

HIAC PODS+ Online Mode & Filter Cart Mode

Joe Dabbs & Bill F. Bars | Beckman Coulter, Inc., 481 California Ave Grants Pass, OR 97526 USA

Abstract

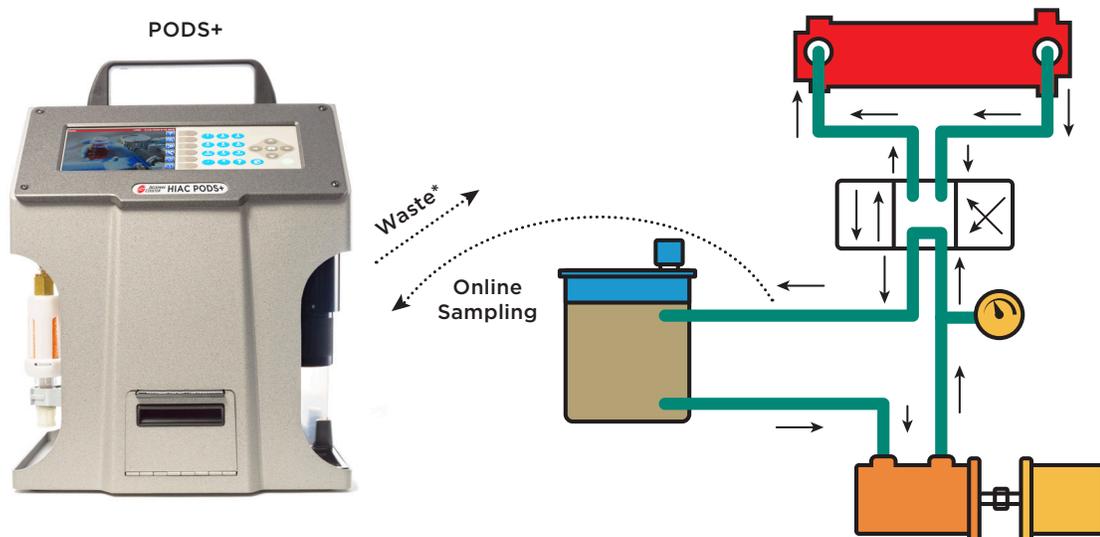
The HIAC PODS+ has three different sampling modes, Bottle Mode, Online Mode and Filter Cart Mode. The Bottle Mode is for sampling fluid that is contained within a bottle and then the bottle is placed in the sample cup chamber. Online Mode is when you connect the HIAC PODS+ directly to a system and the instrument makes measurements periodically. Filter Cart Mode is identical to Online Mode but with added features, like controlling an external device or simply turning a light on when the fluid becomes dirty. Knowing the differences between Online Mode and Filter Cart Mode will allow operators to get the most out of their PODS+.

Difference between Online Mode and Filter Cart Mode

Both are online configurations of the PODS+ instrument where the instrument is connected directly to an active fluid system:

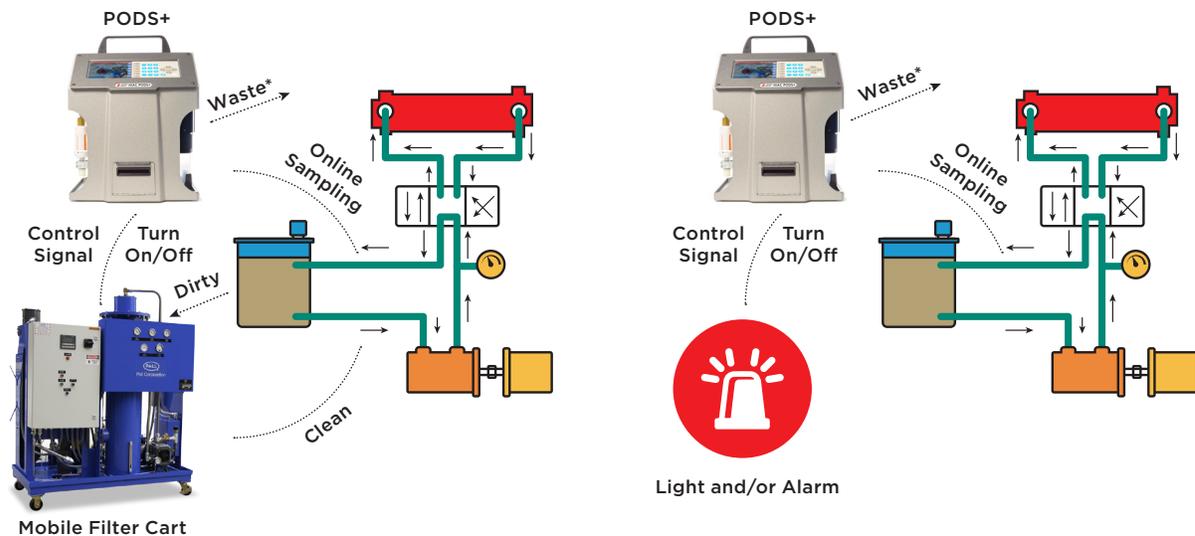
Online Mode

Makes measurements periodically from an active system to determine cleanliness in a dynamic environment.



Filter Cart Mode

Identical to Online Mode with the exception of the provision to specify a desired channel count level or cleanliness code at a point the operator would like to control an external device when that count or code is reached. This can be utilized for both “Clean to Dirty” or “Dirty to Clean”, scenarios.



*Waste line must have little or no pressure for fluid to properly flow through the PODS+

Scenario 1 – Filter Cart Mode Clean to Dirty

Connect the PODS+ to an active system and taking a particle count measurement hourly. Like most systems, contamination levels increase steadily while the system is in operation. The operator would like to know either visually or audibly without constantly monitoring the instrument when the contamination level reaches an ISO code of 20 on the 4 μ m channel. The PODS+ can be connected in the online manner to the system to perform the periodic sample testing. The Filter Cart Mode is selected and programmed to trigger an external device when the system reaches the desired code of 20 on the 4 μ m channel (Clean to Dirty option). Once the desired code is reached, the PODS+ is equipped with an I/O control port with relay contact control to drive an alarm light, audible alarm, or other electronic device to signal the operator the system is dirty and in need of service.

Scenario 2 – Filter Cart Mode Dirty to Clean

This is a follow onto the above scenario where now you have a dirty system that needs to be connected to a filter cart for cleaning. The PODS+ can be configured with the “Dirty to Clean” option and a cleanliness trigger level of an ISO code of 14 on the 4 μ m channel. Start the system and start the PODS+ sampling. The I/O port would be connected to control the filter cart pump so that when the cleanliness code of 14 on the 4 μ m channel is reached, and the system is sufficiently clean, the control signal can turn off the filter cart pump. This is a walk away scenario where the instrument, filter cart, and system are started simultaneously and when the process is complete the Filter cart pump is shut down to be disconnected and removed at the customer’s convenience.

Hardware

For both the Online and Filter Cart mode the following accessories are required.

Online Adapter Kit Part number: B95366

Included in the Kit: On-Line Adapter, High Pressure Hose Mini-mess/SAE J514 40”, High Pressure Hose Mini-mess/Mini-mess 78”, Drain Tubing 6’, antistatic PTFE with metal quick connect, and a FFKM O-ring.

Author



Joe Dabbs | Beckman Coulter, Inc.,

481 California Ave Grants Pass, OR 97526 USA

Joe Dabbs is a Global Marketing Manager for Beckman Coulter Life Sciences Industrial Particle Counting. In this role he manages the HIAC portfolio of liquid particle counters and sensors and has recently driven the development and release of the new HIAC PODS+. He has a B.S. in Kinesiology from Western State College of Colorado and an MBA from Marylhurst University.



Bill F. Bars | Beckman Coulter, Inc.,

481 California Ave Grants Pass, OR 97526 USA

Bill F. Bars is a Sr. Applications Scientist for Beckman Coulter Life Sciences in Grants Pass, Oregon, USA. He has created and developed many of the liquid systems production processes and procedural tools for the BEC Particle products. These products include but are not limited to the following HIAC branded products: 8011+, PODS+, GlyCount, 9703+, ROC, and HRLD Sensors. He has worked for Beckman Coulter Life Sciences for 20 years in a multitude of engineering capacities ranging from Metrology to Service Training and Application Support. He is a member of the NFPA U.S. TAG to ISO/TC 131/SC 6 - Contamination control group.