

Add-On Sensor Kits For Connecting Equipment to IIoT.

Using Conair's SmartServices™ sensor kits, you can connect older equipment, and non-Conair equipment to Industry 4.0 and the Industrial Internet of Things (IIoT).

Sensor kits are available in two levels - basic (Kit A) and advanced (Kit B). SmartServices sensors can currently be added to: Pumps (positive displacement, long distance, regenerative, and hybrid style), Thermolators (temperature control units), resin dryers, and PowerFill units.



SmartServices Sensor Kit on PD Pump
(not all sensors shown)

Industry 4.0 technology for pre-Industry 4.0 equipment

Sensors have come a long way in a short time. SmartServices sensor kits enable you to work ahead of the curve.

Wouldn't you like to know in advance that your pump filter is slowing down productivity? Clogged filters increase wait time for receivers as demand is met down the line. Wouldn't it be great to know BEFORE the pump belt breaks that there's an issue? Sensors can help with that.

Is it important that your dew point be monitored on an older dryer without built-in dew point monitoring? SmartServices sensor kits can help with that - as well as letting you know process temperature, regeneration temperature, filter status, and even Drying Monitor information.

Thermolators need to work day after day, shift after shift. Sensors included with your SmartServices sensor kit will help you know when flow rates decrease, pumps are running harder than normal, inlet pressure changes, or even what your average temperatures and pressures are, so that you can be notified when anything moves out of the "normal" range.

► Backwards compatible

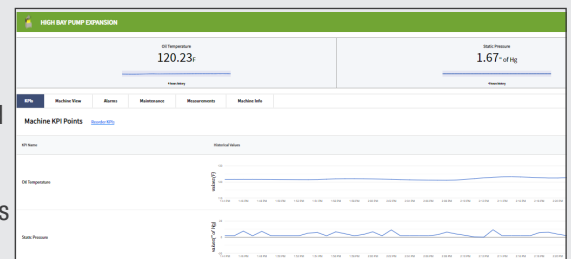
The SmartServices sensor kits allow for backwards compatibility. Now your older equipment without current control technology can still be connected to your IIoT system. Have a dryer that's as old as the dirt, but still runs great? No problem - it can be connected.

► Everything you need for easy installation

These kits are designed to have everything you need for most applications. From detailed engineering drawings and sensors with attached wiring to wire ties and double-sided tape, these kits will get you from A-Z without stopping to pick up supplies at the hardware store.

► At-a-glance equipment performance visibility

One of the many advantages of SmartServices is the dashboard - see all your connected equipment on one dashboard, with Key Performance Indicators and equipment health at a glance. These sensor kits enable your older equipment to be monitored on this same dashboard.



► Conair support when you need it

We all know that issues happen any time - during evenings, weekends, and even while you're on vacation. Conair's SmartServices dashboard not only gives you access to your connected equipment wherever you are - it also can give Conair the ability to remotely troubleshoot and diagnose issues.



Uptime Guaranteed

Remote control and diagnostics, KPI monitoring and notifications, maintenance reminders, and pre-failure predictions.

SmartServices delivers the connection of modern technology to operators, maintenance staff, and production managers to significantly reduce unplanned downtime. With maintenance interval reminders, and KPI monitoring and notifications, you can schedule maintenance during planned downtimes. The ability to monitor temperatures, vibrations, flow rates, and pressure differentials with SmartServices sensors and PLC controls, allows for benchmarking of "operating correctly" data, which can be compared to real-time data. If real-time results are outside the allowable bandwidth of normal operation, it is an early indicator of potential future problems.

Pumps, belts, and filters don't typically fail in an instant. Normally, these wear items fail over time. SmartServices can monitor changes in operation and predict failure before it occurs, allowing you to prevent unplanned failures. That is why Conair advertises Uptime Guaranteed.

• **Surface Temperature**

These sensors are used to notify you of abnormal heat increases on the surface of a pump, motor, or other mechanical piece of equipment. These abnormalities typically indicate a future failure.



• **RTD Probe**

RTDs are used to determine the current temperature of air flow, liquid, and more. These sensors can detect increases or decreases

in temperature, and will warn of heater failures, overheating oil in pumps/motors, and other temperature-related issues.



• **Vibration**

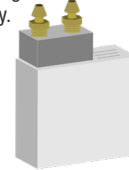
Motors, pumps, and other equipment does vibrate during normal operation. That's typical. But SmartServices knows the difference between normal vibration, and the type of vibration that is



an early indicator of problems like pump failures, worn bearings, loose/worn belts, and more!

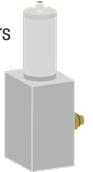
• **Pressure differential**

Knowing the difference in pressure/vacuum before and after a filter allows SmartServices to detect when a filter is starting to become too dirty.



• **Dew Point**

Dew point monitors can help prevent wet material from being used to make parts. Many older dryers or dryers not from Conair do not offer dew point monitoring. These sensors monitor the dryer's performance and efficiency and will notify you of potential problems.



Which Kit?

Pumps (PD, RG, LDP)

Kit A Sensors:
Vacuum transducer
Pressure differential

Kit B Sensors:
Vacuum transducer
Pressure differential
Surface temperature
Vibration sensor

Thermolators

Kit A Sensors:
RTDs (2)
Pressure transducers (2)

Kit B Sensors:
RTDs (2)
Pressure transducers (2)
Flow sensor
Vibration sensor
Inlet pressure sensor

Dryers

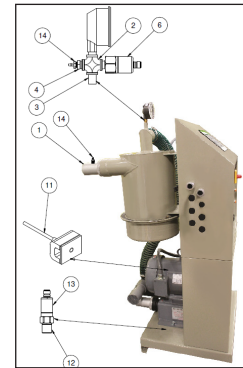
Kit A Sensors:
RTDs (4)
Dewpoint sensor
Pressure differential (2)

Kit B Sensors:
RTDs (6)
Dewpoint sensors (2)
Pressure differential (2)
Drying Monitor probe

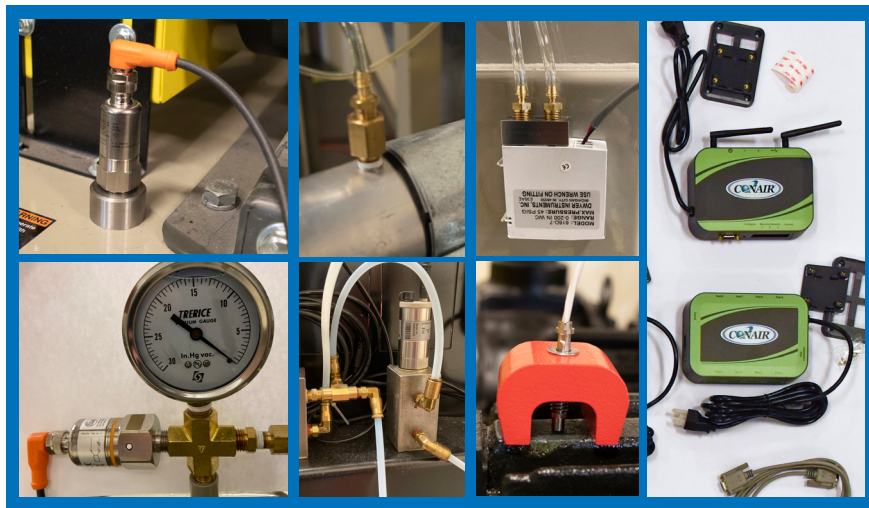
PowerFill

Kit A Sensors:
Vacuum transducer
Pressure differential

Kit B Sensors:
Vacuum transducer
Pressure differential
Surface temperature
Vibration sensor



How it Works



Sensors on the equipment — Attached to the SmartServices Expansion Box — Connected to the Conair Cloud*

RTDs, vibration sensors, surface temperature sensors, flow meters, dew point sensors, and other individual sensors are attached to the SmartServices Expansion box ports and the Hub. The SmartServices Hub communicates over the Internet to the secure cloud storage. The data in this cloud storage is analyzed and displayed on your SmartServices dashboard when you log on.

*hosted by Amazon Web Services

Specification Notes

Specifications may change without notice. Consult with a Conair representative for the most current information.

