



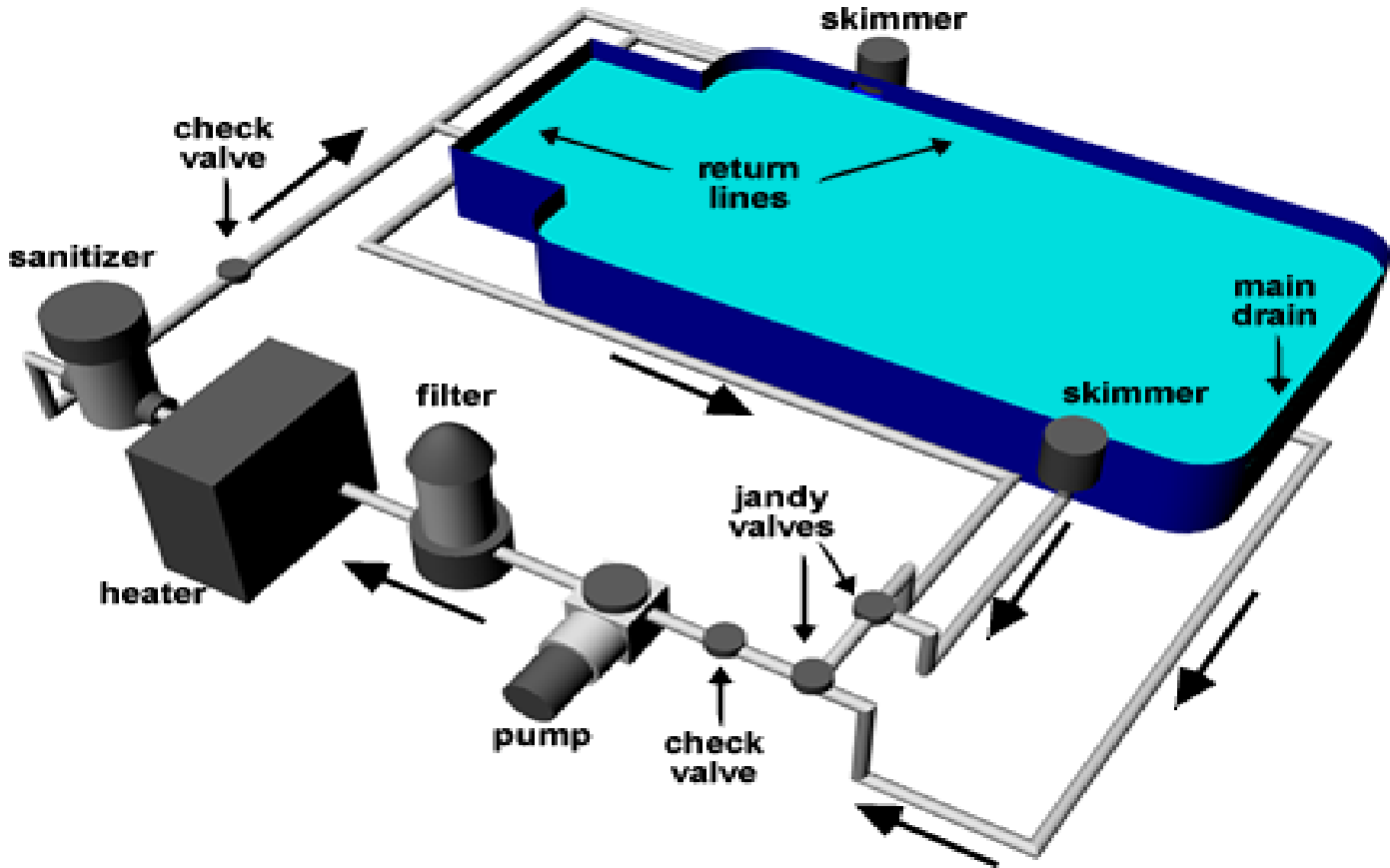
INTRODUCTION TO BASIC POOL EQUIPMENT

DOH/Water Recreation Program

Overview

- Basic pool configuration
- The flow of water
- Basic pool components

Flow of Water

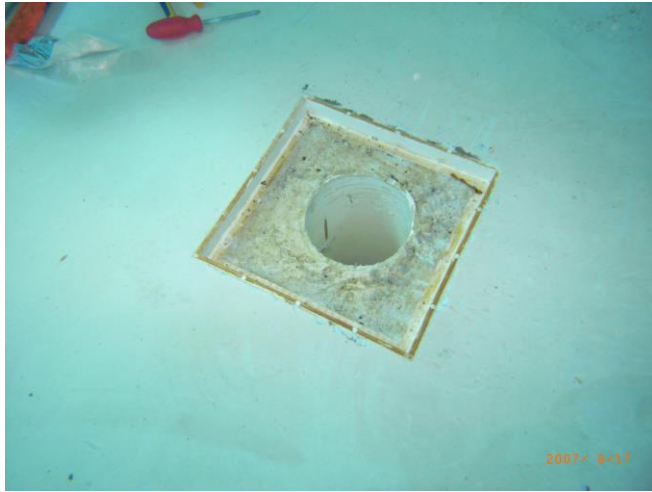


Main Drains

- Transfers water from pools
- Virginia Graeme Baker Pool and Spa Act
- Contact your local health jurisdiction prior to making any changes



Examples



Gutters

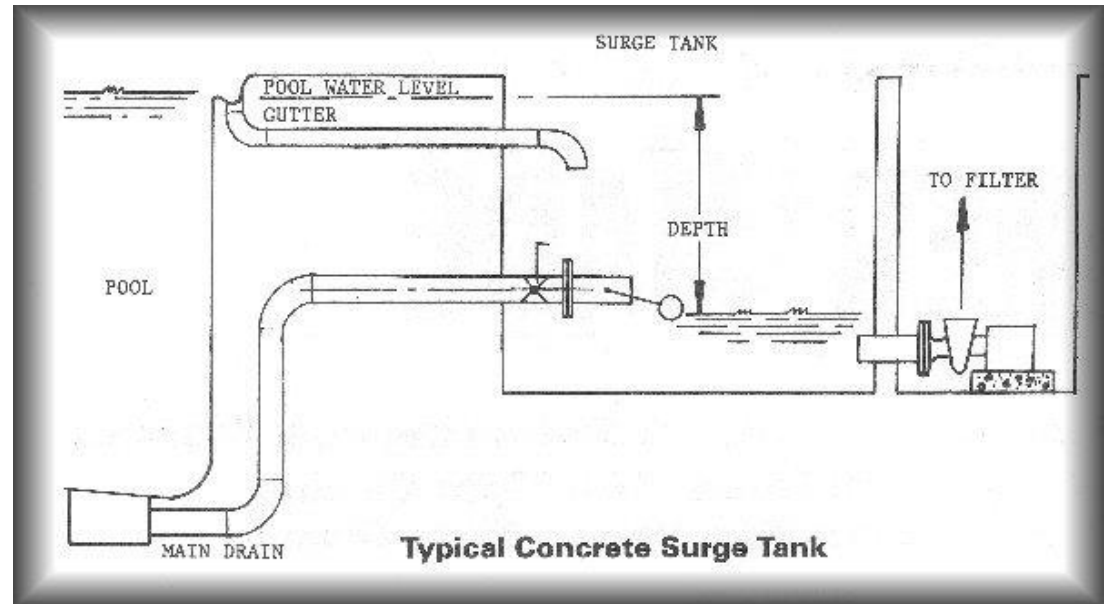
- Perimeter recirculation system
- Required for swimming pools 2,500 square feet or more in Washington
- Surface water is displaced into the gutter then travels from the pool to the filter



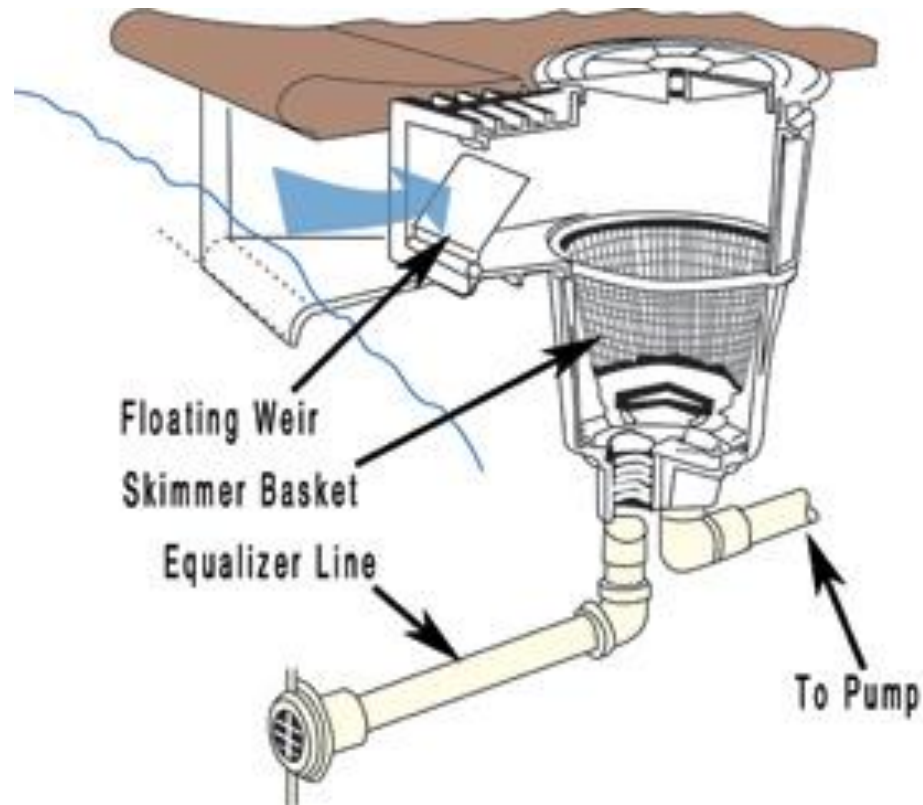
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Surge Tanks

- Also known as collection tank or balancing tank
- Water is displaced when bathers enter the pool
- Usually installed between the main drain system and recirculation pump



Surface Skimmers



Pump: The main feature of circulation

1. Pulls water from the pool through
 - skimmers or gutters and main drains
2. Pushes water through
 - filter(s)
 - Heater (not required)
 - Disinfectant equipment
3. Returns water to the
 - return inlets



Components of a pump

- Pump housing
 - Hair and lint strainer
 - Impeller
 - Motor (including shaft)
 - Mechanical shaft seals
-
- *Do not replace your pump or pump motor without checking with your local health department

Pool Water Filtration

Sand filtration

- Oldest type
 - Replace the sand every 5 to 15 years.

Cartridge filtration

- Newest form
 - Clean filters per manufacturer's recommendation.

Diatomaceous earth (D.E.)

- Most efficient type
 - removes the smallest particle size of any pool/spa filtration device

Different Types of Filters



Sand

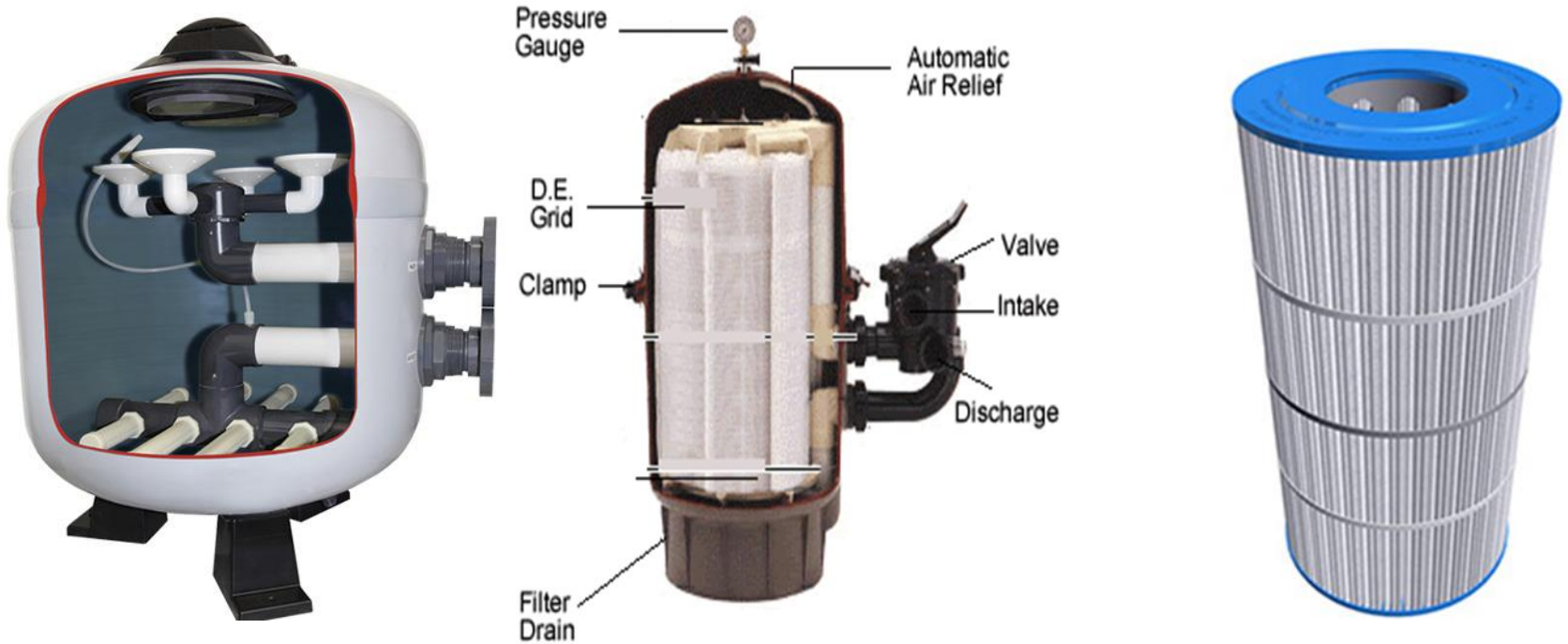


Cartridge



D.E.

Inside of a Sand Filter

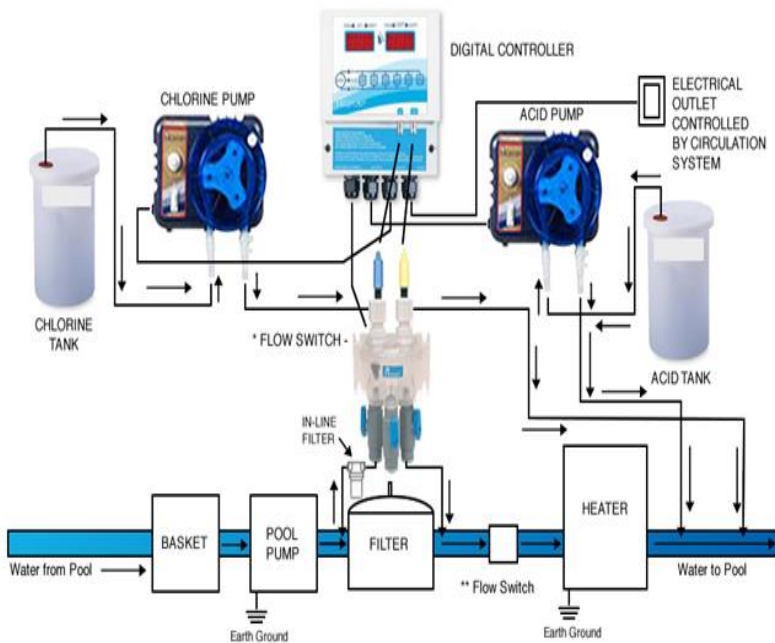




Heaters

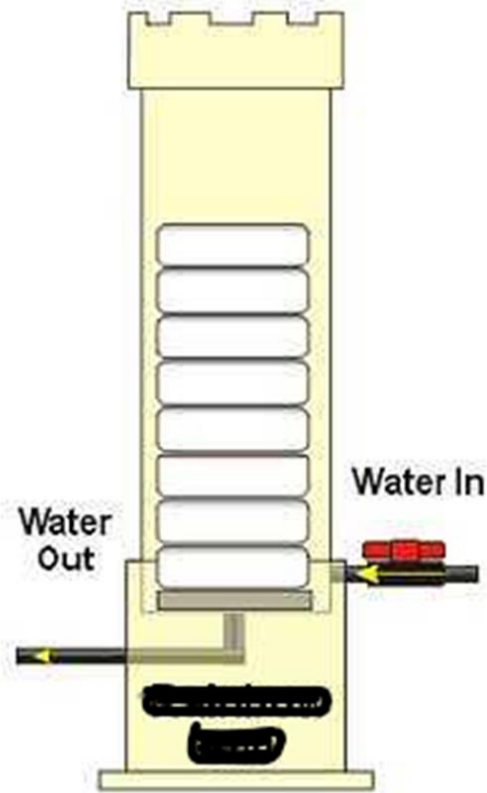
- Water temperatures should not exceed 104° F
- Temperature controls should be protected against unauthorized users
- Install before chemical injection
- Not a required piece of pool equipment
- **Contact your local health department before making any changes to your recirculation system.**

Disinfectant Feeder Types



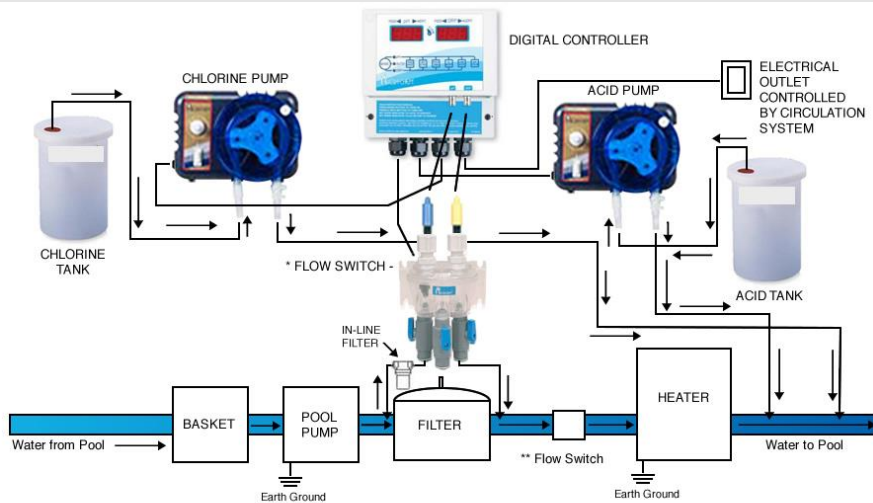
Disinfectant Type	Feeder Type
Trichlor (Tablets)	Erosion Feeder
Sodium hypochlorite (Liquid)	Chemical controller + Feeder pump for liquid
Calcium hypochlorite (Tablets, briquettes)	Chemical controller + Spray erosion feeder
Salt chlorine generator	Chemical controller + Salt chlorine generator

Erosion Feeders



- Water goes in from one end
- Tablets get dissolved slowly
- Water goes out from the other end
- Dial control (valve) allows flow adjustment
- Dial control and # of tablets in the feeder allow dose adjustment
- Smaller tablets (more surface area?)

Automatic chemical controller/feeders Safety



- The controller must not activate the chemical feed pumps when there is no flow
- Chlorine + Acid = Chlorine Gas
- Interlock and flow sensor are some of the techniques used, but not perfect
- Chlorine and acid containers are right next to each other



Return Inlets

- Flow patterns provide equal distribution of chemicals and temperature throughout the pool
- Location
 - Wall
 - Floors
 - Combination of both
- Essential in eliminating dead or stagnant areas
- Replace if
 - Missing
 - Sharp edges or extensions develop



Questions?



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