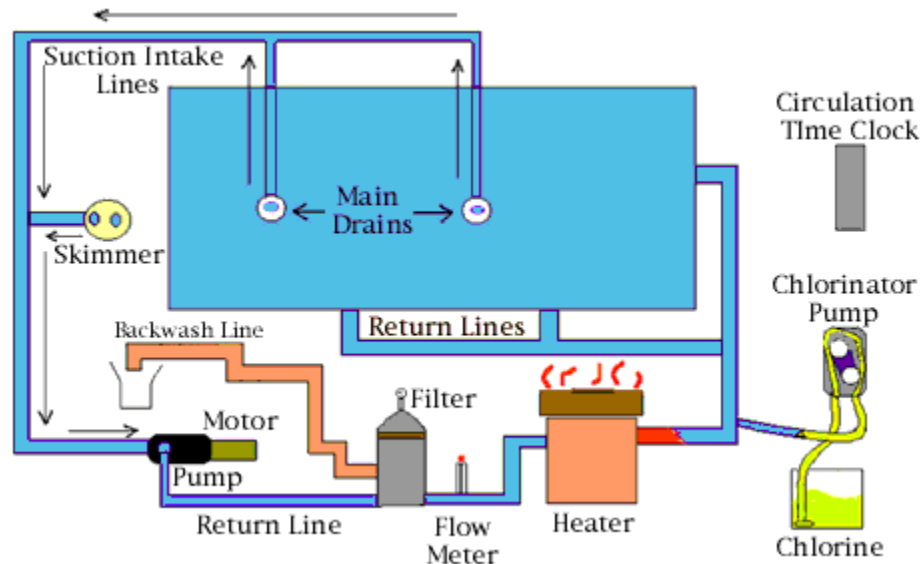


Pool Diagram



BASIC EXPLANATION OF POOL CIRCULATION SYSTEM

This is a basic design of a pool system. The water in the pipes is being pulled from the main drains and skimmer to the pump. Once the water is pulled into the pump it is then pushed through to the Filter. The filter then filters out the debris in the water. The clean filtered water passes through the flow meter. The flow meter gauges the gallons per minute the pool pump is circulating. The water is then pushed through the heater where the water is heated depending if the heater is turned on. The heated water is then chemically treated by the automatic chlorinator before it returns back into the pool system, which is known as the return lines in the pool. This process continues itself through out the day. The health department requires that all commercial pools circulate during the hours the pool is available for use. The pool system is also required to have a turn over rate of 6 hours. Which means the pool must circulate the entire water volume in the pool at least every 6 hours.

Spa systems run exactly the way a pool system runs. The same system, but just add the booster pumps, and motors for the jets. The turn over rate for commercial spas is once every 30 minutes. The booster motors operates by pulling in water exactly how the pool pump does and pushes the water back out through the jet return lines. The booster pumps do not go through the circulation system. They simply pull water in, and push it back out. The air from the jets comes from an air intake line that is plumbed into the return line going back into the spa. With the force of the water being pushed through the return line it creates a venturi which pulls air into the return line, which gives the jets the air bubble action.

BACKWASH RATE

The rate of flow, in gallons per minute per square foot of filter surface area, required for efficient filter cleaning.

CHLORINE

A heavy, green, highly poisonous gas compressed in liquid form and stored in heavy steel tanks. Used in swimming pools as a bactericide and algacide. Extreme caution must be used in handling.

FLOW METER

A device that measures pressure differential across a calibrated orifice and indicates the rate of flow at that point.

POOL FILTER

May filter dirt from the water at the cartridge surface or allow penetration of smaller suspended particles into internal interstices.

SKIMMER

A device other than an overflow trough for continuous removal of surface water and floating debris from a pool. Usually returns water so removed to the filter system.