

- ✓ Feed pump with automatic flow control
- ✓ Influent basket strainer for debris removal
- ✓ Chemical feed systems configurable for flow-pacing, closed-loop PID, or trim control
- ✓ Chemical feed pump configurable as a composite sampler
- ✓ Influent piping weir eliminates need for feed tank
- ✓ Multiple stage rapid mixing
- ✓ Multiple stage flocculation
- ✓ Variable speed mixers with direct entry of mixing gradient setpoint
- ✓ High intensity illumination of floc and float
- ✓ Dissolved Air Floatation Tank with adjustable nozzles and separation zones
- ✓ Automated float removal system
- ✓ Sample sink keeps equipment clean and dry



- ✓ All equipment integrated onto one skid for plug-and-play operation
- ✓ Designed for automatic un-manned operation
- ✓ Monitored and controlled remotely via wireless cellular connection
- ✓ Data logging to formatted text file for importing into spreadsheet and charting applications
- ✓ Historical and real-time trending visualization tool
- ✓ Alarm notification via email or text messaging
- ✓ IoT network of sensors provides exceptional diagnostic information



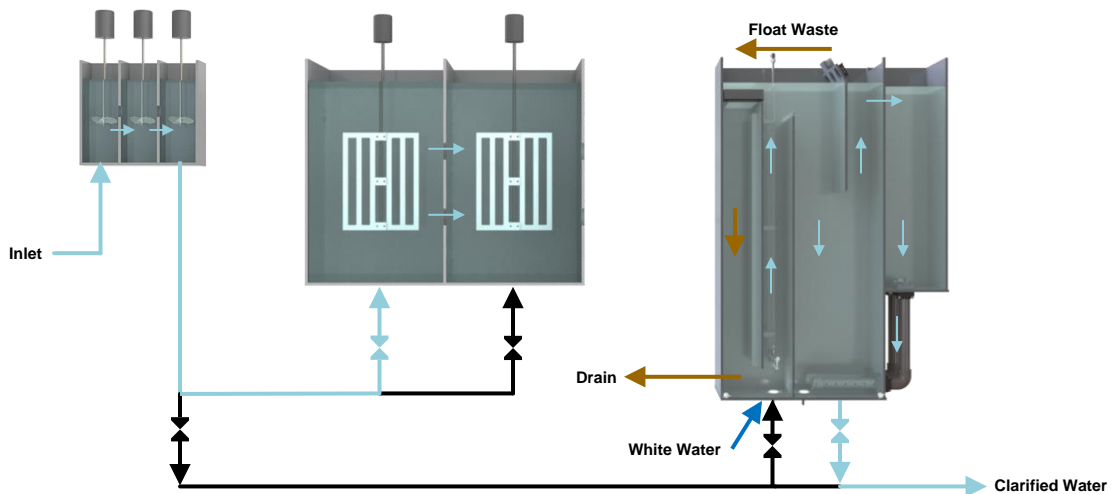
All information presented in this data sheet is for configuration code D09532210-10PC-2TU-2PH-4CF-1CM. See ordering section for other configurations.

## Example Specifications

D09532210-10PC-2TU-2PH-4CF-1CM		
Flow Rate	1...12 gpm	3.8...45.5 L/min
Strainer Size	> 0.031 inch	> 793 $\mu\text{m}$
Rapid Mix Basins	3	3
Rapid Mix Basin Volume	2.5 gallon	9.5 L
Rapid Mix Velocity Gradient	50...1000 $\text{s}^{-1}$	50...1000 $\text{s}^{-1}$
Flocculation Basins	2	2
Flocculation Basin Volume	95 gallon	360 L
Flocculation Velocity Gradient	5...130 $\text{s}^{-1}$	5...130 $\text{s}^{-1}$
Floatation Basin	138 gallon	522 L
White Water Pump	0.25 ... 1.20 gpm	0.95 ... 4.5 L/min
Saturation Air Rate	50 ... 60 psi	3.45 ... 4.14 bar
Clarified Water Basin	133 gallon	503 L
Chemical Feed Systems	4	4
Chemical Feed Rate	0.02...16.5 mL/min	0.02...16.5 mL/min
Chemical Tank Volume	3.75 gallon	14.2 L
Operating Dimensions	120 X 48 X 82.6 inch	3048 X 1219.2 X 2098 mm
Operating Weight	5700 lbs	2585.5 kg
Electrical Supply	Single Phase	Single Phase
Voltage	120 / 240 V	230 V
Frequency	60 Hz	50 Hz
Maximum Current	20 / 10 A	10 A

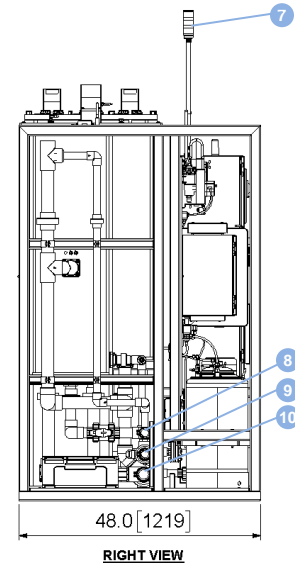
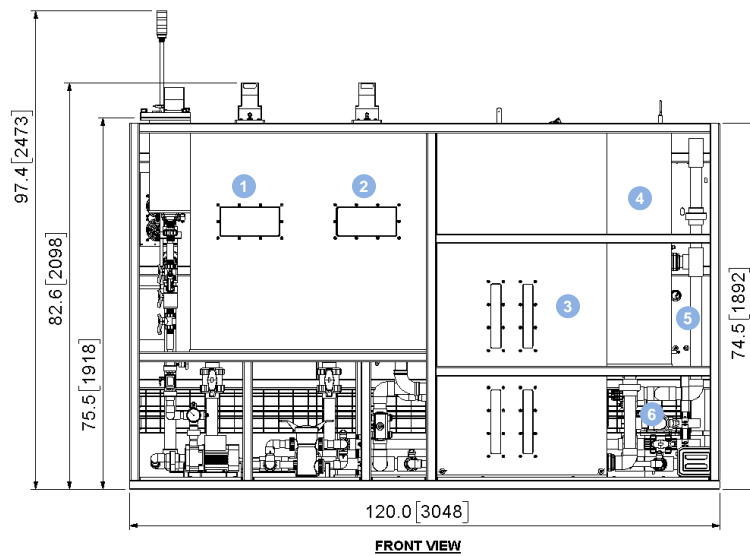
## Operation

The standard Flocculation and Dissolved Air Floatation Pilot module has three basic flow configurations. These include rapid mix only, rapid mix followed by flocculation for direct filtration applications, and rapid mix followed by flocculation and dissolved air floatation for conventional applications. The module includes three rapid mix basins for staged injection of chemicals for reaction optimization. It also includes two flocculation basins for staged flocculation. One or two stage flocculation can be configured using manually-operated valves. The floatation basin uses white water for floc floatation. Float is removed by an automatic flushing system. Cycle time and flow rate are adjustable for optimal float removal.



The diagram above shows valve position for three stage rapid mix followed by two stage flocculation and dissolved air floatation.

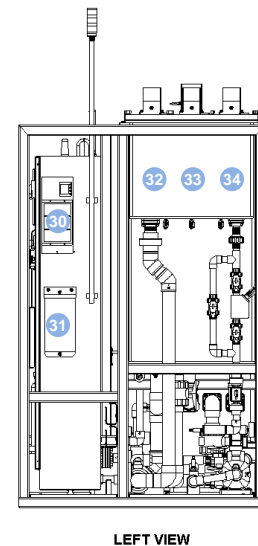
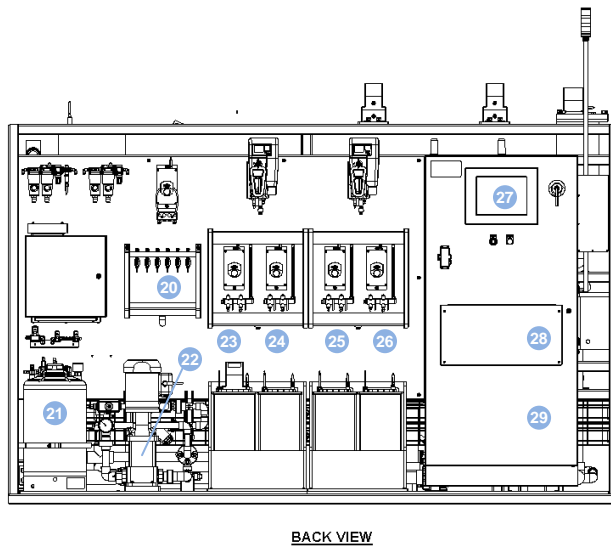
# General Arrangement Drawings



1	Flocculation Basin 1
2	Flocculation Basin 2
3	Floation Basin
4	Clarified Water Basin
5	Float Removal System

6	Float Flow Control Assy.
7	Status Beacon
8	Clarified Water, 1-1½" MPT
9	Inlet, 1- 1½" MPT
10	Drain Waste, 2" MPT

11	



20	Sample Sink
21	Air Prep System
22	Feed Pump
23	Chemical Feed System 1
24	Chemical Feed System 2

25	Chemical Feed System 3
26	Chemical Feed System 4
27	Operator Interface
28	Folding Shelf
29	Control Panel

30	Air Conditioner
31	Power Transformer
32	Rapid Mix Basin 1
33	Rapid Mix Basin 2
34	Rapid Mix Basin 3

Dimensions: inch [mm]

## Data Logging

The following parameters are automatically collected and stored for analysis. The collection is performed at a user-specified frequency from once per second to once per twelve hours. The values are time and data stamped and simultaneously written to a formatted text file on a removable flash drive and to a backup file on the internal solid state drive. These files can be transferred by removing the flash drive or using file transfer protocol over a remote connection.

Inlet Turbidity	Rapid Mix 3 Gradient	Chemical 1 Dosage	Chemical 3 Tank Level
Inlet pH	Flocculation 1 Gradient	Chemical 1 Flow	Chemical 4 Dosage
Inlet Temperature	Flocculation 2 Gradient	Chemical 1 Tank Level	Chemical 4 Flow
Feed Pump Suction Pressure	Clarified Water Turbidity	Chemical 2 Dosage	Chemical 4 Tank Level
Strainer Differential Pressure	Clarified Water pH	Chemical 2 Flow	System Diagnostic Data
Feed Flow	Float Flow	Chemical 2 Tank Level	Spare Signal 1 (4...20 mA)
Rapid Mix 1 Gradient	Float Removal Interval	Chemical 3 Dosage	Spare Signal 2 (4...20 mA)
Rapid Mix 2 Gradient		Chemical 3 Flow	Spare Signal 3 (4...20 mA)

## Remote Operation

The pilot module is designed for fully automatic un-manned operation and can be monitored and controlled remotely. A wireless cellular router is installed in the control panel. This device can provide remote access to the pilot module in locations where adequate cellular data service is available. The router can be configured for the Verizon or AT&T networks depending on which network has the best service at the installed location. Data service is included during the warranty period. Data service beyond the warranty period can be purchased from Intuitech in one year blocks. Any task normally performed using the operator interface can also be performed remotely using a laptop computer, tablet, or smartphone. The operator interface can also be configured to send alarm notifications via email or text messaging.



## Ordering

Our standard Flocculation and Sedimentation Pilot Module can be configured as shown below. It can also be customized to meet specific requirements for an additional cost. Please contact Intuitech for more information.

