean & bagged	Term used for factory cleaned tubing and fittings. It is shipped "clean and bagged"
Cleanroom	A room in which the air is cleaned / filtered and contamination is controlled
COAX	Coaxial double-contained tubing consisting of inner carrier tubing and outer containment tubing. Inner piping is often 316L seamless tubing, while the outer might be 304L E (welded) tubing
Cold room (cold chamber)	An insulated structure served by a refrigeration system
Combined building sewer	A building sewer that receives storm water, sewage, and other liquid waste
Common vent	The vertical vent piping portion that serves two fixture drains installed at the same level in a vertical stack
Compression joint	Joining method that uses pressure clamped fittings and o-rings to form joints
Condenser	A vessel or arrangement of pipe or tubing that liquefies vapor by removal of heat
Conductor pipe	A round, square, or rectangular metal pipe used to lead water from the roof to the sewer
Contactor	An electromagnetic actuated relay used to close an electrical circuit
Controlled-atmosphere (CA) storage (gas storage)	A refrigerated food storage room where atmosphere is modified by adding carbon dioxide in large concentrations and lowering oxygen levels. CA storage reduces the respiration rate of some fruits and vegetables, which increase storage life
Cooling bath	Cold liquid in a tank for immersion cooling



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Corrosives	Gases / chemicals that will degrade normal materials
Cryocooling (cryogenic cooling)	Cooling below 120 K
Direct Current (D.C.)	A steady flow of electrical current in one direction only
Deep seal trap	A trap with a seal of 4 in. or more
DI reclaim	A devise that uses deionized water as makeup water for waste neutralization systems
Differential controller	A device that maintains a given difference in pressure or temperature between two pipe lines or spaces
Diverter	Valves that direct water to various outlets, which are used in showers, tubs & shower combinations, bidets, roman tub fillers and kitchen faucet sprayers
Double suction compressor	A compressor with a split suction valving arrangement for carrying two suction pressures
Drai	A pipe that carries a liquid flow
Drainage system	The piping that conveys sewage, rain water, or other liquid wastes to a place of disposal
Drum trap	A trap consisting of a cylinder with its axis vertical. The cylinder is larger in diameter than its inlet and outlet diameters
Dry-ice bunker	In a refrigerated vehicle, a compartment containing dry ice to keep the load cooled
Drywell	A pit located on porous ground, walled up with rocks, which allows water to seep through the pit. Used for disposal of rain water or the effluent from a septic tank
Effluent	The liquid waste that flows from a septic tank into a leaching field
Electropolished (EP)	Electrochemical process that uses anodic dissolution "reverse plating." Current causes metal ions to be dissolved from the surface of the metal, starting with the high points, so that the surface becomes smoother
ERW / welded	Welded tubing
Escutcheon	A flange or shield beneath a faucet handle. This part covers the faucet stem and the hole in the fixture or wall
Evaporative cooling	Cooling by exchange of latent heat from water sprays, jets of water, or wetted materials
Evaporator	Part of a refrigeration system where the refrigerant absorbs heat from the fluid by evaporation.
Filter drier	A desiccant installed in the liquid line (and sometimes the suction) of a refrigeration system
Fixture	A receptacle attached to a plumbing system in which water or other waste may be collected for ultimate discharge into the plumbing system
Fixture branch	The drain from the fixture trap to the junction of the drain with a vent
Fixture drain	The drain from the fixture branch to the junction of any other drain pipe



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Fixture unit	A unit flow rate from a fixture. A design factor to determine the drain pipe size for a fixture
Flammable	Gases that will ignite easily
Flood level rim	The top edge of a plumbing fixture from which water will overflow
Floor drain	An opening at floor level connected to a trap to receive the floor drainage
Flushometer	A device that allows a predetermined quantity of flushing water, actuated by water pressure
Freeze-up control	A control device to prevent failure of a refrigeration system due to formation of ice at the expansion device or from frost formation on a coil
Gas box	Containment box for toxic or flammable gases. Contains bottles and gas panels
Gas bunker	Storage area for hazardous gases
Gas panel	Valve and regulator assembly to control flow of gas from a gas cylinder
Gas stick	An assembly of valve, regulator, gauge, filters and transducer
Hastelloy C-22	Special alloy stainless steel for highly corrosive chemicals
Head-pressure control	Pressure-operated control that opens an electrical circuit if the high side pressure on a refrigeration machine becomes excessive
HEPA filter	High efficiency particulate arrester air filter. Removes 99.997% of airborne contaminants .3 micron or larger
High limit	The maximum desirable, or safe, temperature; the alarm given when the measured temperature drops below this selected temperature
Hot gas bypass valve	An automatic valve that maintains suction pressure by diverting vapor from the high side of the system to the low side
Hot gas line	The line that contains discharge gas from the compressor to the condenser or evaporator
House drain	The part of the horizontal sewer piping inside the building receiving waste from the soil stacks
Hp (horsepower)	One horsepower = 2544 B.T.U. per HR. One horsepower = 745.2 watts
Hub end	Pipe-end connections that are leaded and caulked or use a neoprene gasket, such as on cast iron sewer piping
Ice storage system	A thermal storage system where ice is formed during low demand periods for use during period of high demand
Ice-bank control	Control of the thickness of bank of ice for milk coolers and other refrigerating cabinets that store refrigeration capacity as ice. A special power element is used so its volumetric expansion causes the control to operate from the expansion of the freezing water
Ice-bank cooler	A water cooler that allows ice to collect on the evaporator tubes



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Inches of Water Column	A measurement of gas pressure, one inch of water column equals 0.036 psi. 28 inches of water column equals 1 psi
Inert gases	Non toxic gases
IR welded / IR Butt weld	Fusion process often used with PVDF or polypropylene piping systems
Jacketed cold room	A cold room that is entirely surrounded by insulated cavities or corridors through which cold air is circulated
kW (Kilowatt)	One kW equals 1,000 watts
kWh (Kilowatt Hour)	The amount of energy one kilowatt produces in one hour. One kilowatt hour = 3412 Btu Per hour
Laminar flow	Air that flows in one direction. It is laminar air flow through HEPA or ULPA filters that make a cleanroom work
Lavatory	A basin for washing hands and face
Lead & oakum	Type of joint using base of oakum and finished with hot poured lead
Lead joint	Type of joint using base of jute or oakum and finished with hot poured lead
Leader	The vertical rain water pipe leading from a roof gutter or roof drain to a storm sewer, or a combination storm and sanitary sewer system, to a point of disposal
Line Voltage	The voltage level of the main power supply
Liquid line	The line conveying refrigerant liquid from the condenser to the pressure reducing device
Liquid waste	The discharge from any fixture other than fecal matter
Low limit	The minimum desirable, or safe, temperature; the alarm given when the measured temperature drops below this selected temperature
Magnetic cooling	Cryocooling by adiabatic demagnetization of certain paramagnetic substances
Manhole	An opening constructed in a sewer to allow access for a person
Mechanical joint	Type of joint made by using flange, gland, and bolts
Mechanical joint / VCR	Threaded connections created by welding a "gland" with a male or female nut one at each end, a gasket is placed between the two glands, and then the nuts are tightened to create the joint
Medium weight (soil pipe)	Service weight, formerly used to distinguish soil pipe materials when victory weight (light weight); service weight (medium weight) and extra heavy were produced
Micron	1 millionth of a meter. A human hair is between 40 and 200 microns in diameter
Normally Closed (N.C.)	A switch or other device that is in the closed position when not energized or activated



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Normally Open (N.O.)	A switch or other device that is in the open position when not energized or activated
O2 clean	Non electropolished tubing cleaned for oxygen service and kept sealed until installation
Oil separator	Device that separates oil and oil vapor from the refrigerant, usually installed in the compressor discharge line
Packaged air conditioner (self contained unit)	Complete air conditioning unit including refrigeration compressor, cooling coils, fan, filter, automatic controls, etc. assembled into one casing
Passivation	Final treatment process used to remove free iron (bio-processing equipment systems)
Pop up assembly	The drain mechanism of a faucet installed on a lavatory. The drain stopper “pops” up and down
Potable water system	Supplies drinking water to fixtures, hot water for domestic purposes
Protocol	The rules for admittance to the cleanroom. From shoe covers and smocks in a class of 10,000 to fully-gowned with hair net, booties, coverall, hood, gloves of the class of 1. Every facility is different, and each has its own protocol training class for contractors that must be taken before an employee is allowed to access the cleanroom
Pressure Reducing Valve (PRV)	A mechanical valve that reduces the incoming pressure of air, water or steam to a lower set pressure
Pull down test	First check of a refrigeration system to measure the time it takes to reduce the temperature to desired levels while measuring pressure and temperature
Pump down	Removal of all refrigerant from the low side of the system
Purge gas	Using argon or nitrogen to create an oxygen free area so that there is no oxidation during the welding process
Pyrophorics	Pyrophoric gases (gases that will ignite with exposure to atmosphere)
Radiant cooling system (panel air system)	A system that uses panel coolers to absorb radiant heat
Refrigerant compressor	The component of a refrigerating system that increases the pressure of a compressible refrigerant fluid and simultaneously reduces its volume while moving the fluid through the device
Relay	An electromagnet device used in a control circuit to provide electric current to a valve or switch. Referred to as a start relay when used for a motor
RO reject	Reject water from reverse osmosis process
Roof drain	A roof outlet designed to receive rain water, leading it into a leader or downspout
Sanitary plumbing system	Consists of fixtures, traps, branches, vent branches, vent drain, cleanouts and building sewer
Seamless	Seamless tubing



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Septic tank	A watertight box (usually concrete) which receives the discharge of a drainage system; designed to separate the solid matter from the liquid part, allow for digestion of organic matter for a period of detention, and permit the liquids to discharge into the soil through a piping or "leaching" system
Service weight	Standard weight soil pipe
Setpoint	The desired temperature setting for heating or for cooling
Single hub	Pipe or fitting having bell on one end and spigot on the other end
Soil pipe	A pipe that receives the discharge of a water closet
Soil stack	The vertical pipe in the house plumbing system into which sewage from water closets and branches discharge
Spec gases	Specialty gases (could be almost anything)
Spigot	The plain end or bald end of a pipe or fitting. This is the male end of a hub and spigot joint
Split condenser	A condenser comprising several heat exchanging components operating on one or several refrigeration systems
Storm sewer	A piping system used to convey storm water
Subcooling	Process of cooling a gas to below its freezing point at a given pressure. Cooling a liquid below its freezing point, thereby creating a condition of unstable equilibrium
Subsurface drain	A drain that receives only subsurface water and conveys it into an underground basin
Suction line accumulator	Installed in the suction line between the evaporator and compressor to trap liquid carryover from the evaporator to prevent it from reaching the compressor
Thermostatic expansion valve	A regulating valve controlled by changes in pressure from the evaporator and superheat of the refrigerant
Tool gas panel	The area on the tool where the gases are brought into the tool. Usually the point of connection between the facility piping system and the internal piping of the tool
Toxic gases	Gases that are toxic
Trap	A U-shaped pipe filled with water and located beneath plumbing fixtures to form a seal against the passage of foul odors or gases
Tunnel cooler	A long, chilled space for cooling food products on a conveyor by rapid circulation of cold air
ULPA filter	Ultra low particulate air filter. Removes 99.9997% of airborne particles .12 microns or larger
Vacuum cooling (vacuum chilling)	Cooling by vaporization under vacuum of part of the water contained in the cooled material
Vacuum test	A test to check the tightness of an uncharged refrigeration system by drawing a vacuum on it



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Terms	Definitions
Vent pipe	A vertical pipe used to ventilate plumbing systems and to provide a release for pressure caused by flushing
Vent stack	The upper portion of a waste or soil stack extending through the roof of the building, installed primarily for the purpose of providing circulation of air
Vitreous	Pertaining to a composition of materials that resemble glass, such as lavatories or drain pipe
Waste pipe	Any pipe that receives the discharge of any fixture except the water closet
Water main	The principle water supply pipe
Water service pipe	The water pipe leading from the street main to the building
Water-cooled air conditioner	A refrigerating system that has water-cooled condenser
Water-cooled condenser	A condenser that removes the heat of the refrigerant by water flowing over condensing surfaces