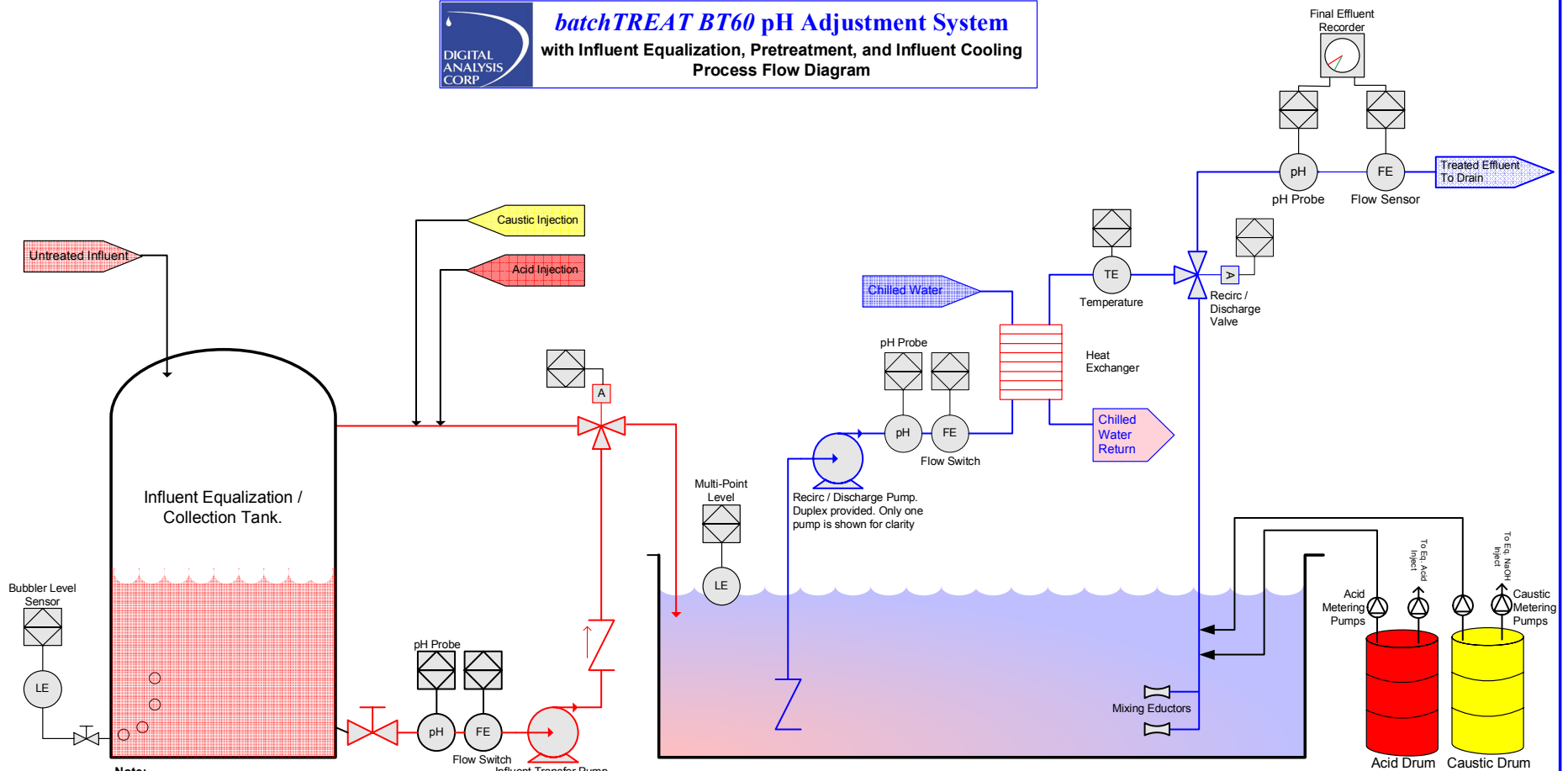




batchTREAT BT60 pH Adjustment System
with Influent Equalization, Pretreatment, and Influent Cooling
Process Flow Diagram



Note:
This is a typical configuration. Optional equipment such as the influent equalization pretreatment system (consisting of the equalization pH measurement and chemical injection equipment) is not required on all systems and may not be quoted.

batchTREAT BT60 pH Adjustment System
Batch Treatment Tank; 900+ Gallons



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Notes:

1. The **batchTREAT** family of pH adjustment systems are batch treatment systems capable of treating very highly acidic and alkaline waste streams. Sizes range from 5 GPM up to 10,000 GPM, with custom built systems handling millions of gallons per day.

2. In order to allow for continuous flow an influent equalization system is used. This system, as the name implies, equalizes incoming flow and chemistry. This tank is normally kept less than half full, therefore incoming flow can occur continuously and at varying flow rates. All incoming flow enters the system at the influent equalization system.

3. On rising level the equalization system will transfer a batch once the tank level reaches the LEH1 point, which is normally about 30% tank level, if the pH system is empty and idle.

4. The influent equalization transfer will halt once the treatment tank level rises above the LEH2 point, which is normally about 75% tank level.

5. Assuming that there is sufficient level in the influent equalization tank, the recirculation / transfer valve changes to the recirculation state once the **BT60** fills to the LEH2 level. In this mode of operation the influent equalization tank contents will be recirculated.

6. Coarse adjustment of pH can take place in the influent equalization tank if the influent equalization pretreatment system is used.

7. Treatment begins in the treatment tank as soon as a batch transfer from the influent equalization begins. Treatment continues as the treatment tank level rises. Under normal circumstances the treatment cycle is done by the time the treatment tank reaches the LEH2, full point. However, under conditions of higher levels of acidity or alkalinity the treatment time may take a considerable amount of time after the LEH2 point is reached.

8. Once the treatment tank pH is in range and stable, and has been in range and stable for a minimum period of time, thereby qualifying for discharge, the effluent will be automatically pumped to drain.

9. During discharge the effluent quality is constantly monitored by both the primary treatment pH probe and the optional final effluent monitoring pH probe. If the discharge pH should approach the discharge limits, as detected by either probe then discharge automatically halts and an alarm can occur.

10. Note: Target flow into the **batchTREAT** from equalization is approximately five times the nominal flow, or 300 GPM, likewise the target flow from the **batchTREAT** is 4-5 times the nominal flow.



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