

STEAM DISTILLATION

Effective, Reliable, Clean, Refreshing, Pure Water

PROCESS

Mother Nature produces water through the natural cycle of evaporation, precipitation and condensation. The sun heats the water that lies in the bodies of water upon the earth. Light vapor evaporates into the sky and is captured in clouds. The clouds are then cooled and release the cooled water upon the earth. As it leaves the clouds, this precipitation is pure. However, as it makes its descent to the earth it picks up the various forms of pollution found in the air. Then, as it reaches the ground, this water continues to pick up contaminants on its way back to various bodies of water.

Distillation duplicates the original process of Mother Nature. Like Mother Nature, distillation boils the water. As the hot vapor rises it is captured in a baffle and then this hot vapor enters into cooling coils. As the hot steam makes its way through the coil, a fan cools the hot vapor into condensed pure water.

The distillation process is a human-controlled version of the hydrological cycle. Distillation uses the process of evaporation, cooling and condensation to “drive out” water molecules from other unwanted substances or contaminants. Also, because distillation boils the water, all bacteria and viruses are killed. Everything else is left behind in the boiling tank to be thrown down the drain.

HISTORY

Over 2000 years ago ancient Greek sailors were using a form of distillation at sea when they hung sponges over pots of boiling water. They would squeeze out and collect the precious water that condensed in the sponges from the rising of steam. Although derived from the seawater, this water collected from the sponge was not salty and was suitable for drinking.

In the 16th century, the Portuguese used distillation devices aboard ships to provide drinking water. Similar devices were used by physicians and druggists to process perfumed hair oil and other makeup and sanitary water to wash wounds. Upper class Orientals used a similar distiller called a “Ranbiki” in tea ceremonies. Up until the 1960’s, water distillation systems were mainly commercial but as environmental pollution increased, health conscious people saw a future for residential water distillers.

EFFECTIVENESS

The first residential water distiller was designed primarily to remove dissolved solids and inorganic solids. As more “sophisticated” chemicals were created by human kind, the need evolved for further advancements in distillation equipment.

Many distillers today utilize a volatile gas vent, which consists of a pinhole in the top of the condensing coils to vent off any unwanted gases. If any gases happen to escape this vent, then a carbon post-filter will trap them. These charcoal filters provide double assurance that these gases will not end up in the distilled water storage tank. These filters do not breed bacteria, as only pure water passes through them.

Some systems have a proven rejection rate of greater than 99% of all contaminants. There is no other process as efficient or as reliable. Water distillation will remove chlorine, nitrates, fluoride, ammonia, aluminum, arsenic, copper, iron, mercury, radium, asbestos, viruses, bacteria, herbicides and pesticides – to name a few.

RELIABILITY

Most distillers do not require the constant monitoring that other treatment methods do. Since the distillation process is so simple, there is little that can go wrong. Customers, who understand the process, are able to trust it and have peace of mind in the system’s operation.

Quality distillation systems are constructed of high-grade stainless steel. Built to last a lifetime, a distiller should consistently deliver the same quality of pure drinking water over the years, with few or no service problems.

(over)

Maintenance of a distiller consists of draining out the residue left over from the boiling process and changing of the charcoal filter every 6 to 12 months. If a heavy scale build-up accumulates in the boiling tank, a cleaning agent to soften and loosen up the scale is required.

Some distillers offer low-maintenance, self-flushing options reducing maintenance requirements.

ADVANTAGES

Distillation offers many benefits over other treatment methods:

- Easily and efficiently removes the toxic chemicals, bacteria, viruses, and parasites such as cryptosporidium, heavy metals and other contaminants that are so harmful to our health.
- More effective than Reverse Osmosis in contaminant reduction, even on high levels of pollution.
- Does not rely on physical barriers (filters) which can fail, letting contaminants through without the user aware of it.
- Produces consistent high quality water for the lifetime of the unit- the quality does not decline with use.
- Distillers are extremely trouble free appliances that require a minimum of service and maintenance for efficient operation.
- Distillers do not require a complicated disinfecting process when used on water containing bacteria.
- Producing your own water assures that you have control over finished product unlike buying bottled water.

USES FOR DISTILLED WATER

- Provides the purest drinking water, free from chemicals, impurities, pollutants, bad taste and color – it's healthy and delicious!
 - Coffee – you'll use less!
 - Tea, Cocoa – taste is in comparable!
 - Ice Cubes – you'll see the difference!
 - Cooking – taste the improvement!
 - Low Sodium Diets – essential!
 - Steam Irons – last longer!
 - Humidifiers – healthier!
 - Pet Care – they'll love you!
 - Fruit Juices – taste like freshly squeezed!
 - House plants – they'll thrive!
 - Aquariums – clean and clear!
 - Wet Cell Batteries – pure power!
 - Photography – perfect development!
 - Baby formula – pure contentment!
 - Feminine Hygiene – sanitary!
 - Complexion Care – feel the difference!

TYPES

There are basically two types of water distillers available today for residential use. Water-cooled models require from 5 to 15 gallons of tap water to make 1 gallon of distilled water. Although slightly quieter to run, they require a drain close by for the hot water. Air-cooled Versions are more popular because they do not waste water, but produce one gallon of pure water for approximately every gallon of feed water.

Distillers may be countertop/portable manual units, semi-automatic or fully automatic. Popular locations for the units are basements or laundry rooms. Most distillers may be hooked-up to a pressurized system, allowing pure water to run to separate faucets in the home. Lines may be ran to the furnace humidifier (saving frequent cleaning due to mineral buildup) and refrigerator icemakers. Dispensing systems and water coolers may also be hooked into the distilled water lines.

Distillation is a process whose time has come! It is highly efficient, reliable, available and crucial to the pursuit of good health. If it has been awhile since you've checked distillation out – or if you never have – now is the time!



PRECISION DESIGN & MANUFACTURING INC.
9024 - 100 STREET
WESTLOCK, ALBERTA, CANADA
T7P 2L4
PH: 780-349-4933 FAX: 780-349-4957
Email: info@precisioncanada.com
Web Site: www.precisioncanada.com