



THE INDUSTRY LEADER IN WASTEWATER NEUTRALIZATION SYSTEMS, TANKS, SUMPS, BASINS AND EQUIPMENT

NEUTRALIZATION SYSTEMS BROCHURE

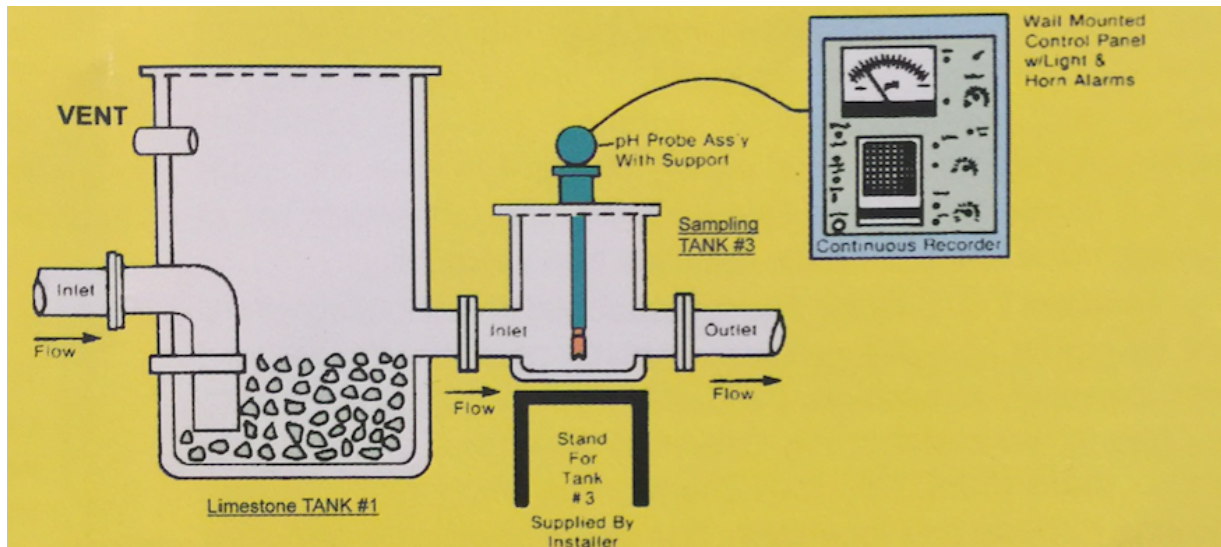
Choose Between **FOUR** Methods of Neutralizing and/or Diluting Chemical Bearing Wastes and Effluents:



Method #1 – Passive Systems, offered, offered TWO ways:

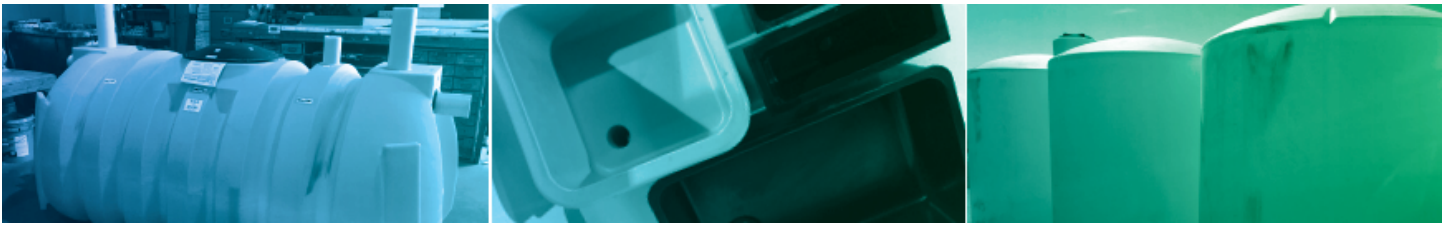
Method #1 (A) / Passive System – Single Treatment Tank (No Sampling or Monitoring)

Method #1 (B) / Passive System – Single Treatment Tank plus Sampling Tank with or without Optional Monitoring System. (Model #K-100A or Model #K-100AM)



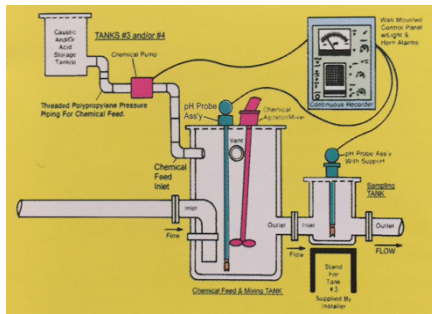
Most Common

Standard T&C round, (vertical/cylindrical) flat bottom tanks for use in collecting or intercepting, chemical bearing wastewaters, above or below ground. This can be done with diluting liquids or water and/or neutralizing agent (limestone chips, chemicals or gases). Anyone can sell you a tank, but T&C offers superior, quality tanks and fittings, designed specifically to handle the worst chemicals for this application. This method is the most commonly used, practical choice for treating polluted wastes, for most installations. (Round, cone bottom, rectangular, square and horizontal/cylindrical tanks are also available). Extensions can be had for tanks in certain below ground situations. These T&C tanks can be used for the storage, sampling and/or pumping of chemicals. Also, available as small, under sink units.

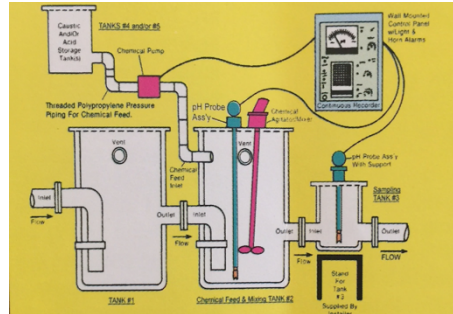


Method #2 – Active Treatment Systems – Chemical Feed / Mixing Systems, Offered THREE Ways:

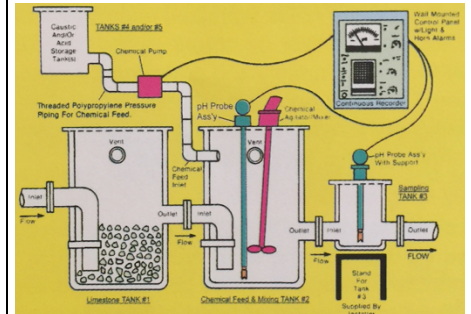
Method #2 (A) Active System Straight Chemical Treatment Only



Method #2 (B) Active & Passive System Straight Chemical Treatment plus Pretreatment Tank



Method #2 (C) Active & Passive System Straight Chemical Treatment with Pretreatment Limestone Tank



More Precise Control

This method offers the same standard T&C round, flat bottom tanks, modified slightly for more sophisticated chemical feed treatment, mixing and pH monitoring and controlling of chemical bearing wastewaters. These systems usually include chemical feed and connecting polypropylene pumps, piping, fittings, valves, alarms, recorders, etc. This method is more sophisticated and can provide more precise control of the effluents being discharged. The tanks are also available in different shapes for above and below ground use. These systems usually include a sampling tank and chemical feed tank(s). NOTE: Variations of this set up are available.



Method #3 – Shunt Tank System

Avoid Shutdowns for Servicing

This method consists of at least two separate standard T&C round, flat bottom tanks for each drainage piping system. We call this system the “shunt (multiple) tank method”. You can use the same tanks as mentioned in either one of the above two methods. However, this “shunt method” should be chosen where approved maintenance servicing is necessary; particularly when system shutdowns must be avoided, such as in hospitals, research facilities, production/manufacturing plants, etc. This system usually includes two or more polypropylene valves and some polypropylene fittings and pipes. This system allows one tank to be shut off for servicing or cleaning, while wastewater flows to and through other tank(s). Thus, your facility remains on-line at all times.



Method #4 - Double Wall Tanks

Added Safety with Secondary Containment

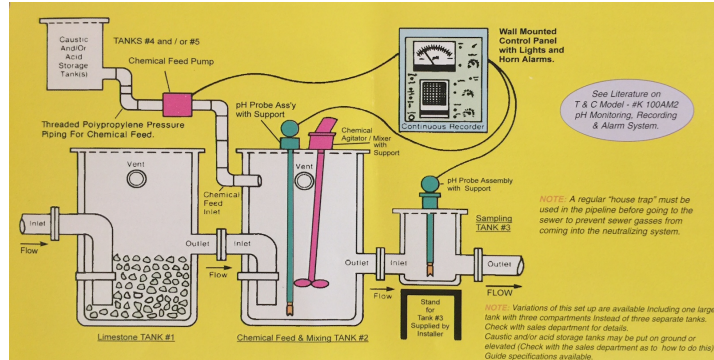
These double walled, round, flat bottom, T&C tanks offer improved and greater safety, against possible chemical leakage, in below and above ground installations. Chemical leakage monitors and/or chemical displacement pumps can be installed between the inner and outer walls. The double wall results from two tank construction – a tank within a tank. The inner tank neutralizes/dilutes the effluents, while the outer tank is a containment tank. Many states and local jurisdictions are demanding this type of double walled protection. NOTE: Fitting connections are welded to both tank walls.

NOTE: Ask for literature on T&C's pH monitoring, recording & alarm systems or leak detection system, which can be ordered and installed with any of the above four methods. Check with Federal, State, and Local authorities regarding any law that may require reporting of all underground chemical tanks, as well as laws that may require secondary containment.

*HDPE=HighDensityPolyEthylene **PP=Polypropylene

Call us at 732-780-5300 to request a quote.

CHEMICAL FEED / MIXING SYSTEMS - TYPICAL METHOD #2 INSTALLATION (Other Variations Available)



OPERATION OF ALL FOUR METHODS:

A common neutralizing medium for all methods can be either lump limestone (or marble chips), one to three inches in diameters with a high calcium carbonate equivalent content in excess of 90%. For wastes containing predominantly (sulfuric) acid, a dolomitic limestone is preferred. (Dolomitic limestone contains a high percentage of magnesium carbonate in addition to the calcium carbonate.) Specify the dolomitic limestone especially in applications where lead acid battery wastes are expected. A smaller size medium should not be used as it tends to solidify and prevent passage of effluent. Water added to the tank helps to dilute the chemical bearing wastes. The water also functions as a seal, similar in nature to the seals of drum traps or P-traps in typical plumbing systems. Ask for T&C's information bulletin on limestone chips and limestone maintenance instructions.

In operation, as acids percolate up through the tank, they react and chemically with the limestone to become neutral salts, water and carbon dioxide. For those applications requiring a tightly controlled effluent waste, having a pH of around 7.0, another secondary or sophisticated neutralization system should also be employed. This is T&C's Method #2.

INSTALLATION & LOCATION:

T&C tanks should be installed on the floor of a basement room, placed into a concrete pit or installed directly into the ground, provided appropriate burial procedures are utilized. Burial procedures for the tanks are similar to burial procedures for most polyolefin piping systems (contact T&C for further details). Under sink installations are also possible.

In as much as these tanks are installed at either the end of a building's piping system or directly at the source of pollution, these tanks actually help to extend the life of a sewer piping system located directly outside the building or the life of the piping within the building.

In installing the pipe to the tank fitting connections, avoid leaving the piping or fittings in strain. Tanks must NOT be supported by inlet, outlet or vent piping. In addition to installing tanks by just placing them on level flooring, tanks may be installed with sturdy sheeting, supporting entire tank bottoms. Also, tanks should be piped and filled completely with water, prior to carefully filling with limestone. Fill water to invert of outlet.

TYPICAL APPLICATIONS:

SCIENCE LABORATORIES –

Middle schools, high schools, colleges, universities, hospitals, medical labs, research institutes, testing facilities, dental facilities, pharmaceutical and food processing plants, chemical and other industrial plant locations.

PHOTO ENGRAVING AND PHOTOGRAPHIC –

Newspapers, publishing houses, printers, photography labs, etc.

BATTERY ACID –

Auto service centers, industrial battery stations, battery manufacturing facilities, etc.

METAL CLEANING AND PAINTING –

Electronics, metal finishers, spraying facilities, etc.

Plating wastes may not be discharged directly to sanitary sewers, because the metallic salts (e.g. chrome, nickel and copper) are generally too toxic to handle and interfere with normal sewage treatment.

A WORD OF CAUTION:

There are many variables affecting neutralization and dilution of various chemicals being discharged through an acid waste system. Town & Country Plastics makes no performance claims for the tanks described in this specification/buyer's guide; nevertheless, T&C polyolefin tanks have, in numerous installations, proven effective as a means for neutralizing/diluting harmful and polluting wastes at moderate or intermittent flow rates. In every application, the proper T&C tanks must be selected and maintained, particular attention must be paid to composition and quantity of effluent being discharged.

For the most reliable performance, T&C recommends the employment of professional assistance in analyzing the effluent, recommending appropriate equipment and prescribing the necessary maintenance services.

Visit tandcplastics.com to learn more.

UNEQUALLED QUALITY AND REPUTATION:

For over 45 years, Town and Country Plastics remains the leading manufacturer and designer of chemical neutralization/dilution systems and equipment. These T&C system components and/or equipment are manufactured only of the finest quality materials of construction, yet T&C products are the most competitively priced. T&C offers tanks, sumps, basins, limestone chips, warning/maintenance signs, pH monitoring-recording-alarm systems, pH probe assemblies, chemical fee systems, pumps, agitators (mixers), chemical sampling equipment, chemical piping, fittings & valves, floor drains, sinks, cup sinks, etc. Most of all, T&C neutralization/dilution tanks and equipment resist the worst, most harmful acids, caustics and solvents.

GENERAL INFORMATION:

Tens of thousands of HDPE & PP piping and tank systems are already in use for many years, in all types of industrial, institutional and commercial applications. These polyolefin* drainage, waste and vent (DWV) systems handle all types of hazardous corrosive, toxic and flammable wastes without failure. For the above reasons, many city and state plumbing codes specifically specify polyolefin neutralization/dilution tanks for handling all types of chemical wastes.

FUNCTION:

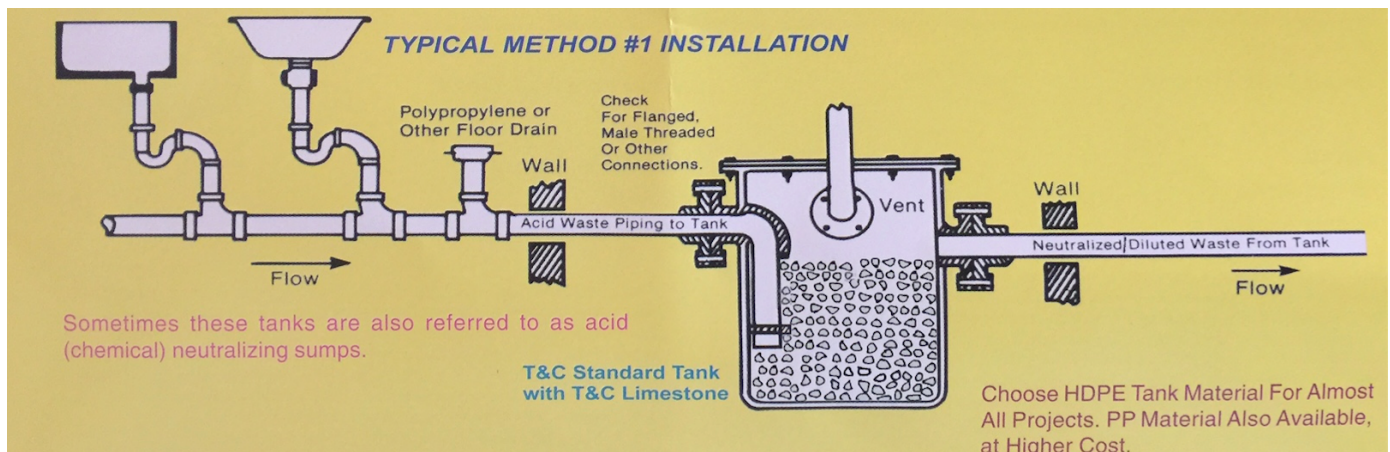
T&C polyolefin tanks are designed to dilute and neutralize harmful wastes that may be discharged from laboratories, industrial processors or any other water polluting sources. Even when harmful wastes are destined for a chemical treatment plant or municipal water treatment facility, T&C tanks can still be useful in diluting the polluted effluent; thereby reducing the burden of treatment placed upon such plants or facilities.

CONSTRUCTION:

All standard T&C tanks are cylindrical in shape; they are flanged at the top and are shipped complete with connecting fittings, matching cover, gasketing and bolts. Only virgin polyolefin materials are used to make T&C tanks. All polyolefin materials used conform to ASTM material specifications D1248-70 for HDPE and D4101 for PP. Two types of polyolefin tanks are available from Town & Country Plastics – HDPE (high-density polyethylene) tanks for temperatures up to 180°F for continuous use, or 212°F for intermittent use and PP (polypropylene) tanks for up to 212°F continuous use. In most all cases, the HDPE tanks will surpass performance requirements and PP tanks will meet the severest requirements. Standard HDPE tanks are black in color; while PP tanks are white in color or translucent. HDPE fittings are generally yellow and PP fittings are black. HDPE and PP tanks are rotationally molded and are seamless in construction. PP tanks cannot be successfully molded in larger sizes and must be fabricated using similar techniques as in fabricating metal tanks. Both HDPE and PP tanks are available in standard sizes. However, all tanks may be custom fabricated to any dimensions specified. Fitting connection size and location may be changed on the tank, upon request. Adapters are also available to connect tanks to many special piping systems (e.g., glass piping, high-silicon piping, cast iron piping and lead piping), upon request. All these changes are available at extra costs.

HDPE and PP tanks are self-supporting; however, larger T&C tanks are reinforced with steel bands for added strength, without additional charge. (Do NOT install tanks in direct sunlight).

Certain below ground tanks may require extensions to tank height. To accomplish this, two tanks are molded. The top of one and bottom of the other are cut out and welded together, to add the height. A band of the same material is added over the weld area, inside or outside the tank, at T&C's discretion.



*HDPE & PP are Polyolefin Thermoplastics.

Email sales@tandcplastics.com to request a quote.