

- ✓ Independent filters with automatic flow control
- ✓ Chemical feed systems configurable for flow-pacing, closed-loop PID, or trim control
- ✓ Chemical feed pump configurable as a composite sampler
- ✓ Shared backwash and air scour system
- ✓ Piping for two separate influent water sources
- ✓ Influent piping weirs eliminate need for feed tanks
- ✓ Parallel or series operation
- ✓ Backwash initiated by operator in manual mode, or by run-time, run-volume, headloss, or effluent turbidity in auto mode
- ✓ Configurable backwash procedure for each filter including drain down, air scour, concurrent wash, and multiple backwash steps
- ✓ Seven ports in each filter for sampling water or media
- ✓ 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 provides exceptional diagnostic information



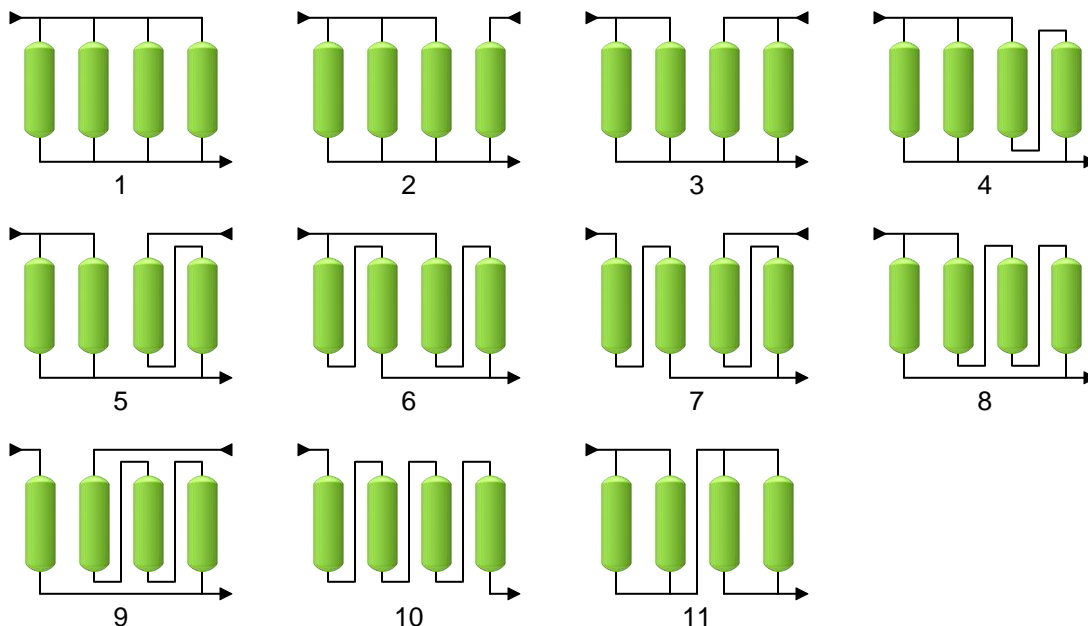
All information presented in this data sheet is for configuration code F40610-SAP-41PC-2TU-4CF.  
See ordering section for other configurations.

## Example Specifications

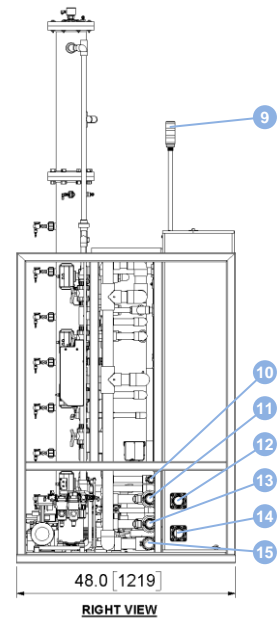
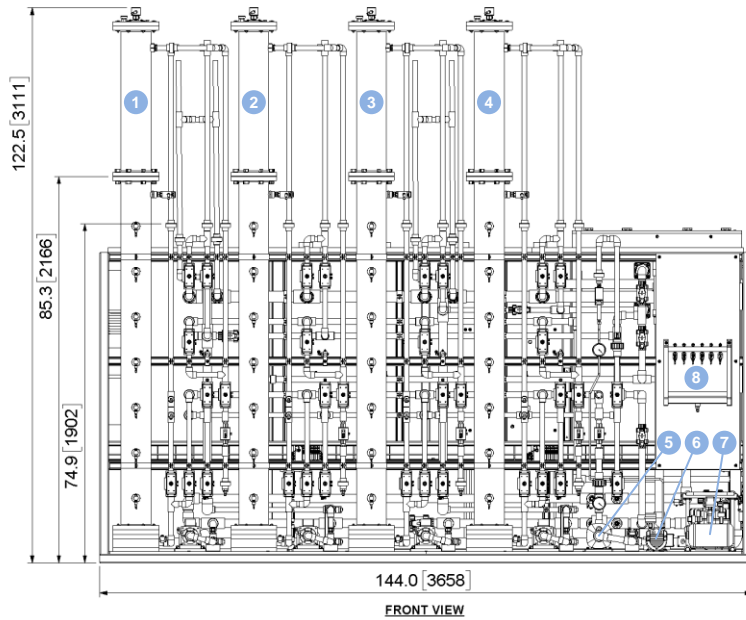
F40610-SAP-41PC-2TU-4CF		
Filters	4	4
Filter Diameter	6 inch	152 mm
Filter Height	112 inch	2845 mm
Maximum Media Depth	72 inch	1829 mm
Media Retention Size	> 0.0059 inch	> 149 $\mu$ m
Filtration Rate	2.1...21.6 gpm/ft <sup>2</sup>	5.1...52.5 m/h
Backwash Rate	5.1...51.0 gpm/ft <sup>2</sup>	12.4...124.6 m/h
Air Scour Rate	2.6...9.2 scfm/ft <sup>2</sup>	47.6...168.3 m/h
Maximum Headloss	25 feet	7.6 m
Maximum Total Flow Rate	16.4 gpm	62 L/min
Backwash Tank Volume	150 gallon	568 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	144 X 48 X 122.5 inch	3658 X 1219 X 3111 mm
Operating Weight	4200 lbs	1905 kg
Electrical Supply	Single Phase	Single Phase
Voltage	120 / 240 V	230 V
Frequency	60 Hz	50 Hz
Maximum Current	18.8 / 9.4 A	11.8 A

## Operation

The standard Granular Media Filtration Pilot module has a very flexible design. All configurations come with two feed water sources. Each source can be directed to a single filter or to a group of filters. If the PAR configuration is selected the filters are operated in parallel only. If the SAP configuration is selected the filters can be operated in series or parallel. Eleven possible configurations are shown below.



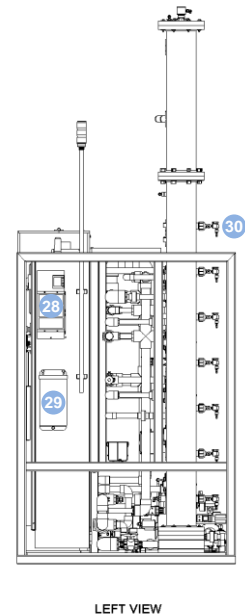
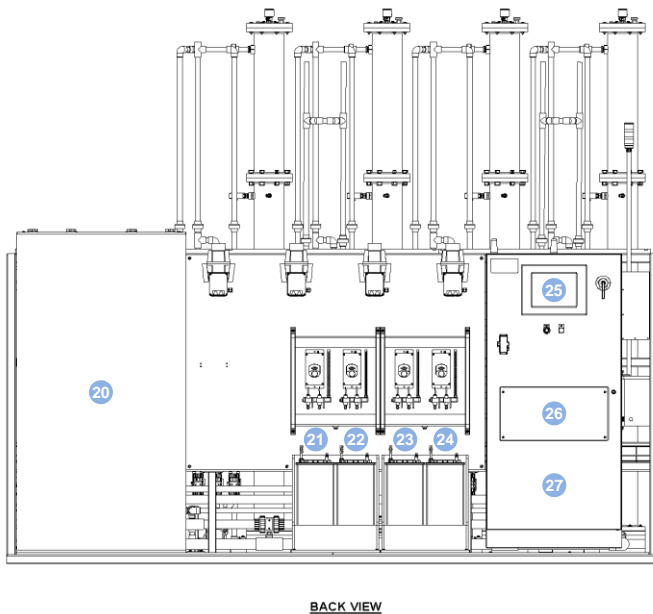
# General Arrangement Drawings



1	Filter 1
2	Filter 2
3	Filter 3
4	Filter 4
5	Backwash Pump

6	Air Scour Blower
7	Compressed Air System
8	Sample Sink
9	Status Beacon
10	Pressure Waste, 1" MPT

11	Inlet 1, 1½" MPT
12	Filtrate Overflow, 2" FPT
13	Inlet 2, 1½" MPT
14	Filtrate, 2" MPT
15	Gravity Waste, 2" MPT



20	Backwash Tank
21	Chemical Feed System 1
22	Chemical Feed System 2
23	Chemical Feed System 3
24	Chemical Feed System 4

25	Operator Interface
26	Folding Shelf
27	Control Panel
28	Air Conditioner
29	Power Transformer

30	Water / Media Sample Port

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.

Filter 1 Flow	Filter 3 Headloss	Chemical 1 Tank Level	Chemical 4 Tank Level
Filter 1 Headloss	Filter 3 Level	Chemical 2 Dosage	Backwash Flow
Filter 1 Level	Filter 3 Effluent Turbidity	Chemical 2 Flow	Backwash Tank Level
Filter 1 Effluent Turbidity	Filter 4 Flow	Chemical 2 Tank Level	Air Scour Flow
Filter 2 Flow	Filter 4 Headloss	Chemical 3 Dosage	System Diagnostic Data
Filter 2 Headloss	Filter 4 Level	Chemical 3 Flow	Spare Signal 1 (4...20 mA)
Filter 2 Level	Filter 4 Effluent Turbidity	Chemical 3 Tank Level	Spare Signal 2 (4...20 mA)
Filter 2 Effluent Turbidity	Chemical 1 Dosage	Chemical 4 Dosage	Spare Signal 3 (4...20 mA)
Filter 3 Flow	Chemical 1 Flow	Chemical 4 Flow	

## 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 Granular Media Filtration 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.

