

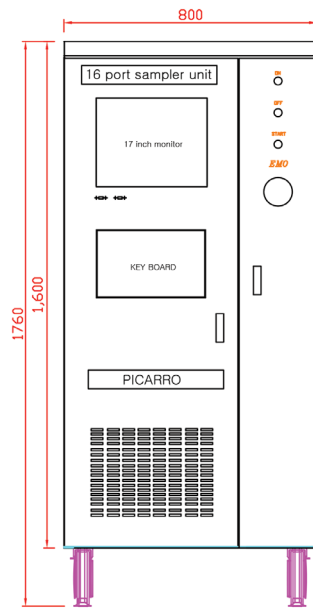
# Continuous Process Monitoring AMC System

For HF, HCl, NH<sub>3</sub> and H<sub>2</sub>S analyzers

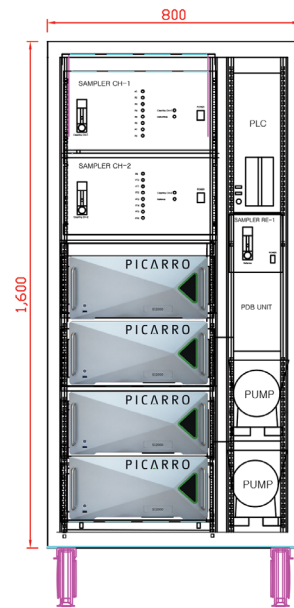
# PICARRO

- AMC system designed exclusively to support Picarro analyzer operation
- Simultaneous, continuous flush sequencer module provides very fast sample point scanning cycles
- Fully user-programmable leak search mode
- Configurable for 8, 16, 24 or 32 sample ports
- Recovery from PPM level leak events to normal cleanroom levels in just minutes
- Optimized performance for Picarro SI2000 analyzers

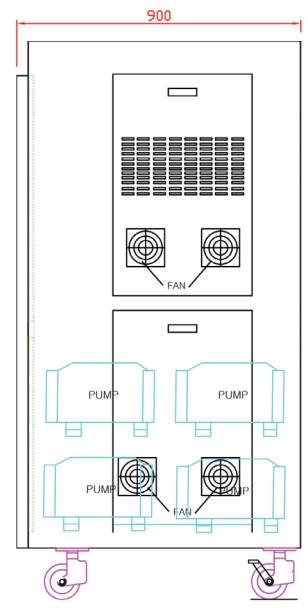
The **Picarro AMC Process Monitoring System** dramatically enhances the value of Picarro gas analyzers by expanding the area of coverage of our analyzers. The System has been designed to optimize response time in the presence of reactive gases with the lowest memory retention in the valves, connectors, sample lines and sequencer components. The Sample Sequencer Module utilizes a mass flow controller and a fast flow, high volume vacuum pump to draw sample as far away as 200 meters. The robust sequencer design is ideal for fast switching between different stocker locations, and for covering large areas in the fab or sub-fab and plenum areas. These highly reliable components assure the best performing system for AMC Process Monitoring with our Picarro SI2000 Series analyzers.



FRONT SIDE VIEW



FRONT INSIDE VIEW



LEFT SIDE

*Continuously monitor up to 32 sampling points for real-time airborne molecular contamination event confirmation!*

## Picarro Sample System Status Screen

The screenshot displays the PICARRO Sample System Status Screen. The main window shows a table of instrument data for 16 lines. The table has columns for Name, Date/Time, Model, and various gas concentrations (H2O, Temp, Press, HF, NH3, H2S). The data is organized into three model groups: Model [SI2108], Model [SI2306], and Model [SI2307].

Instrument Name	Date / Time	Model [SI2108]				Model [SI2306]				Model [SI2307]	
		H <sub>2</sub> O	Temp	Press	HF	NH <sub>3</sub>	H <sub>2</sub> O	Temp	Press	H <sub>2</sub> S	Press
Unit		ppb	°C	Torr	ppb	ppb	ppm	°C	Torr	ppb	Torr
[CH-1] Port.01-08	14:26:26	0.304	80.0	140.439	0.042	0.419	0.225	45.0	139.979	0.000	0.000
LINE #01	2018-01-05 14:20:11	0.311	80.0	139.934	0.042	0.425	0.227	45.0	139.958	0.000	0.000
LINE #02	2018-01-05 14:20:31	0.310	80.0	139.894	0.043	0.416	0.225	45.0	139.909	0.000	0.000
LINE #03	2018-01-05 14:20:51	0.311	80.0	140.031	0.043	0.411	0.227	45.0	140.060	0.000	0.000
LINE #04	2018-01-05 14:21:11	0.309	80.0	140.004	0.042	0.42					
LINE #05	2018-01-05 14:21:31	0.312	80.0	140.014	0.043	0.40					
LINE #06	2018-01-05 14:21:51	0.313	80.0	140.002	0.042	0.43					
LINE #07	2018-01-05 14:22:11	0.313	80.0	139.975	0.042	0.40					
LINE #08	2018-01-05 14:22:31	0.312	80.0	139.994	0.042	0.40					
[CH-2] Port.09-16	2018-01-05 14:23:11	0.314	80.0	139.995	0.042	0.41					
LINE #09	2018-01-05 14:23:51	0.312	80.0	139.886	0.042	0.43					
LINE #10	2018-01-05 14:24:11	0.311	80.0	139.980	0.042	0.42					
LINE #11	2018-01-05 14:24:31	0.308	80.0	139.984	0.042	0.42					
LINE #12	2018-01-05 14:24:51	0.307	80.0	140.017	0.041	0.43					
LINE #13	2018-01-05 14:25:11	0.309	80.0	140.011	0.041	0.43					
LINE #14	2018-01-05 14:25:31	0.308	80.0	139.938	0.041	0.43					
LINE #15	2018-01-05 14:25:51	0.310	80.0	140.020	0.042	0.42					
LINE #16	2018-01-05 14:26:11	0.307	80.0	140.000	0.042	0.42					

Overlaid windows include:

- Line Information:** Shows details for a specific line, including Item, Port Name, Active status, Sampling time, and Waiting time.
- PLC Program - Set Up:** A configuration window for the PLC program.
- Leak Search Schedule:** A grid showing the schedule for leak searches across 14 ports. The grid has columns for Start, Return, and Max Port, and rows for each port (Port 1 to Port 14).

At the bottom, there are flow control panels for [CH-1] Port.01 ~ 08 and [CH-2] Port.09 ~ 16, showing auto control settings and current data (e.g., 1.41, 0.00).

## AMC Process Monitoring System Software

User-selectable default and customizable programs are available for setting multiple sample point scanning & search modes. Default sample point cycle times are recommended at approximately 30 seconds each, but the Sequencer Module can be set to scan through each 8-port system at two to three times this rate or faster, if required. User-programmed scenarios can also be programmed to optimize the locations of leak events, or for monitoring the leak size over time (from low level PPT concentrations into the PPB levels), and for monitoring the potential leaks over as many as 32 sample points (or more) simultaneously. Both automatic and manual modes are available for leak search schemes. Preventive maintenance cleaning cycles can be programmed on a periodic basis and System Status screens will easily indicate each sample point composition and unique pressure & temperature readings. With the high flow, continuous flush design of each Sequencer module and proper annual sample line maintenance, frequent or excessive flushing of long distance sample lines should never be necessary - even after a significantly high concentration gas leak event in the PPM concentration levels.

A0317 Sample System Specification				
Model Numbers	A0317-8	A0317-16	A0317-24	A0317-32
Power Consumption	300 W	500 W	700 W	900 W
Power Requirements	100-110 V, 220-240 V, 50/60 Hz			
Sampling Line	3/8" PFA			
Configuration	Stationary Rack			
Dimensions	31.5" W x 36" D x 70" H (80 x 90 x 178 cm)			
Weight	485 lbs. (220 kg)			
Sample Pump Max. Flow Rate	60 liter/min			
Operating Conditions	5-40°C			
Ambient Humidity	<99% RH non-condensing			

**PICARRO**

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