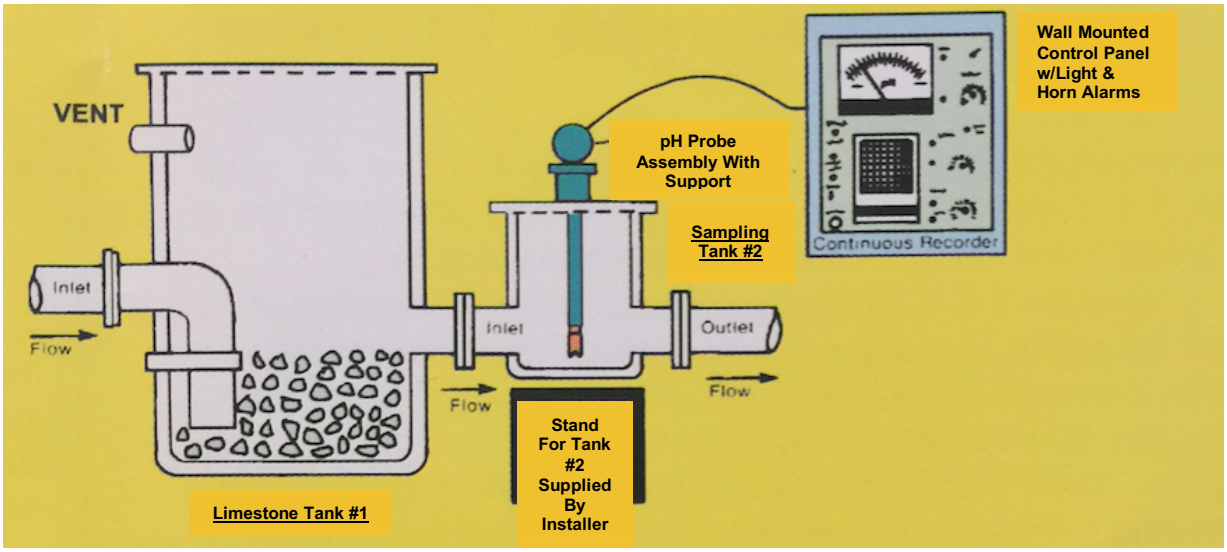
THE INDUSTRY LEADER IN WASTEWATER NEUTRALIZATION SYSTEMS, TANKS, SUMPS, BASINS AND EQUIPMENT

NEUTRALIZATION SYSTEMS BROCHURE

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

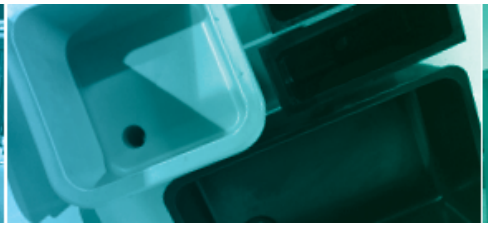
Method #1 – *Passive Systems, offered TWO ways:*

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)

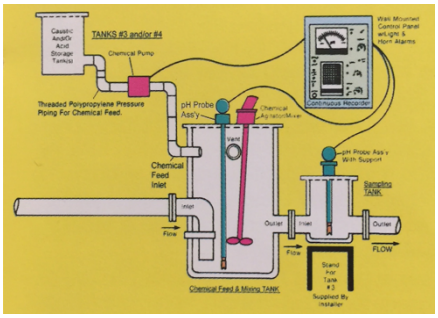
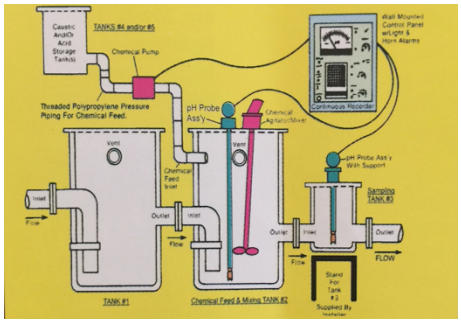
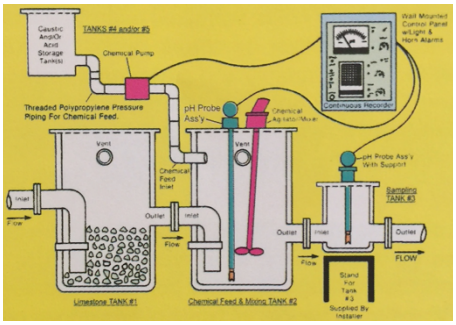


Most Common

Standard MIFAB 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 MIFAB offers superior, quality tanks and fittings, designed specificially to handle the worst chemicals for this application. This method is the most commonly used, practical choice for treating polluted wastes, for most installations. Extensions can be had for tanks in certain below ground situations. These MIFAB tanks can be used for the storage, sampling and/or pumping of chemcials. 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 MIFAB 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 chemcial feed and connecting polypropylene pumps, piping, fittings, valves, alarms, recorders, etc. This method is more sophisticated and can provide more precises 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.

OPERATION OF ALL FOUR METHODS:

A common neutralizing agent for all methods can be either lump limestone (or marble chips), one to three inches in diameters with a high calcium carbonate content in excess of 90%. For wastes containing predominantly sulphuric 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. Water added to the tank helps to dilute the chemical bearing wastes and functions as a seal, similar in nature to the seals of drum traps or P-traps in typical plumbing systems.

In operation, as acids percolate up through the tank, they react with the limestone to become neutral salts, water and carbon dioxide. For those applications requiring a tightly controlled effluent waste having a pH of 7.0, another secondary or sophisticated neutralization system should also be employed.

INSTALLATION & LOCATION:

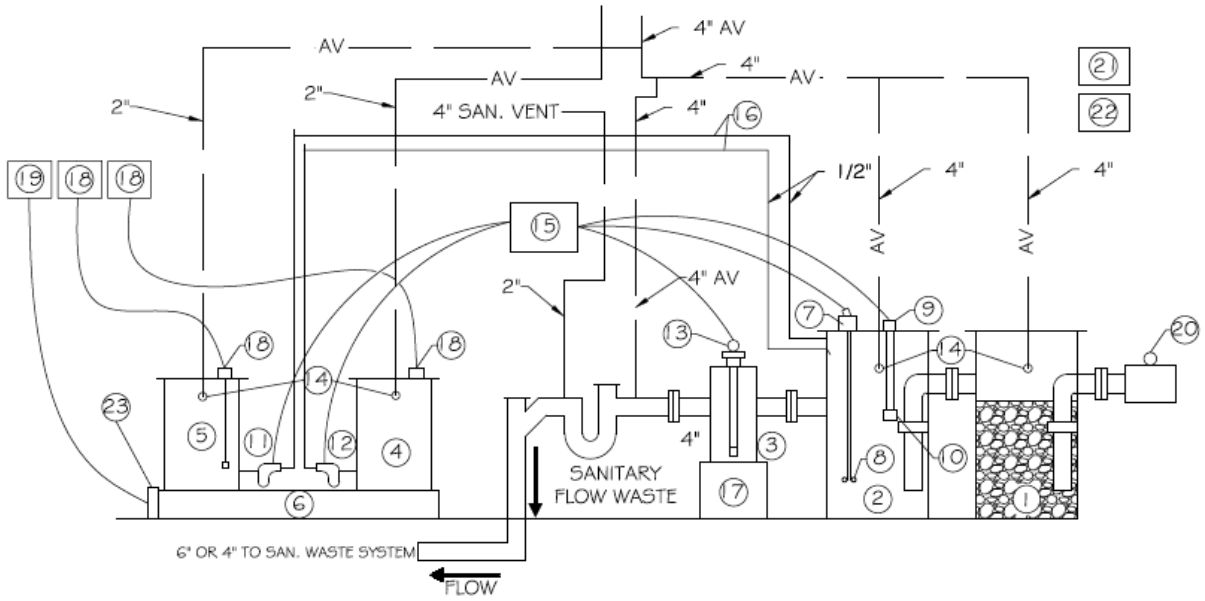
MIFAB tanks should be installed on the floor of a basement room, placed into a concrete pit or installed directly into the ground, provided appropriate burial procedures are utilized. Burial procedures for the tanks are similar to burial procedures for most polyolefin piping systems (contact MIFAB for 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.

*HDPE=HighDensityPolyEthylene **PP=Polypropylene

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



1. LIMESTONE NEUTRALIZING / DILUTION TANK #1
2. MIXING AND FINISHING TANK #2
3. SAMPLING TANK #3
4. ACID FEED TANK #4 (ACID REAGENT TANK)
5. CAUSTIC / ALKALI FEED TANK #5 (CAUSTIC REAGENT TANK)
6. SPILL CONTAINMENT PALLET
7. CHEMICAL AGITATOR / MIXER
8. AGITATOR SHAFT AND MIXING BLADE
9. pH PROBE ASSEMBLY
10. pH PROBE SENSOR
11. CAUSTIC CHEMICAL FEED PUMP
12. ACID CHEMICAL FEED PUMP
13. pH PROBE ASSEMBLY WITH SUPPORT
14. ACID VENT CONNECTIONS
15. CONTROL PANEL
16. THREADED PP SCHEDULE 80 PIPE
    WITH THREADED JOINTS
    WITH TEFLON TAPE
17. CONCRETE PAD OR EPOXY COATED STEEL STAND,
    BY INSTALLER
18. LOW LIQUID LEVEL ALARM ASSEMBLIES
19. POLYPROPYLENE LEAK DETECTOR WITH SWITCH BOX
    AND ALARMS
20. POLYPROPYLENE SHUT OFF VALVE
21. MODEL #WMS-1 SIGN
22. MODEL #WMS-2 SIGN
23. PP-44T LEAK DETECTION FLOAT ASSEMBLY TO BE
    INSTALLED IN SPILL CONTAINMENT PALLET AND/OR
    PIT FLOOR

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 chemcials being discharged through an acid waste system. MIFAB makes no performance claims for the tanks described in this specification/buyer's guide; nevertheless, MIFAB tanks have, in numerous installations, proven effective as a means for neutralizing/diluting harmful and polluting wastes at moderate or intermittent In every application, the proper MIFAB tanks must be selected and maintained and particular attention must be paid to compostion and quanity of effluent being discharged.

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

FUNCTION:

MIFAB 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, MIFAB tanks can still be useful in diluting the polluted effluent, thereby reducing the burdern of treatment placed upon such plants or facilities

CONSTRUCTION:

All standard MIFAB tanks are cylindrical in shape, they are flanged a tthe top and are shipped complete with connecting fittings, matching cover, gasketing and bolts. Only virgin polyolefin materials are used to make MIFAB tanks. All polyolefin materials used conform to ASTM material specifications D1248-70 for HDPE. In most all cases, the HDPE tanks will surpass performance requirements. HDPE tanks are rotationally molded and are seamless in construction. 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 an additional cost.

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

Tank extensions and custom tanks are available. Please call T&C for details.

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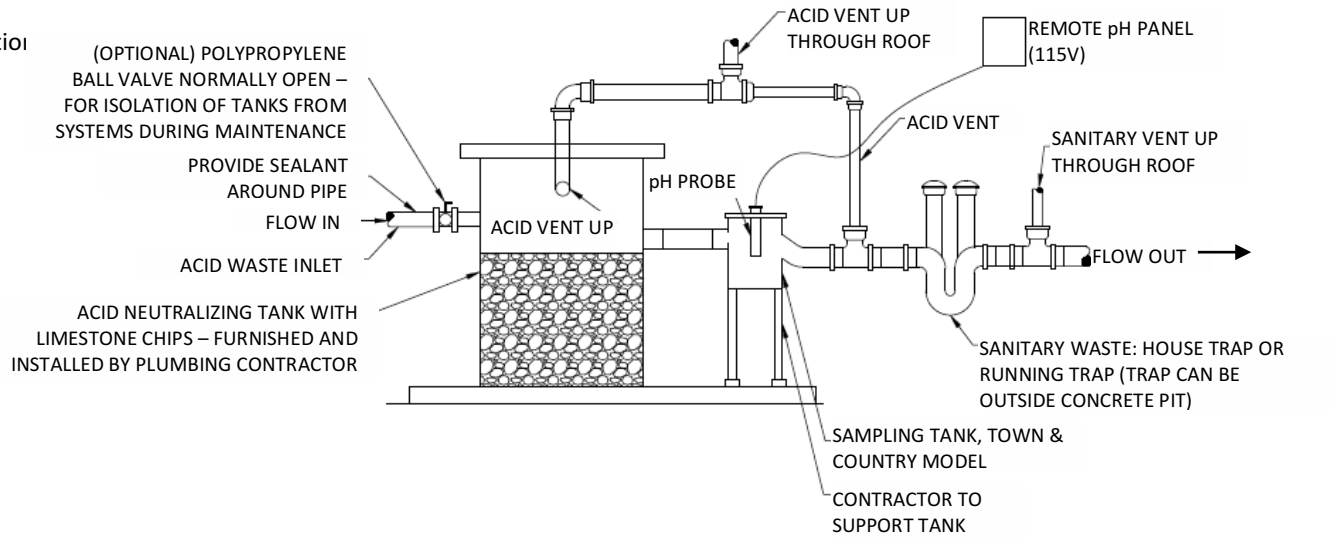

*HDPE & PP are Polyolefin Thermoplastics.