

## Clean in place

Industriel Techniques Ltd design and manufacture hot and cold CIP systems for cleaning and sanitation of pipework and vessels in the brewery, these include single shot designs for heavily soiled applications, where there may be a risk of contamination to the process, other designs include recovery systems where the post rinse is re-used in the pre-rinse cycle reducing effluent costs and chemical / water consumption.

### Overview

#### *Pre-rinse cycle*

The tank is filled with cold liquor to the level probe, the outlet and drain valve are opened and pump started.

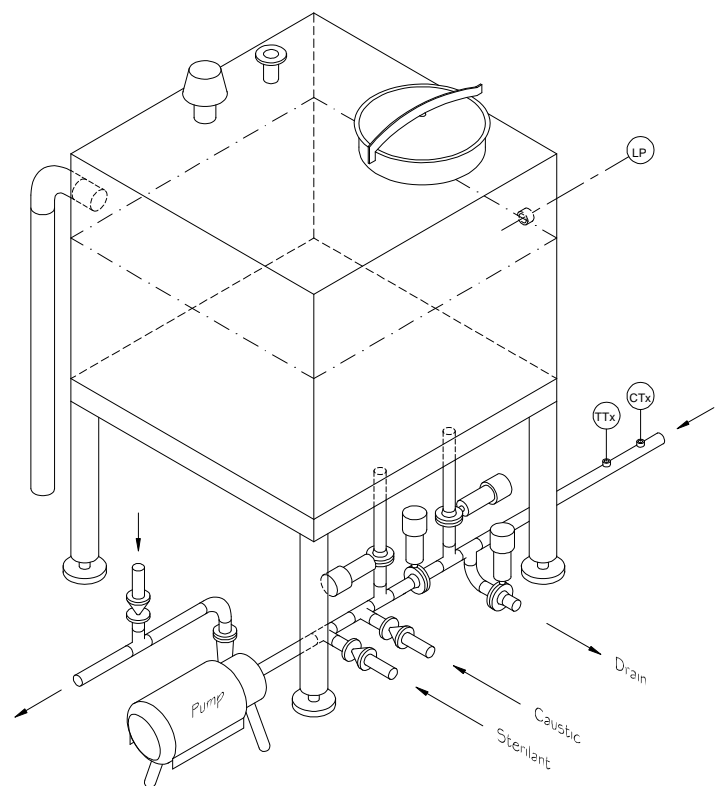
When the return flow switch is initiated a timer is started and the circuit is flushed to drain. When the timer has elapsed the drain valve is closed and the return valve to the tank is opened locking cold liquor in the circuit.

#### *Dilute caustic cycle*

Cold liquor is pumped around the circuit and live steam is injected to heat the liquor to a pre-determined temperature controlled via a temperature transmitter (TTx) located on the return main, once the temperature reaches the set point caustic is dosed into the system to approximately 2% concentration which is controlled via the causticity transmitter (CTx) located on the return main. The caustic solution is recirculated at around 3m/s velocity for pipework mains and to the cleaning head manufacturers recommended velocity for tanks and vessels. Additional steam and caustic are injected during the cycle to maintain both temperature and causticity within the set points. At the end of the dilute caustic cycle the contents is drained

#### *Post-rinse cycle*

The tank is re-filled with cold liquor and pumped around the circuit to drain until the low level set point is reached, the tank return valve is opened and drain valve closed, the cold liquor is injected with sterilent and recirculated for a pre-determined time, the post rinse including sterilent can be returned to the tank and re-used for the next pre-rinse cycle or sent to drain.



Single shot CIP system

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