



# WFI COOLER



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EFFORTLESS TEMPERATURE CONTROL  
**SMART TECHNOLOGY**

# INTRODUCTION

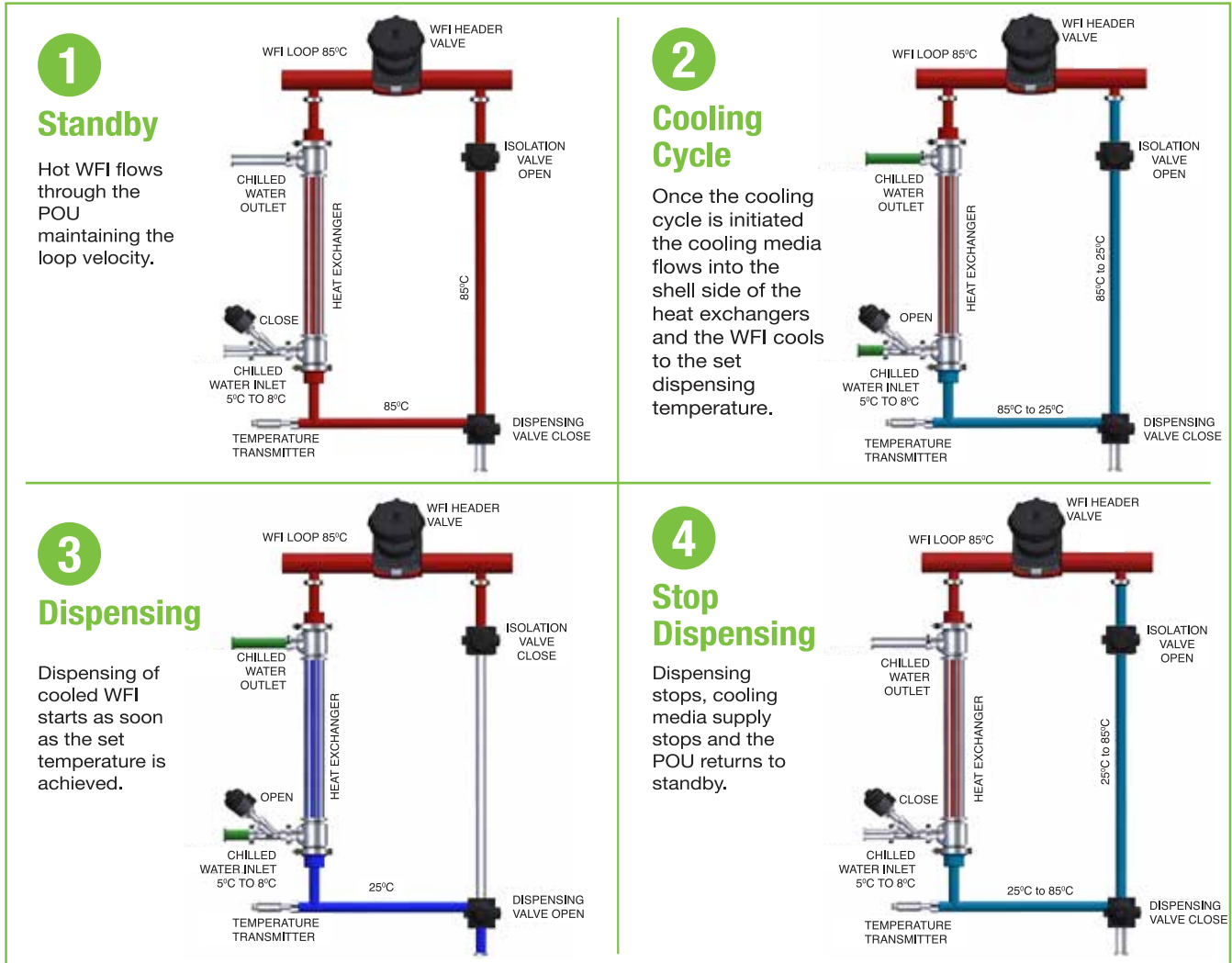
The POU Cooler is designed to dispense instant temperature controlled WFI. The POU's meet the high quality requirements and hygienic standards of the pharmaceutical industry featuring compact, high performance sanitary shell and tube heat exchangers in the double tube sheet configuration. Many features and options can be customized.



## WHY PUREX

- Dispense flow rates of 100 LPH (0.5 GPM) to 6000 LPH (25 GPM) at any range of temperatures
- Works as a subloop and complies with ASME BPE guidelines of maintaining velocity of 1.2 m/s to ensure that there is no microbial growth in the system
- Featuring double tube sheet heat exchanger which eliminates the risk of cross contamination
- POU performance remains unaffected by the loop pressure variations
- Optionally offers variable dispense flow rates with varying temperatures
- Advanced automation features allow integrated smart management of POU Systems and client's control system to optimize WFI loop performance
- Compliance to CFR 21, Part 11 guidelines (optional)
- Each and every unit undergoes FAT to ensure 100% validation

# PROCESS FLOW DESCRIPTION



## CONSTRUCTION FEATURES

Heat Exchangers	Sanitary double tube sheet shell and tube
POU Cabinet	Closed SS 304 matt finish cabinet with locking arrangement
Electrical Enclosure	CE and UL compliant
Contact Surface	Contact surfaces finish are as per Pharma requirements
Passivation	POUs are cleaned & passivated
Instruments	Process instruments are provided for the safe POU operation
Valves	Sanitary diaphragm
Insulation	Chloride free PVDF insulation

# PUREX ECONOMY



PUREX ECONOMY model is off the shelf solution. Dispensing is instant at the set point temperature. The dispensing temperature is visible on the display meter mounted on the cabinet door. This is a stand alone unit and operates with a single ON/OFF switch. Installation is easy with wall or skid mounting option.

**FEATURES**

- Very easy to operate
- Single/Constant flow dispense
- Single/Constant temperature dispense
- UL & CE Certified
- ASME BPE compliant
- Emergency stop button

## PRODUCT INFORMATION

MODEL NO	STEC 05
CAPACITY	100 - 1200 LPH (0.5 to 5 GPM)
DISPENSING MODE	Hot Dispense & Cold Dispense
OPERATION	Fully Automatic (ON/OFF switch)

# PUREX ADVANCED

The PUREX ADVANCED is a stand alone POU model and works in fully automatic and in manual mode.

**FEATURES**

- PLC/HMI based control for operation and monitoring
- 3 level of user security controls
- Single/Constant flow rate dispense
- Single/Constant temperature dispense
- UL & CE Certified
- ASME BPE compliant

## PRODUCT INFORMATION

MODEL NO	STAC 05	STAC 15
CAPACITY	100 – 1200 LPH (0.5 to 5 GPM)	1300 - 3500 LPH (5.5 to 15 GPM)
DISPENSING MODE	Hot Dispense & Cold Dispense	
OPERATION	Fully Automatic & Manual through HMI	
COMMUNICATION	Communicates with WFI control system through PFC/Ethernet	



# PUREX CUSTOM

PUREX CUSTOM is designed to meet the client's specific requirement. Most features and options can be customized.

This model can dispense the WFI at varied temperature and flow rates. Its operation is PLC controlled fully automatic and can communicate with other PLCs or SCADA.

## OPTIONAL FEATURES

- Multiple dispensing flow rates
- Multiple dispensing temperatures
- Dump to drain during cooling mode
- Zero Dead Leg isolation valves at header
- NEMA 4X compliant cabinet
- ASME BPE compliant
- CE & UL certification is optional
- Integrated operation with downstream equipment

## PRODUCT INFORMATION

MODEL NO	STCC
CAPACITY	100 – 6000 LPH (0.5 to 25 GPM) or higher
APPLICATION	Cooling or Heating
DISPENSING MODE	Hot Dispense & Cold Dispense
OPERATION	Fully Automatic & Manual through HMI
CONTROL OPTIONS	<ul style="list-style-type: none"><li>• Stand alone fully automatic</li><li>• Remote operation</li></ul>

## COMMUNICATION

OPTIONS	<ul style="list-style-type: none"><li>• POU to POU Communication</li><li>• Communication with other systems</li><li>• Communication with SCADA/DCS System</li></ul>
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# CONTROL OPTIONS

## Fully Automatic Stand Alone System

This is a stand alone unit which works independently without any communication with other systems

## Remote Start/Stop Operation

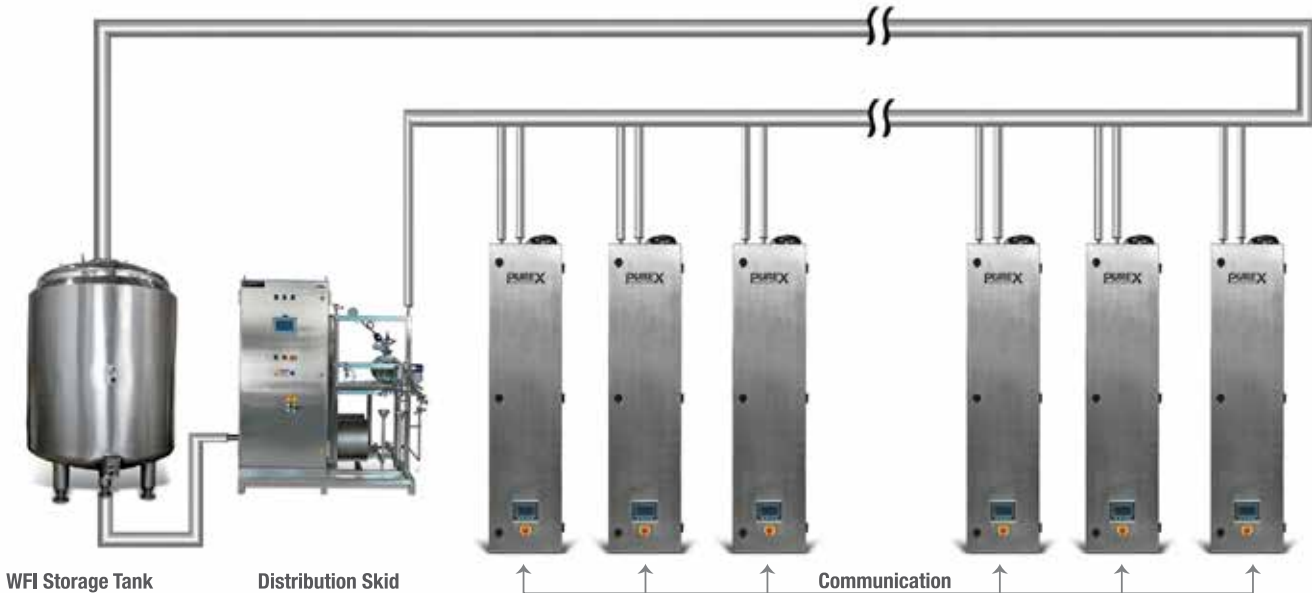
This is an additional feature to stand alone system, using this feature, the user can start/stop the POU remotely. This is useful when POU unit is not accessible to the user, i.e. either it is installed at higher elevation or other room. Remote START/STOP operation can be done by following options:

- Remotely installed HMI
- Communication with other system PLC
- Communication with SCADA/DCS system

## Communication Options



# POU to POU Communication



When there are multiple POUs installed in series in loop, the simultaneous operation of POUs has to be controlled to ensure the minimum required loop velocity as per Pharma guidelines. This is achieved by the POU to POU communication feature in which all POUs communicate with each other using Ethernet protocol and the user can limit maximum number of POUs in operation to ensure the loop velocity is maintained.

## Documentation & Tests

The Technical Documentation includes the following:

**Section 1**  
General  
Documentation

**Section 2**  
Component  
Description

**Section 3**  
Hardware and  
Software  
Documentation

**Section 4**  
Piping, Fitting  
and Welding  
Documentation

**Section 5**  
Operating  
and Instruction  
Manuals

**Section 6**  
Validation  
Protocols

## FAT

**Test A**  
Mechanical Component  
Acceptance Test

**Test B**  
Electrical  
Acceptance Test

**Test C**  
Functional  
Test



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