

PSC / FLEXX System Quality Design Criteria

Client Industry

Type of industry, please specify

Feed Source (Please attach analysis if available)

Select Client feed water source

Is Client treatment prior to the system being considered (e.g.: chlorine injection, softeners, etc.)? If yes, please list

Feed Water Summary

Feedwater Analysis has been provided with RFQ

Yes

No

- NOTE: a feedwater analysis must be submitted to PSC if PSC is to provide Application Engineering services otherwise all chemistry responsibility is considered to be provided "by others".
- Feedwater analysis submittal to include the following at a minimum
 - Ca, Mg, K, Na, Ba, Sr
 - Bicarbonate or Alkalinity, Cl, F, SO₄, NO₃
 - pH, Silica
 - TDS
 - TOC (required only if TOC is specified for final water quality)
 - And anything else there might be a specification for
- Please contact PSC for suitable laboratory if required.

Temperature (blend valve not inc.) °F

Pressure in psig

Maximum available flowing GPM

Desired Final Product Water Specification

Industrial / Commercial

Food & Beverage

Laboratory Grade

Biopharm

For USP Purified selection only

Additional Purity Requirements

Conductivity / Resistivity (μS/cm MΩ-cm)

Total Organic Carbon (TOC) (ppb)

Bacteria specification (cfu/ml)

Endotoxin specification (EU/ml)

Particles (Type)

(Limit)

Other (e.g.: pseudomonas free, RNA / DNA free, etc.), please list:

Will the water purification system be validated?

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Water Usage

1.	How much water will be used in an eight-hour shift?	
2.	How many shifts per day?	
3.	How many days per week?	
4.	If there were to be an interruption in make-up water (city feed issue or pre-treatment service) how much reserve water for production would the Client like?	
5.	What is the Peak Instantaneous Demand?	
6.	How long does the Peak Instantaneous Demand last?	

Client's Facility

1.	Does the customer understand that they will bring feed water pipe to the inlet connection of the system through a code required backflow preventer installed by a licensed plumber?		
2.	Please indicate facilities power platform		
	a. Single Phase	V	HZ
	b. Three Phase	V	HZ
3.	Are there drains in the area?		
4.	Is there a "no discharge" or "discharge quality" requirement?		
5.	Is there a source of clean, dry, oil-free air available for controls operations?		
6.	Are there any limitations to door openings, obstructions, or obstacles in place at the Client's location? Please describe dimensional challenges below:		
7.	Are there any special facility conditions (e.g.: explosion proof, seismic requirements, etc.)? Please describe below:		
8.	Please provide dimensional data of area, or room, where the equipment will be installed:		
	Length (inches)	Width (inches)	Height (inches)

Capital vs. Operating Cost

1.	Is the Client primarily concerned with:		
	Capital Cost		
	Operating Cost		
	Three year payback of operating cost over higher capital cost		
2.	Where applicable, is there a preference for:		
	(Note: if TOC is greater than 2.0 ppm, straight EDI system will not work, must employ a Reverse Osmosis system.)		

Utility Costs

1.	Is the cost of power at this facility known? (Cost per kilowatt)	\$
2.	Is the cost of city feed water known? (Cost per 1,000 USG)	\$
3.	Is the cost of wastewater disposal known? (Cost per 1,000 USG)	\$

Controls

Controls packages may range from simple lights and switches designed to permit safe operation of the equipment or, more complex packages that utilize Programmable Logic Controllers (PLC), HMI (Human Machine Interface), data acquisition, and remote communication. Design of the controls package can be custom tailored to suit each Client's specific requirements. All controls packages are available as either Siemens or Allen Bradley based platforms.

Cost Effective Defaults

A majority of systems can be controlled effectively with a lower tier PLC offering. This is both cost effective and simple to implement. Commonly used is an Allen Bradley MicroLogix or Siemens S7 200 based PLC with panel mounted lights and switches in UL, Nema 4/12, electrical enclosures.

Alternate Material Options

Enclosure (NEMA 4/12, NEMA 4X Fiberglass, NEMA 4X Stainless Steel)

Hardware (Allen Bradley or Siemens based PLC control system)

HMI: Small (used for "soft" switches), Large (used to view P&ID operations and unit values)

Ethernet capability: offers connectivity to Client Ethernet network and/or BMS system

Client Standards: list Client preferences not shown above (e.g.: larger processors, specific control components, standard platforms, etc.) below:

Additional Requirements

Standards: such as cUL, CE, etc. Please list below:

Additional Options

Additional options to complement the equipment being considered are listed below. Although these are typically related to service offerings for water equipment, they are important aspects to consider at the equipment design phase.

Validation

Interested in Validation Documents with system

Interested in option to field execute the Validation Documents

Instrument Calibration

Interested in critical instruments being calibrated by factory

Interested in on-going calibration as an aspect of local service offering

Build-Own-Operate: client is interested in no capital outlay and 3 to 5 years rental or lease program

Extended Warranty and Emergency Part Replacement
(Multi-year warranty and next day parts shipment)