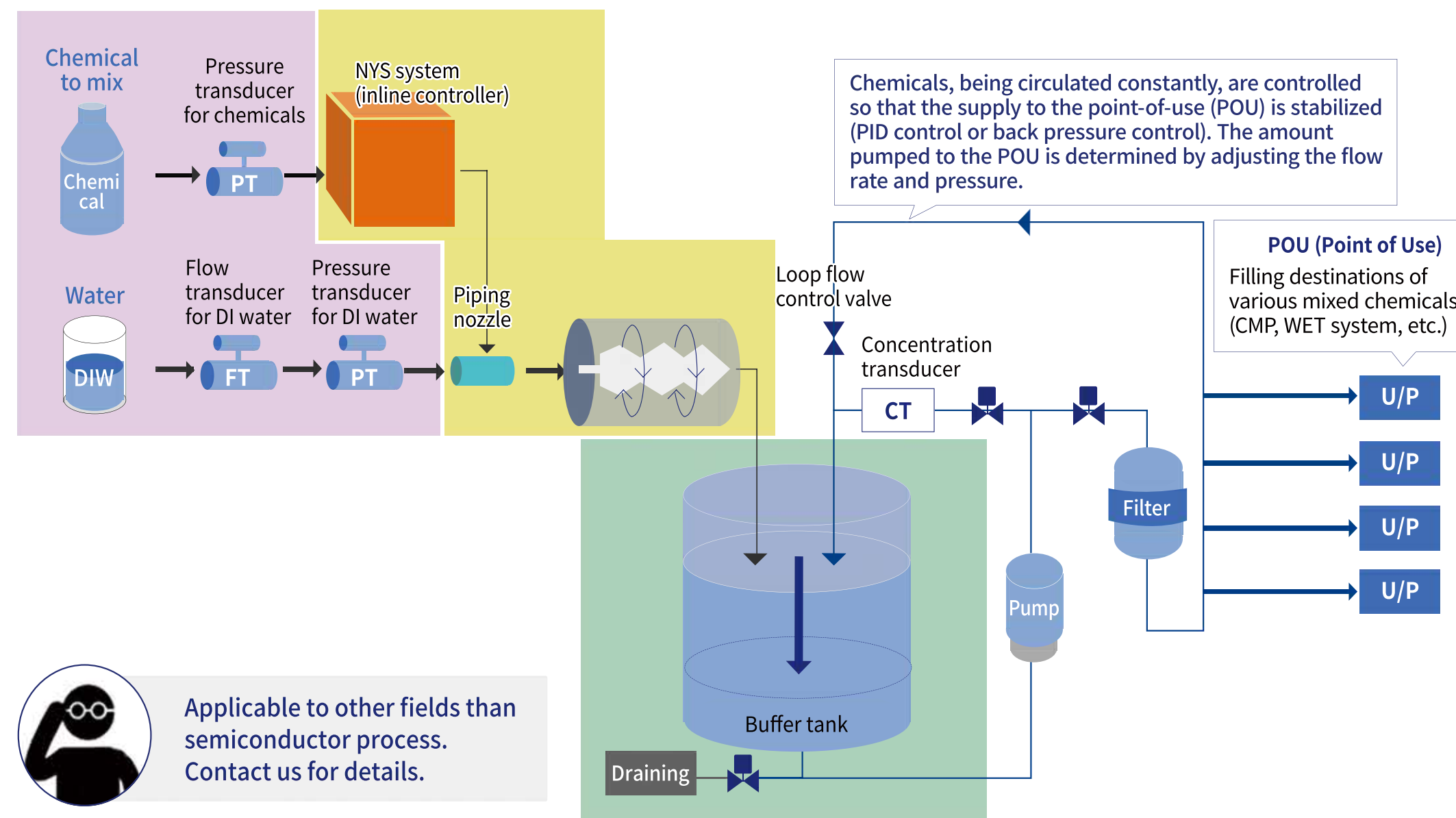


# CHEMICAL MIXING METHOD

NYS's unique chemical mixing method can achieve "high efficiency", "high accuracy" and "lower cost" in a simple mechanism without using complicated equipment.

Example: An in-line mixing system developed in-house



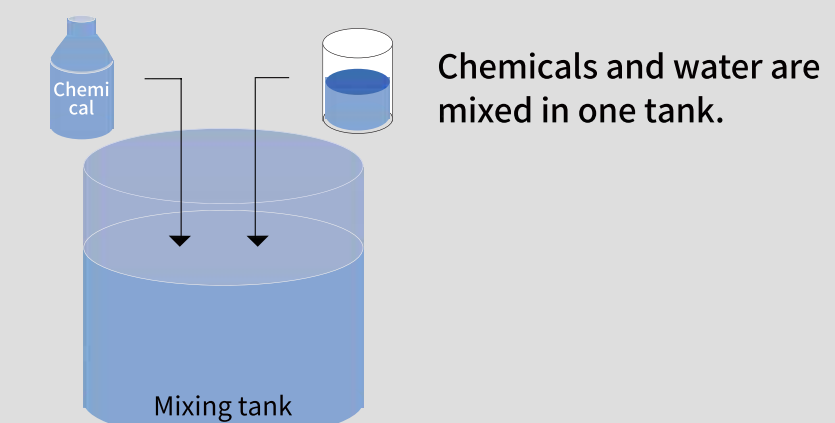
The "Mixer" and "Tank" functions are both mounted in the piping

## Conventional methods ...

mix chemicals and water in one tank.

## Disadvantages

- Impurities (dirt) could easily get into the tank.
- Only one mixing can be done per one tank.
- For a continuous dispensation, a mixing tank and a supply tank need to be installed separately.
- The only way to increase productivity is to increase the number of tanks, which requires larger physical footprint.



## NYS method ...

mixes chemicals and water in the piping before they enter a tank.

## Advantages

### (1) Space saving

Mixing and stirring can be done simultaneously in the piping, and the number of tanks and the footprint can be minimized.

### (2) High-precision mixing

No need to worry about impurities getting into the tank as mixing is done in the piping without being exposed to the outside air.

### (3) High-efficiency operation

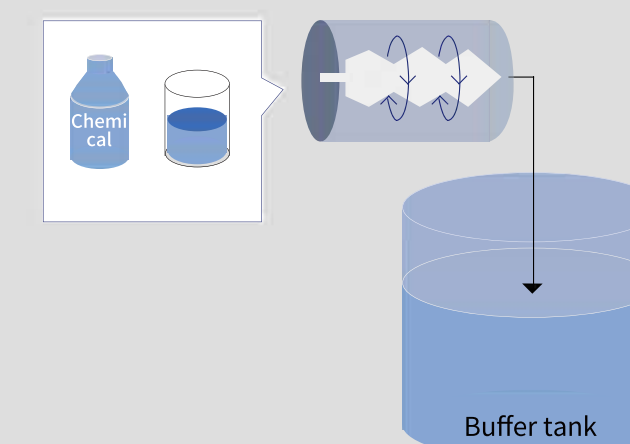
Since mixing processes are completed before the fluids go into the tank, the mixed fluid in the tank can be replenished even during a dispensation process. Also, chemical concentration can be easily changed.

### (4) Improved productivity

Continuous monitoring of concentration during dispensation processes ensures a stable supply. Mixing processes can be done continuously (with real-time monitoring function).

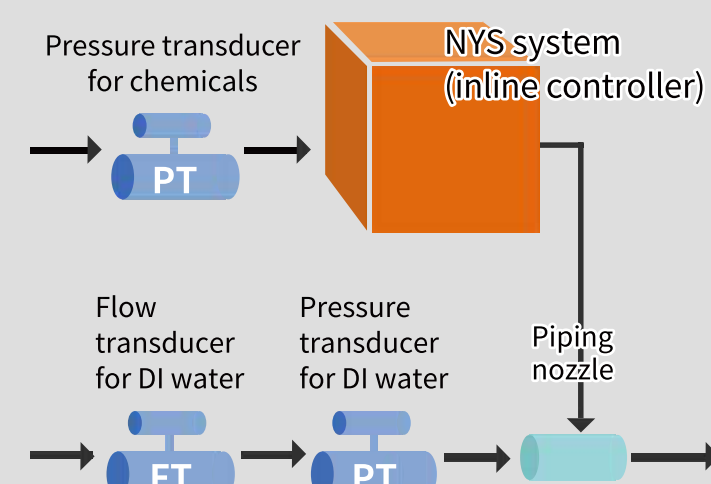
### (5) Lower cost

Achieving (1) through (4) results in total cost reduction.



## How we achieve high-precision mixing

The key to improving the mixing accuracy is to pay close attention to the accuracy of equipment used in the process before mixing chemicals and water. NISHIMURA CHEMITECH jointly develop such equipment with equipment manufacturers as system equipment, pressure gauges, flow meters and piping nozzles to improve the equipment accuracy.



## Replenishing operation

Mixed fluid is stored in a tank and then dispensed into POU's (chemical bottles, etc.). We offer a function to adjust the amount of fluid stored in the tank: when the mixed fluid volume decreases, a sensor detects the drop in the fluid level to start a replenishing mixing to bring the level back to a constant level.

