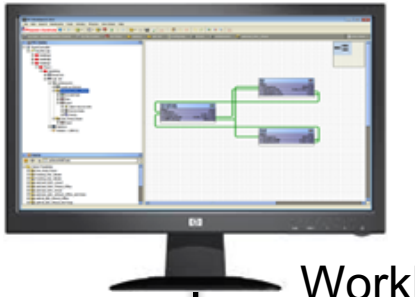
vantage
BY PHOENIX CONTROLS

Room Manager

Supervisor



Workbench

Room Controller

Room Integrator

View

Sentry

Accel II Valve With Celeris Valve Controller

View Pressure

Accel II Tracking Pair with Traccel Valve Controller

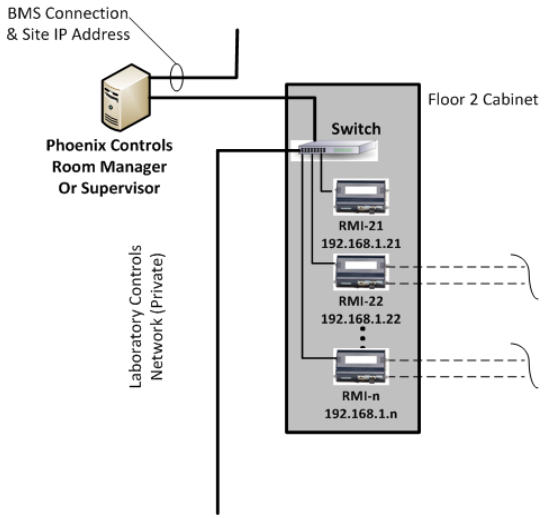
Comprehensive Laboratory Management Solution

New Integration Solutions

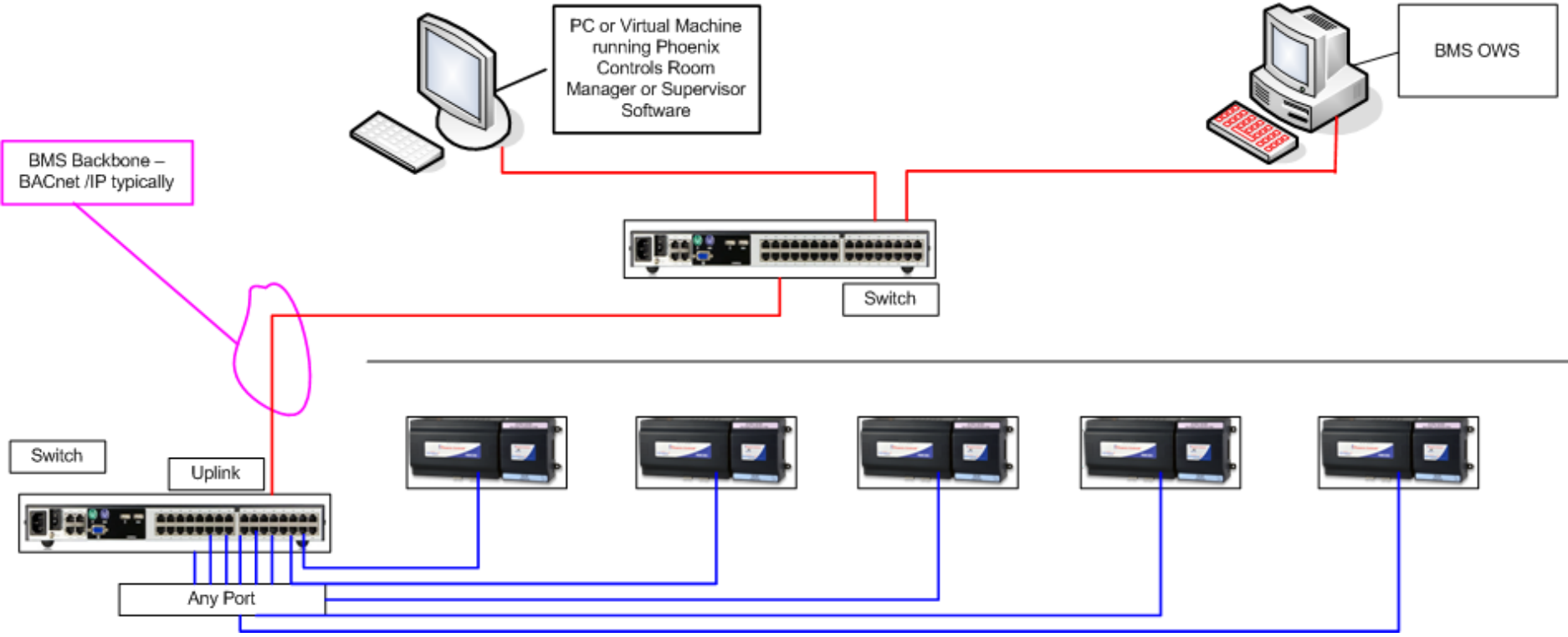
- **Room Integrator (RMI)**
  - Low cost integration only product
  - Room networking and protocol translation
  - Integrate one room at a time
  - Webserver serving diagnostic displays

- **Room Controller (RMC)**
  - Networking, Integration and Control in one cost effective solution
  - Same features as RMI
  - Plug in IO Modules

- **Room Manager Software (RMM)**
  - Functionally replaces MacroServer
  - Supports single IP drop architecture
  - Local backups
  - Remote access point

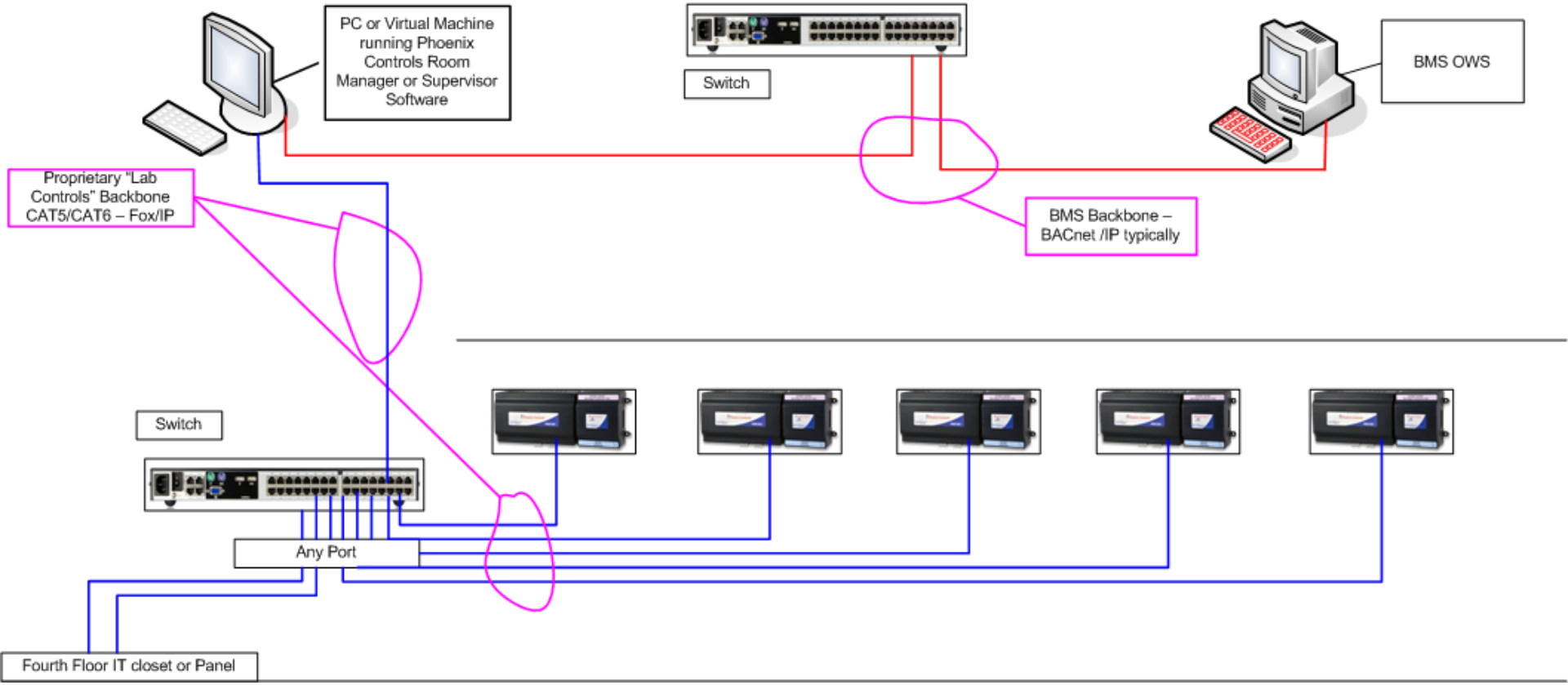


Distributed Integration

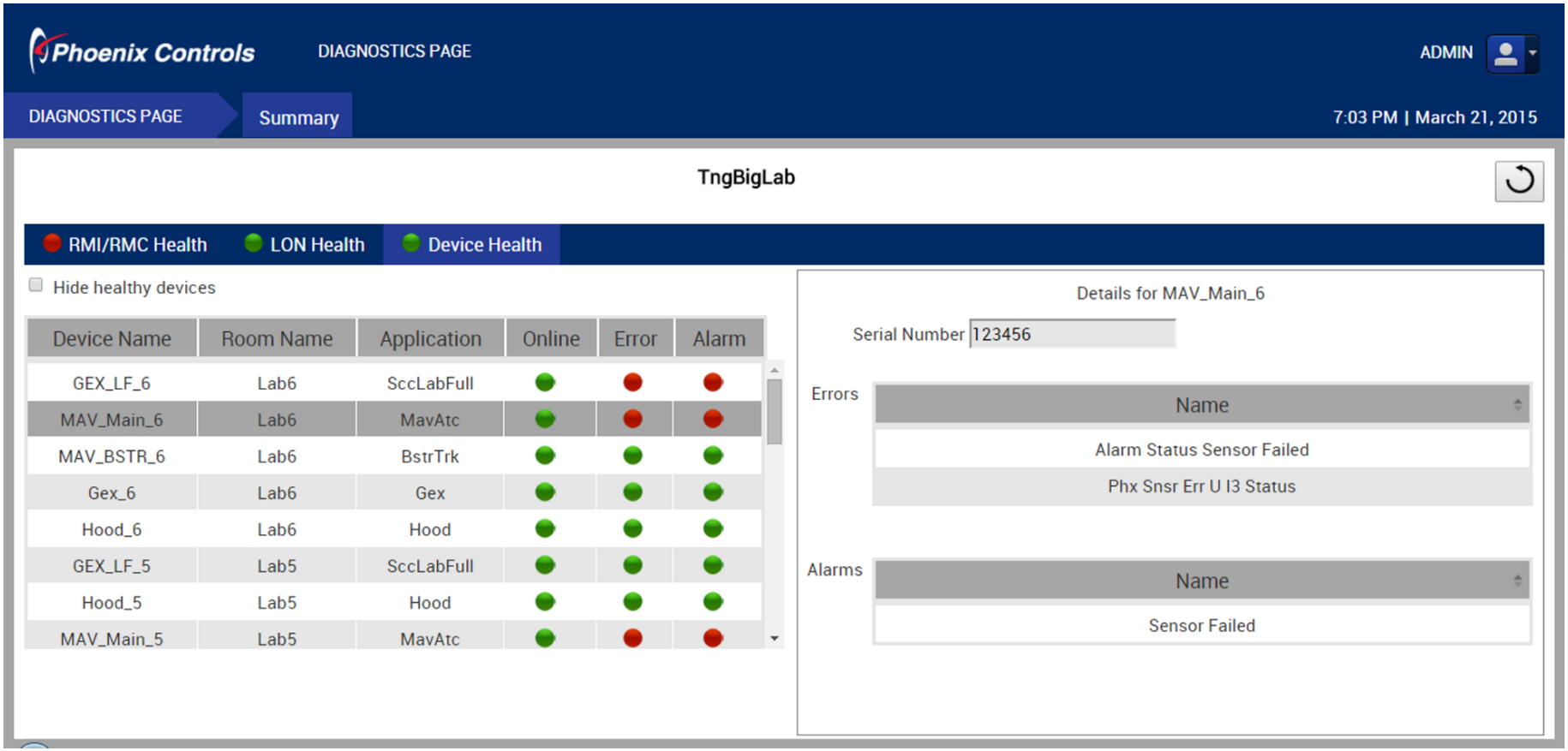


Integrate as soon as room is commissioned

Centralized Integration

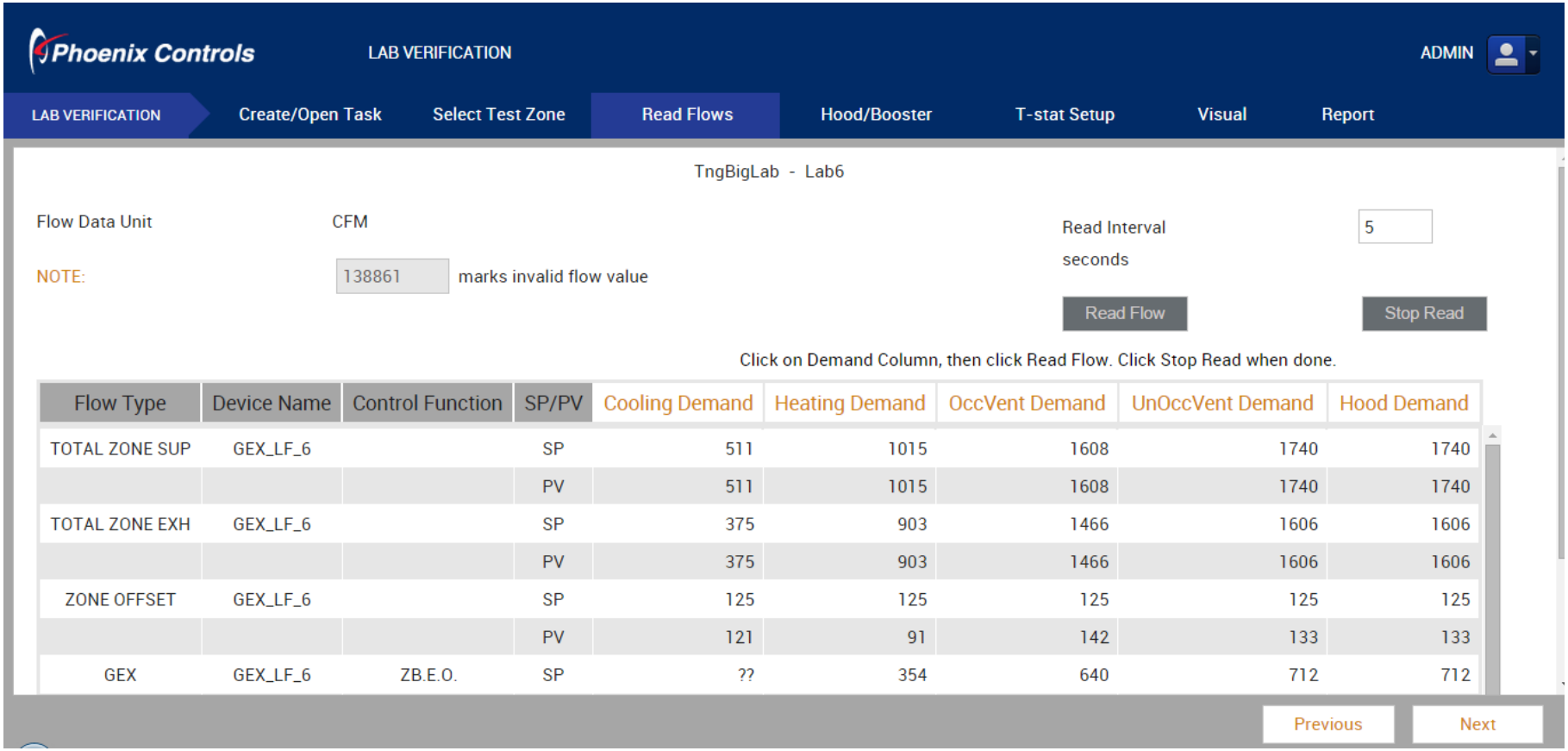


Diagnostic Displays



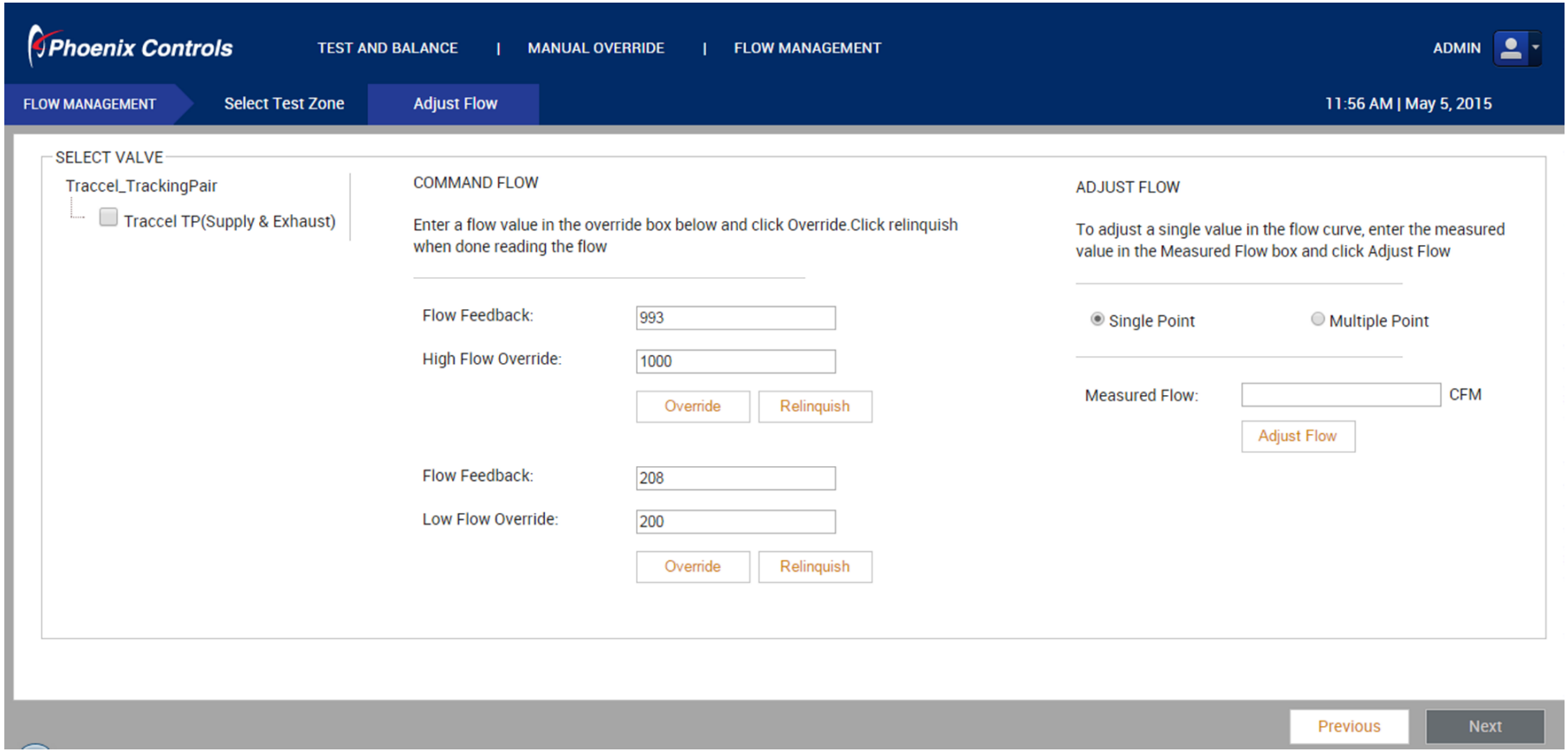
Diagnose a problem anywhere you have access

Flow Management



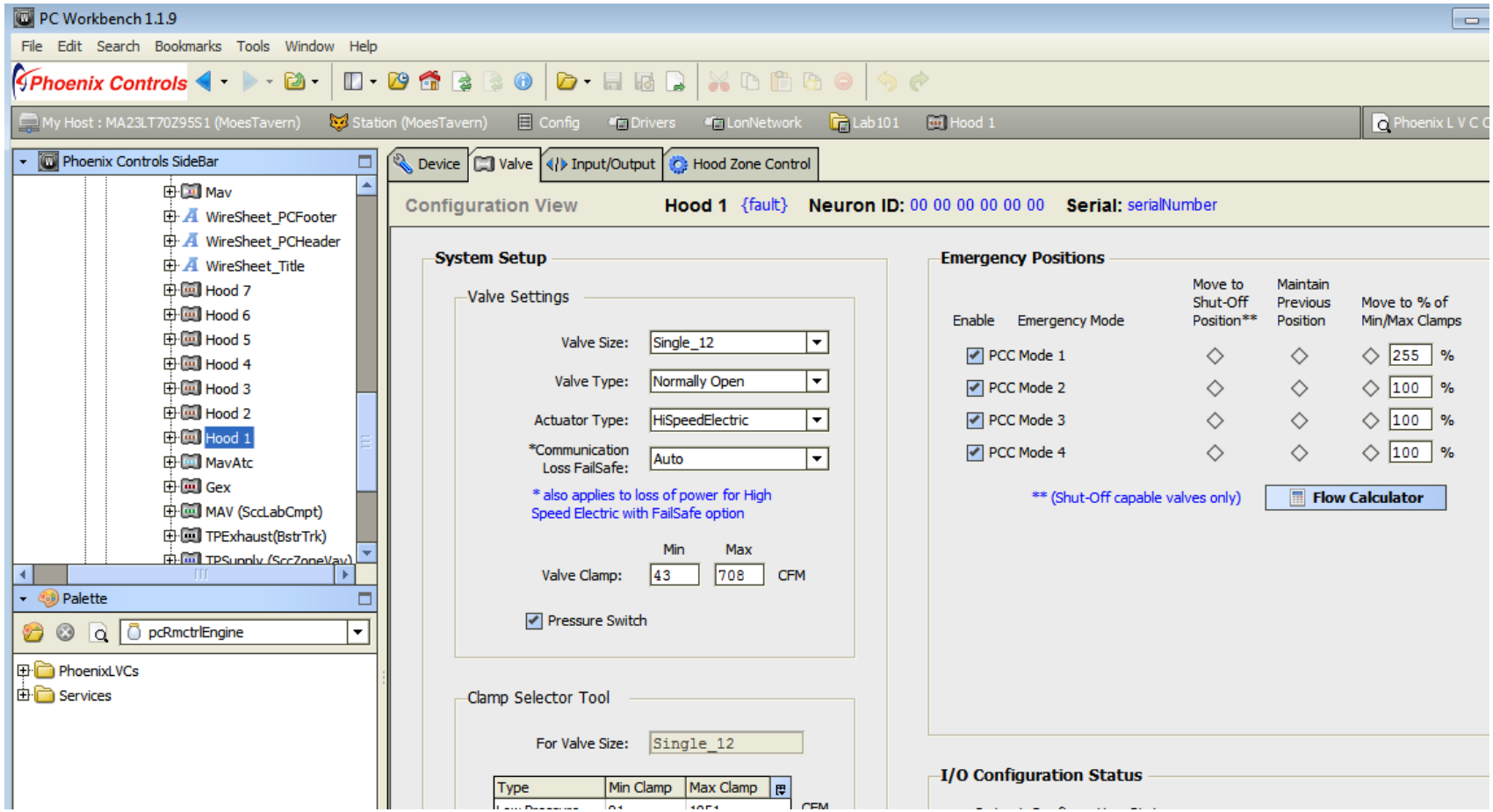
Easy tool to confirm valves work as designed

Flow Adjustment



Can make quick adjustments to get off site faster

Workbench Configuration and Diagnostics



Consolidated all tools into a single solution

Notes on Migration

- MicroServer
  - Reuse existing FTT-10 wiring in the room
  - Can remove / bypass the Lon routers
  - Run standard CAT 5/6 Ethernet from RMI / RMC to switch (provided by others)
  - Multiple protocols available for building integration
- MacroServer
  - Reuse existing FTT-10 wiring in the room
  - Remove TP-1250 wiring
  - Run standard CAT 5/6 Ethernet from RMI / RMC to switch (provided by others)
  - One NIC on Room Controller computer to RMI / RMC subnet, the other to building network
  - BACnet over Ethernet integration
- C1 to C2 retrofit
  - Replace CCU100-PEM with RMC if implementing temp and reheat control and do not want to rewire sensors and other equipment
  - Replace CCU100 with RMI
  - Reuse existing room wiring and run standard Ethernet cable to switch

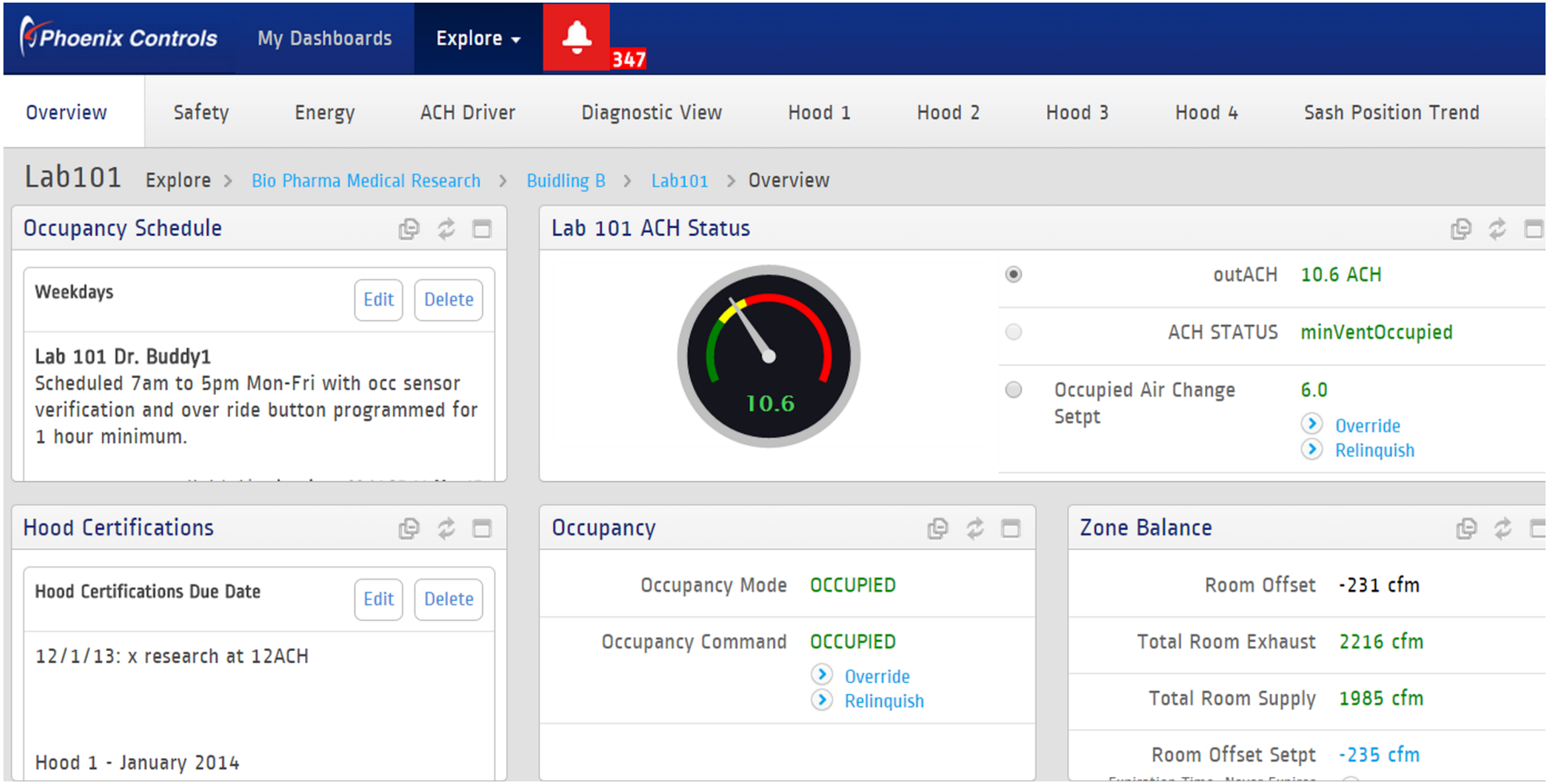
Phoenix Controls

New Front End Solutions

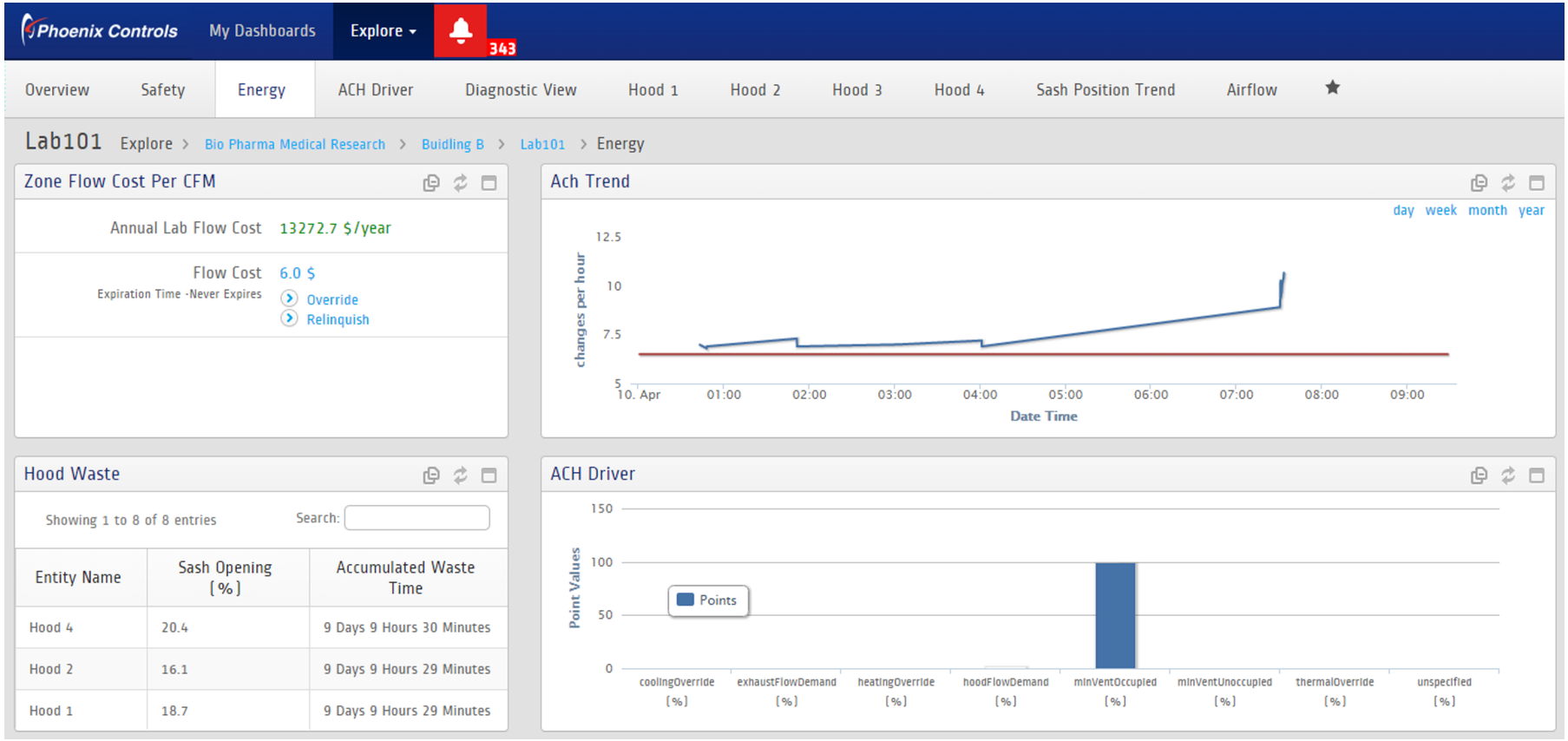
- Supervisor
  - Software solution
  - For medium and large (greater than 300 points to be viewed) projects
  - Offers long term data trending and archiving
  - Lon-based applications (connect to Micro/MacroServers, RMI/RMC/RMM)

- Portal
  - Hardware based solution
  - Small projects (less than 300 points to be viewed)
  - Short term trending
  - Front end solution for BACnet MS/TP applications

Dashboards

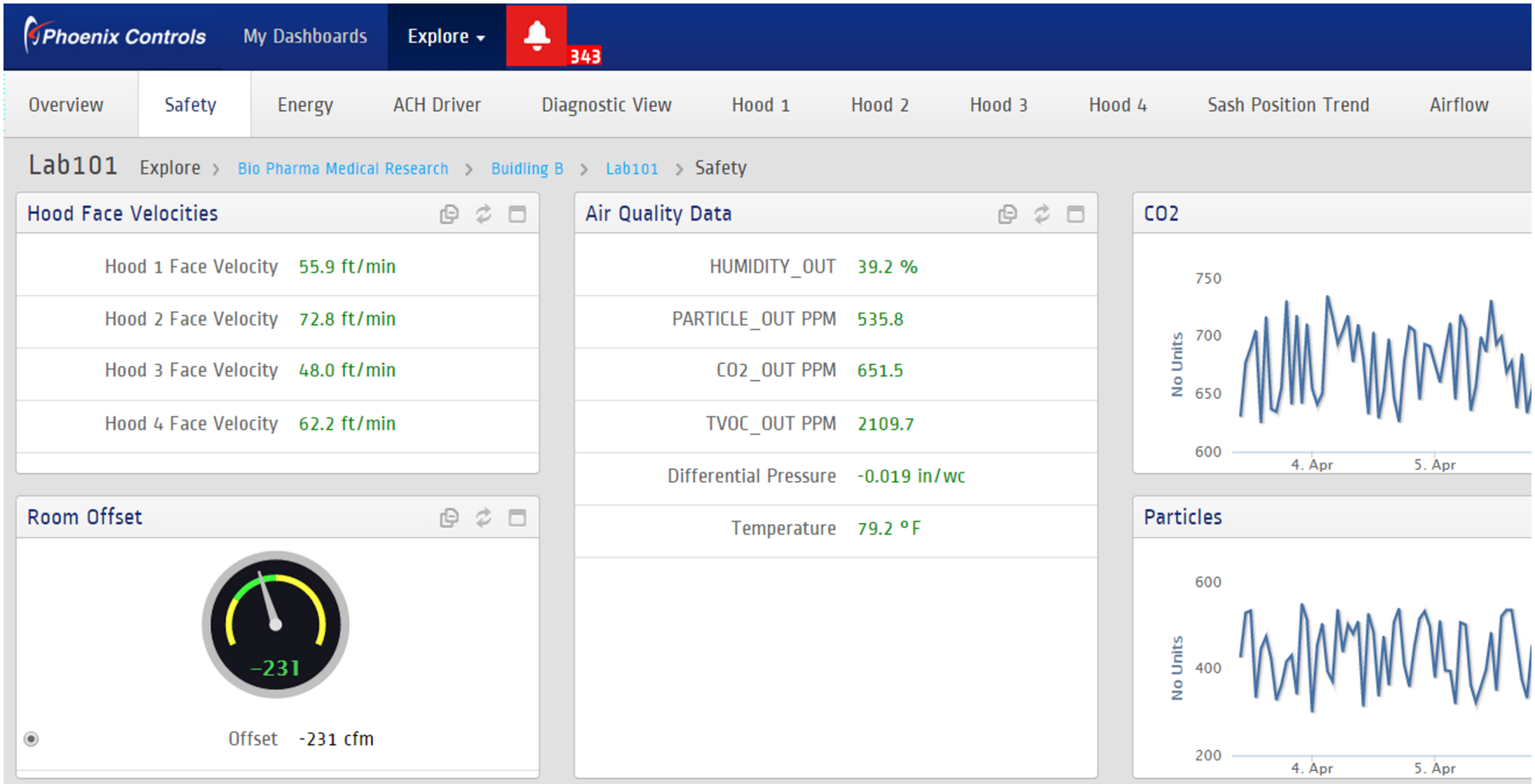


Identify Poor Sash Management



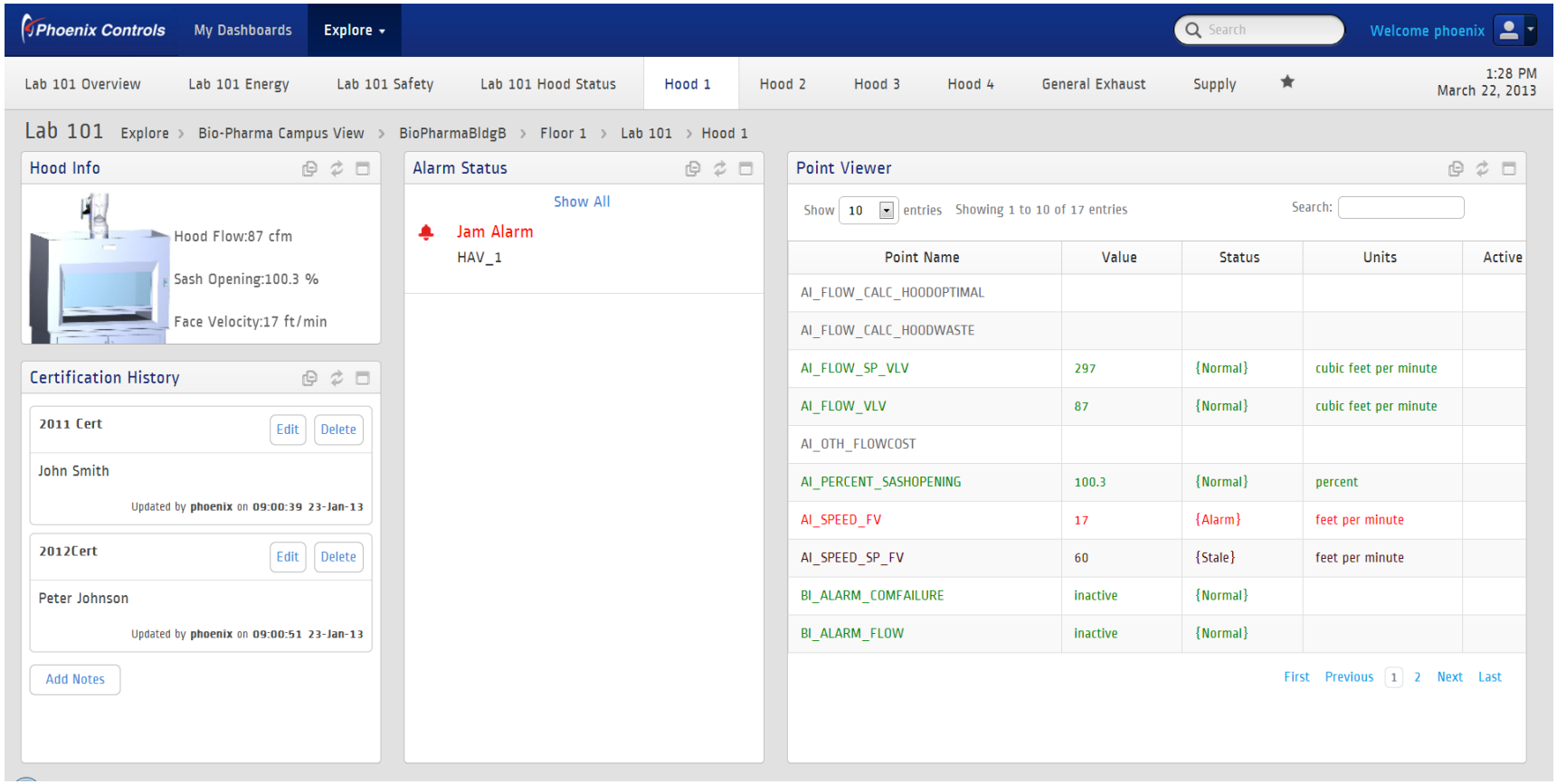
Reduce energy costs via better sash management

Monitor Third Party Devices



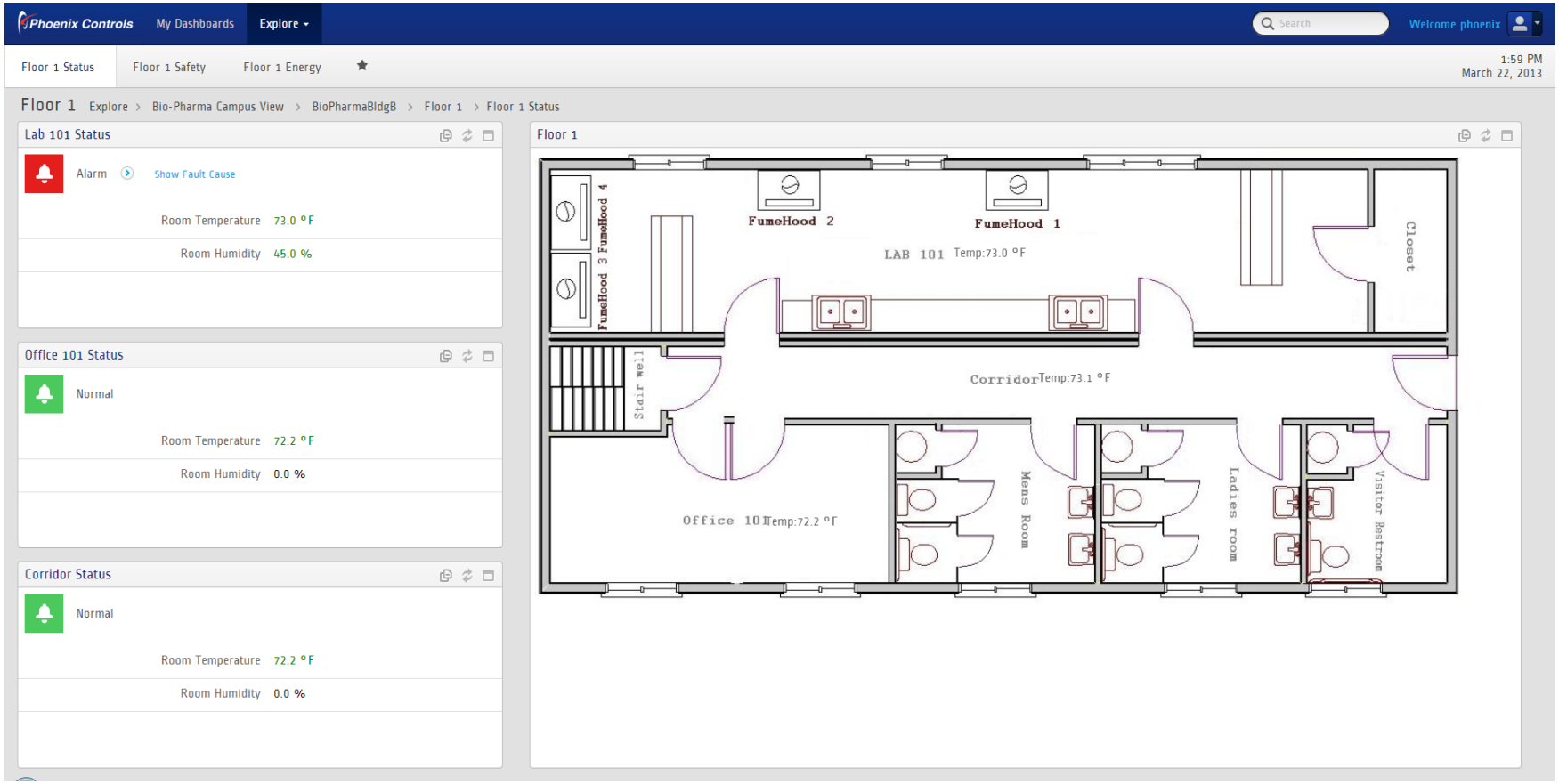
Standalone front end for all equipment in the room

Troubleshoot Problems Quickly



Shorten downtime and ensure equipment efficiency

BMS-like Views



Shorten learning curve with familiar look

View Touch Screen Room Monitor

- 7" capacitive touch screen display
- Rated for IP54 environments
- BACnet MS/TP or Lon
- On screen configuration
- Touch navigation
- "Tile" screen layout
- Single or multiple rooms

Takeaway Goes Here

Instinctive Alarming

- Full screen visual and audible alarms
- Two-tap to acknowledge
- Alarms nest in tile after acknowledge

Phoenix Controls

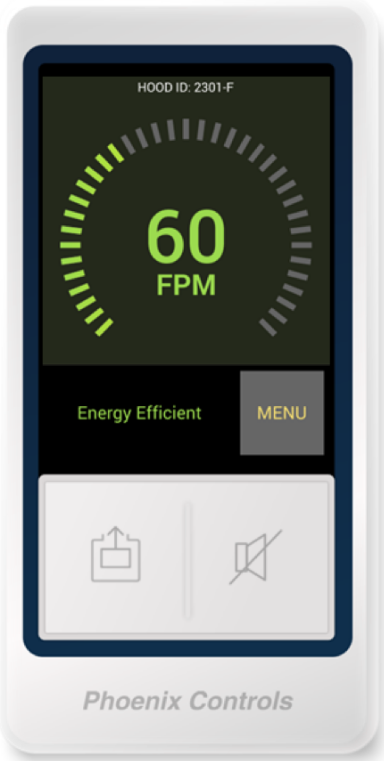
Customizable Alarming

- Local alarming
- Customizable by tile or by point
- Audio volume control and mute

Phoenix Controls

Three New Fume Hood Displays

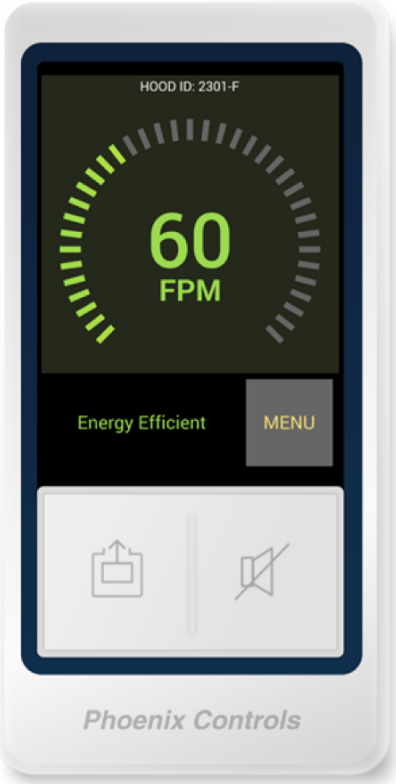
- Sentry S
  - Functionally replaces FHM430
  - When safety is the only concern
- Sentry SV
  - Same as S but also calculates face velocity
- Sentry SE
  - Functionally replaces FHM631
  - Safety and energy savings are priorities



Phoenix Controls

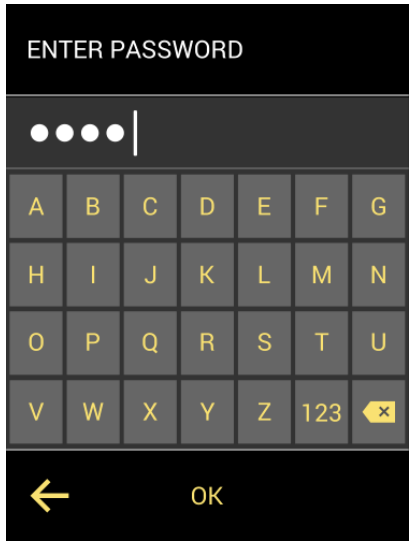
What's New

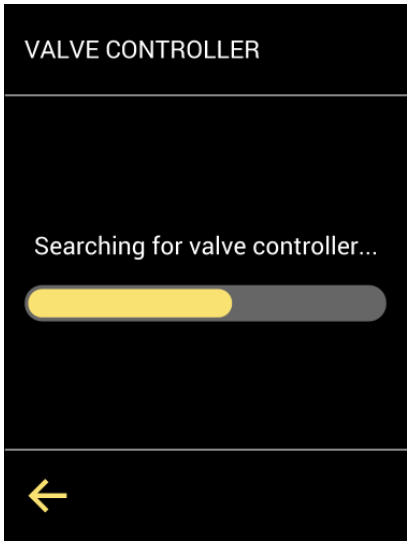
- Bright, touch screen display
- Much smaller footprint
- Energy waste indicator
- Custom user messages
- Daily use with stop watch & timer
- On the Lon network
- Easier wiring via hub
- Optional sidewall sensor



Phoenix Controls

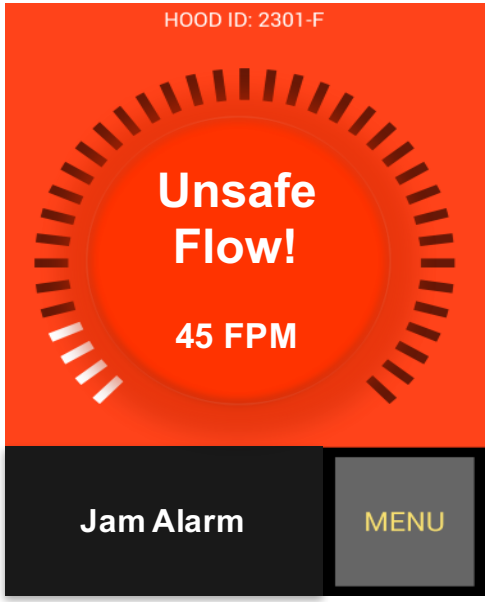
Touch Configuration

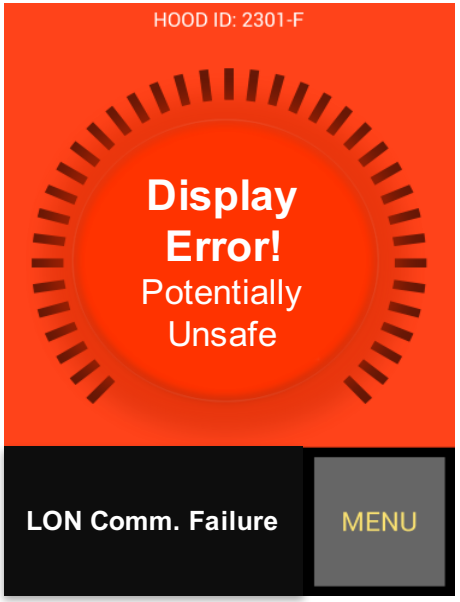


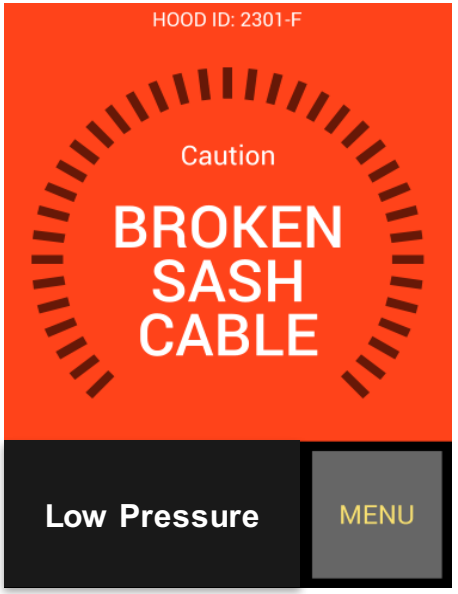


Quickly configure and copy for shorter installs

Intuitive Alarming

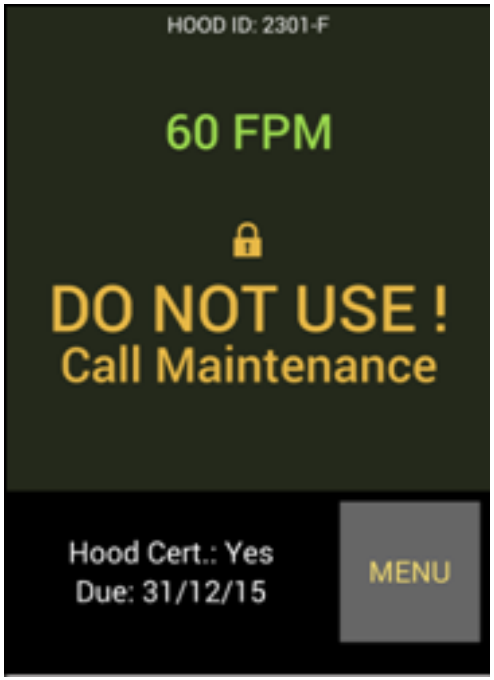






Descriptive Text for Easy Diagnostics

Message Banner



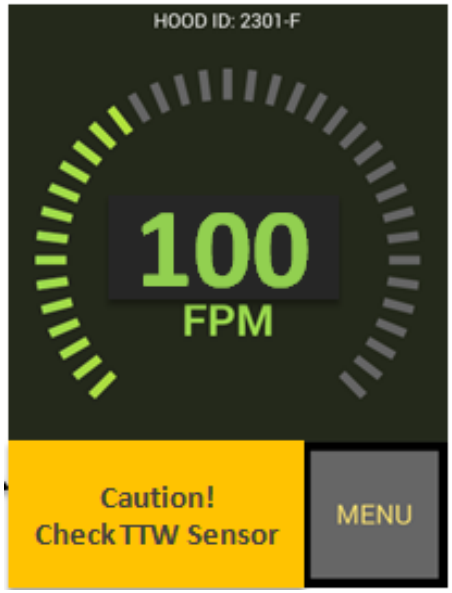
Custom Messaging for Users or Facility Staff

More Information

Not Just Hood Monitoring but also Daily Use

Side Wall (TTW) Sensing I/O Option

- Available on all three models
- Reference only (0-10 volts input)
- Wire third party sensor to available 0-10v input on valve
- Does not control valve
- Sash position continues to control flow
- Drift Alarm: when calculated face velocity and side wall sensor reading vary by a configurable percent difference
- Optional and selectable in configuration settings



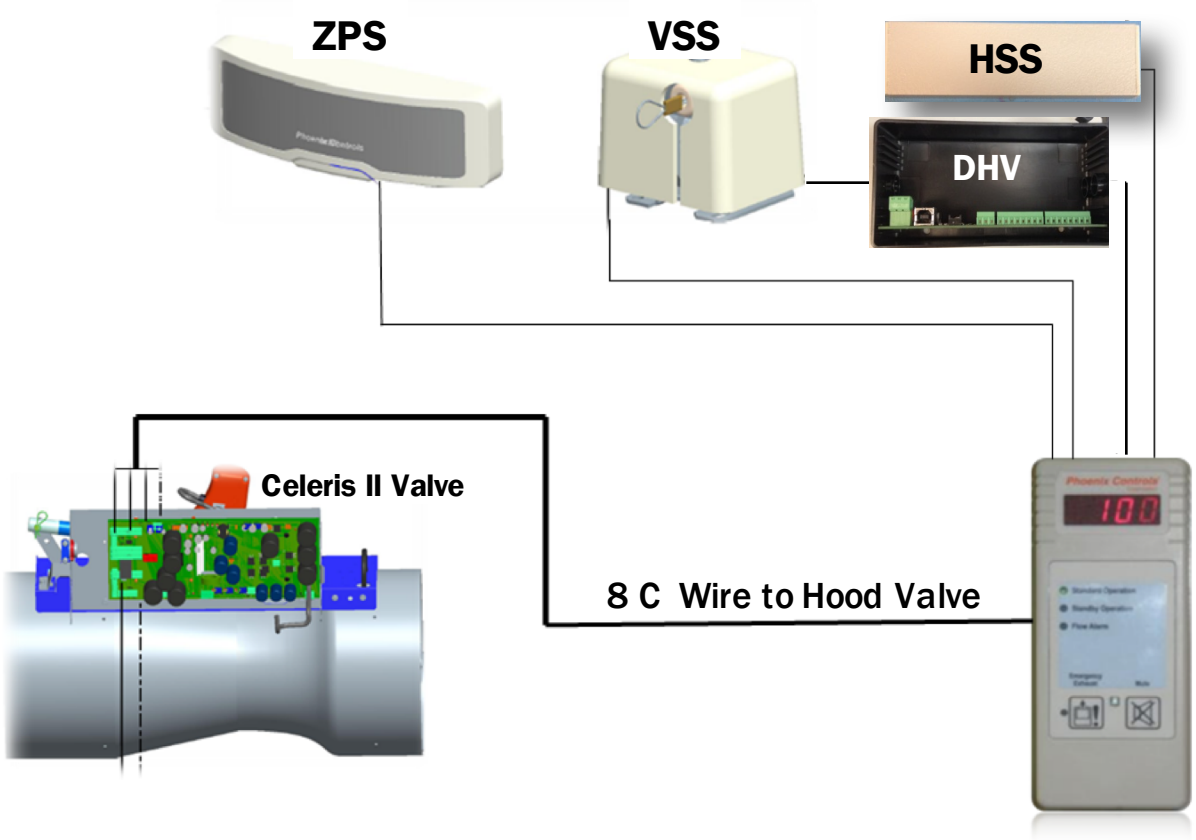
Reference Only, Not for Control

Summary

Feature	Sentry S	Sentry SV	Sentry SE
Primary / Secondary	Yes	No	No
Displays Face Velocity	No	Yes	Yes
Custom Messaging	Yes	Yes	Yes
Clone Configuration Settings	Yes	Yes	Yes
Energy Savings Monitoring	No	No	Yes
Sidewall Sensor Drift Alarm	Yes	Yes	Yes

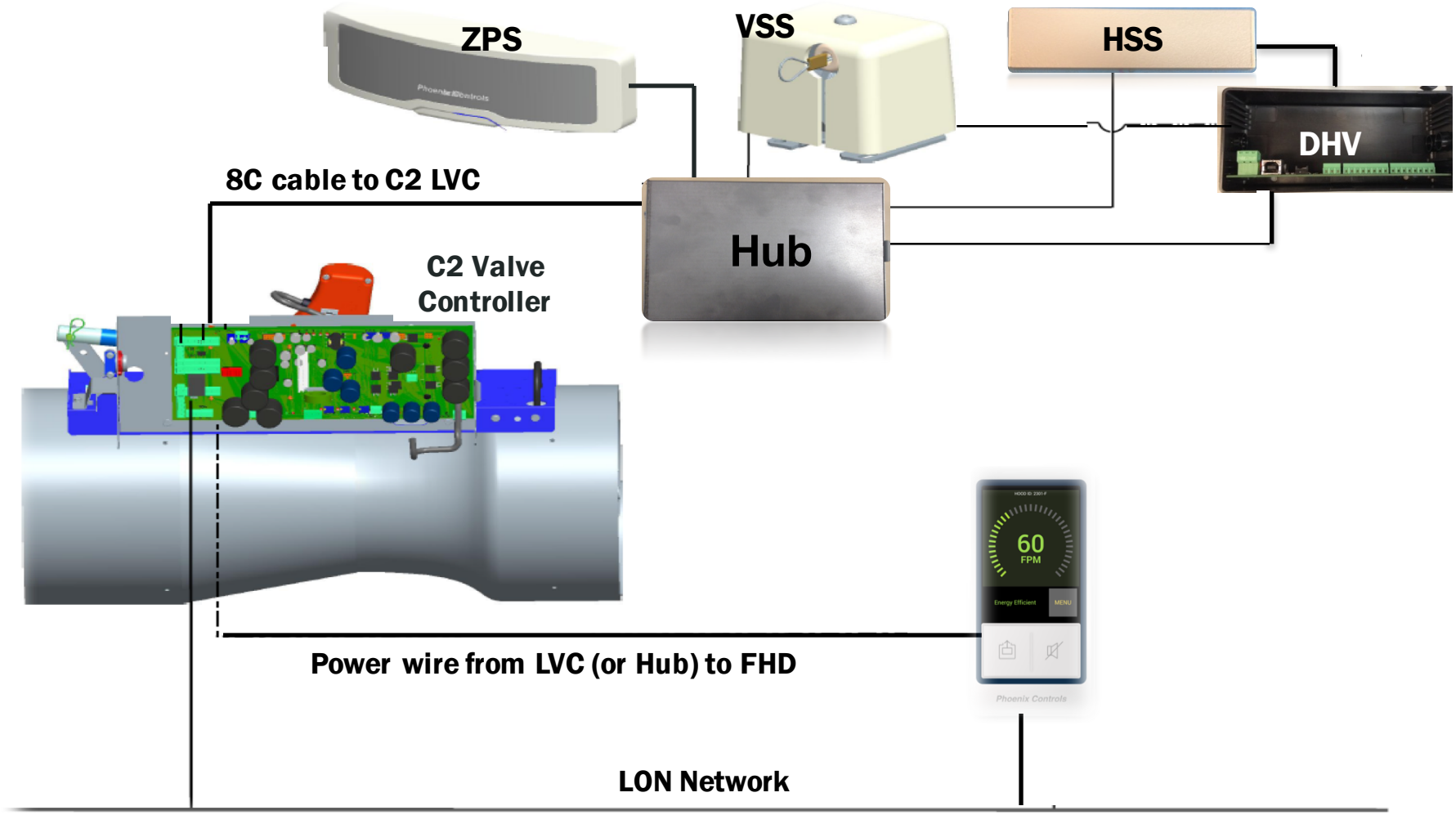
Phoenix Controls

Legacy FHM Wiring Layout



Current Monitor Performs Control Logic

Sentry Wiring Layout



vantage
BY PHOENIX CONTROLS

The Vantage value proposition includes:

- More information for more users: facility staff, lab users, IT, administration
- Cost effective front end solutions that offer more value at a significantly lower cost as compared to integration to BMS
- Room and hood displays with modern look and feel
- Lower cost to configure, commission, support
- Shorter learning curve
- Reduce time and effort to diagnose equipment issues