

ASC

Process Systems





Who are ASC?



ASC are one of the leading global manufactures of autoclave's, ovens, composites process equipment, and computerised process control systems.

ASC primarily serves the composite, aerospace, motorsport and advanced materials sectors of manufacturing.

Headquarters are in California where we have a 9,290m² manufacturing facility.

Offices in Europe and China

QM System

ISO 9001 – 2008 Registered

- Full document control
- Dedicated quality inspectors
- Ongoing 5S Kaizen/Lean Manufacturing Projects
- Management commitment
- Independent 3rd Party Inspection of Pressure Vessel related inspections.
- 3rd Party CE Verification
- NQ1-A – For the Nuclear Industry
- Supplier Inspections & Verifications



Pressure Vessel Certification

- ASME - U, U1, & R
- PED – European Union
- Peoples Republic of China - D1,D2
- Lloyd's Inspection - Japan



In House Manufacturing

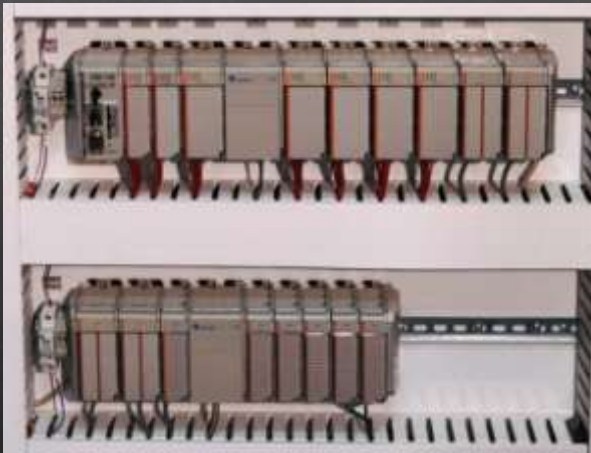
- 9,290 M² of manufacturing space under one roof.
- Positioners, rotators and automatic sub-arc welding.
- MIG & TIG welding
- Rolling equipment
- Overhead cranes.
- 2,000 Tonne / Year capacity



Electrical & Control



- In-house design of all control and power systems for all equipment.
- Panel-building to UL508, CSA, and CE.
- 100% Panel-test and burn-in.
- Shop and field electrical installation to NEC, IEE and local codes.
- UL Certified.
- CE, CSA system certification.



Full Factory Integration, Inspection & Testing

ASC
Process Systems



Factory Integration



Factory Inspection



Factory Testing

Service, Maintenance & Calibration **ASC** Process Systems

- Full-time Service Manager.
- Dedicated global maintenance service team.
- Preventative and remedial maintenance & service.
- Calibration services.
- Service & Repair for all makes of autoclave.
- Annual maintenance contracts.
- Total Care packages.
- 24/7 maintenance available subject to contract.

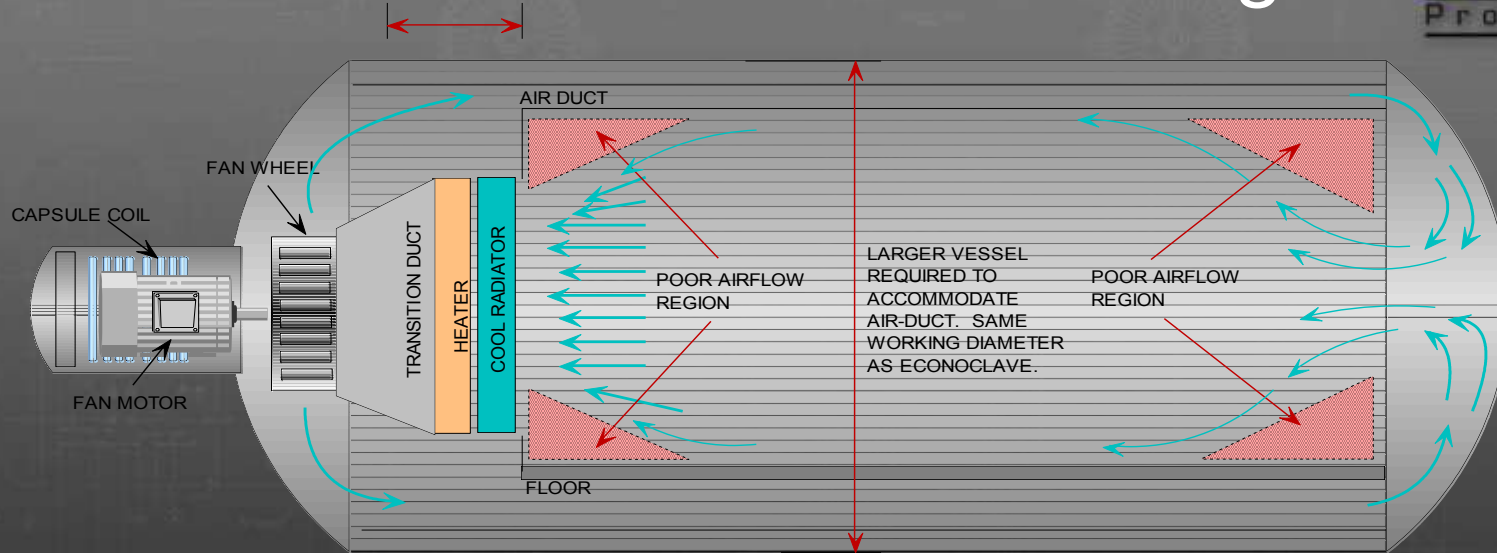


Econoclave® - Aerospace Autoclaves



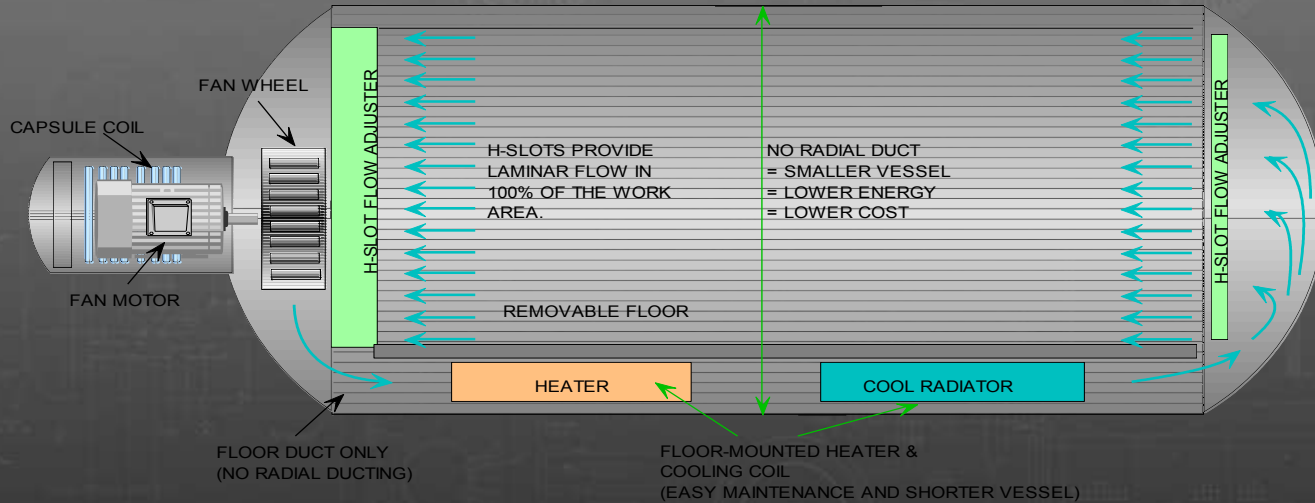
- Affordable aerospace specific autoclaves
- PC-controlled using CPC Level I or II
- Optimised designs - Focus on standardisation
- Commonality of spares
- Full integration = minimal installation effort
- Unique flow design = smaller vessel
- Energy efficient design
- Use of high-quality materials
- Exceed Qualifications of Boeing D6-49327 & Airbus AIPS 03-02-018 & 019 (With the relevant sensor configuration)

Conventional Autoclave Design



Typical autoclave configuration with anular duct and rear mounted heating & cooling systems. This design increases the autoclave diameter and increases the autoclave length by up to 2 meters on an autoclave of this size compared to the ASC Econoclave® design. This can result in up to a **25% increase in autoclave volume**, with Nitrogen being the largest single cost in autoclave operation this has a dramatic effect on long term cost of ownership.

The Econoclave®



*Saves space and cost by reducing the overall diameter and length.
Reduced volume means less pressurisation gas equals less energy.*

ASC Econoclave™ Design incorporates under floor heating and cooling, this area is also utilised as the air duct directing air through the “H” Slots which are set to manage the air flow for the best efficiency inside the autoclave.

ASC Cost of Ownership



- **This difference in size reduces ALL of the operating costs.**
- **The pressurisation volume required, the energy needed and the size and cost of the ancillary equipment.**
- **Allowing for tooling and products, the volume difference could be as much as 25% on an autoclave of this size.**
- **Assuming an average of two cures per day, 6 days per week based on a working year of 48 weeks then the saving in pressurised Air or Nitrogen alone would be considerable.**
- **At an average cost of \$0.25 per m³ for Nitrogen generated on site that is many thousands of dollars per year. This cost increases if nitrogen is supplied in Liquid form for evaporation to pressurise the autoclave.**

“H”-Slots Tailor Uniformity



“H” Slots in door and rear bulkhead adjusted to maximise internal airflow and heat transfer.

Econoclave® Benefits

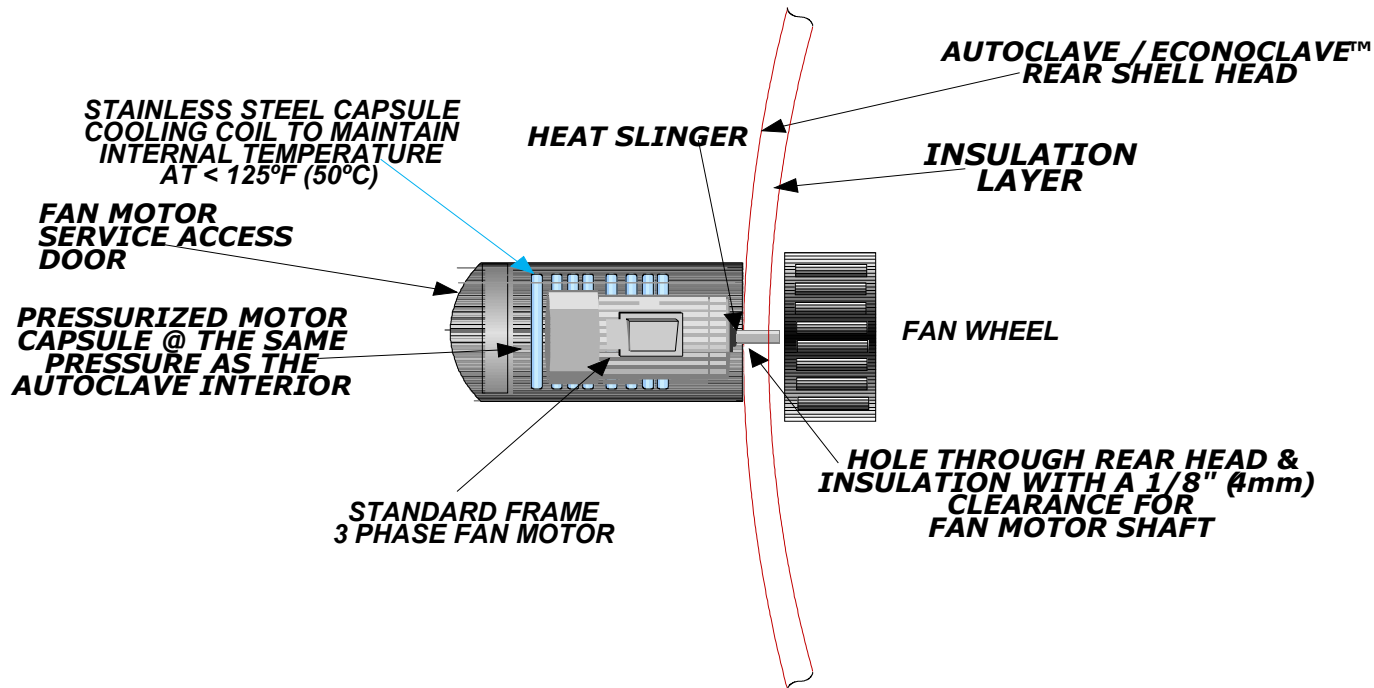


- Lower operating costs.
- Smaller vessel to pressurise.
- Pressurisation is one of the largest through life costs in autoclave operation.
- Less internal mass to heat & cool.
- “H” Slot provides unsurpassed uniformity as well as customisation of airflow for awkwardly shaped parts.
- Lower maintenance cost.
- Standard framed fan motor in a water cooled pressure capsule.
- Heating & Cooling located under the floor for improved heat transfer & simple accessibility.
- All wetted parts of the cooling system stainless steel.
- Stainless Steel valves and pipe work on vacuum systems.
- Standard components available internationally.

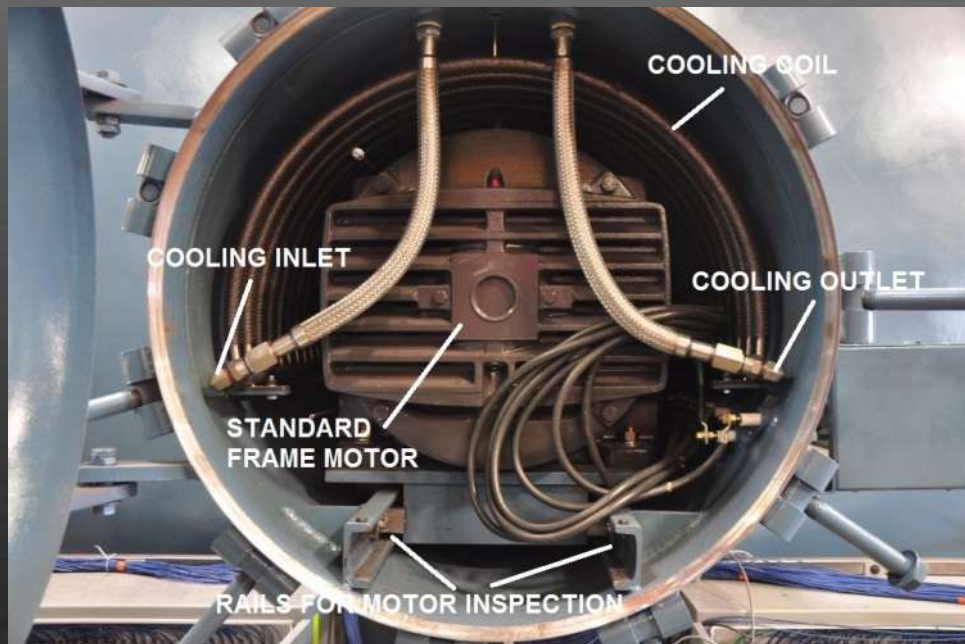
ASC Motor & Fan System

WWW.ASCHOME.COM

AUTOCLAVE / ECONOCLAVE™ FAN MOTOR HOUSING



ASC Motor & Capsule



Proposed Vacuum System



- All Stainless Steel large bore tubing & valves.
- Automated selection valves on each line for vacuum, vent and block.
- Separate pressure rated transducers for each vacuum sensing line.
- Resin / Particle traps on each line – As standard.
- Programmable level vacuum.
- Separate vacuum level balance tank.
- Vacuum system and bag integrity checks prior to start.
- Vacuum leak test facility with reporting anytime during the cure.

ASC Safety Systems



- Certified mechanically sprung safety valve.
- Hydraulically activate door with 'hold to activate' controls.
- Door safety interlocks with mechanical and electrical interlocks.
- Door fitted with Safety Bar lock integrated to a pneumatic locking cylinder.
- Locking cylinder sets the Bar Lock in place whenever pressure is present in the autoclave.
- Bar lock is connected to an Audible warning valve & backup pressure gauge.
- Hydraulic interlock valve & limit switches lock out the door hydraulics to prevent fluid flow when the Bar Lock is shut.
- Person In Autoclave (PIA) cable - when activated, Alert horn sounds, Control Screen jumps to alarm view – Person In Autoclave alarm is displayed. Heating contactors open (heat disabled). Cooling control is enabled – 20°C set point is preset and full cooling commences. Pressure inlet is disabled. Pressure set point is dropped to zero psig – exhaust and dump valve is forced open 100%.
- Oxygen level sensing and Nitrogen purge system, door cannot operate until 20% oxygen content is shown inside the autoclave.

ASC Large Autoclave capability



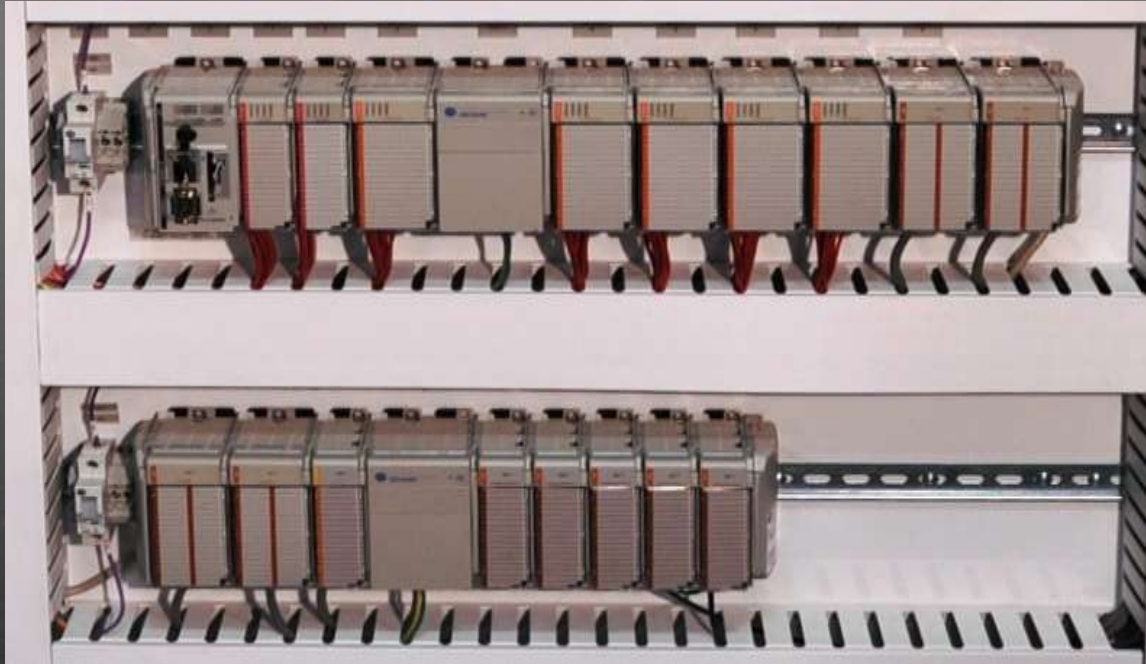
One of the Worlds Largest Autoclaves 9.15M diameter X 23.15M long built in the field by ASC at Boeing Charleston, SC USA

CPC TM Control Systems



- Best in Class autoclave control system & software.
- Installed on more than 2,000 pieces of equipment all over the world.
- Over 20 years of constant development and improvement based on customer feedback.
- Global installation base.
- Standard and custom control packages to suit all budgets and process requirements.
- Reliable, Robust and Secure.
- ASC Owned and developed software.
- No 3rd party dependence.
- No yearly software licenses.

Level II CPC – PLC Based Systems



Siemens or Allen Bradley PLC's with dual PC interface
Siemens Systems are also available.

ASC CPC™ Software



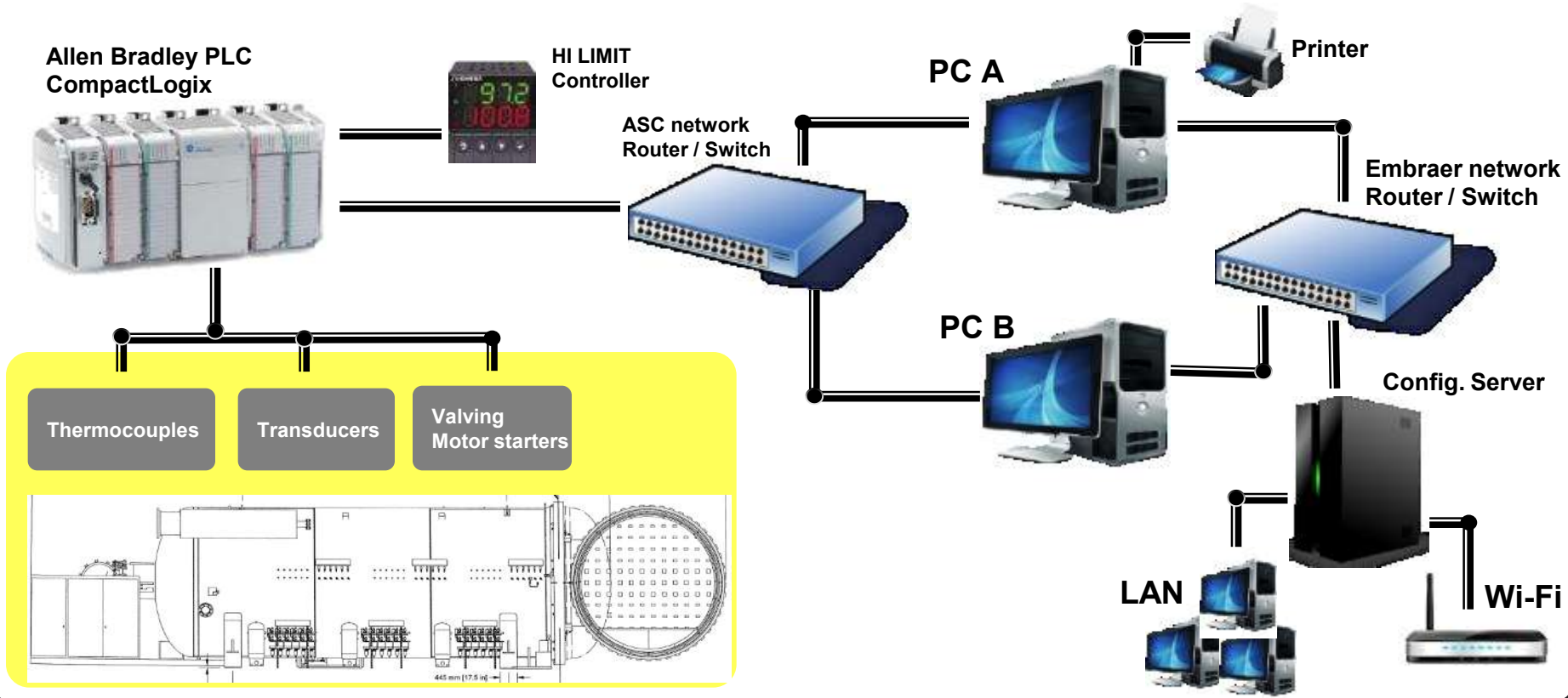
- Windows® 7 Professional operating systems
- CPC™ (Composite Processing Control) software for control, data-acquisition, HMI, quality control, and analysis of composite processes.
- Leading software for PC-based control of Autoclaves, Ovens, RTM & VARI used throughout the Aerospace industry.
- Over 2,000 CPC™ installations worldwide.
- SAP and MRP interfaces available.
- Statistical analysis of autoclave usage and cure efficiency.
- Flexible and powerful.
- Expandable and customer configurable.
- Future proofed.
- Client/Server application
- Dual-PC installation (A & B)
- Instant 'Hot Swap'

ASC CPC™ Software



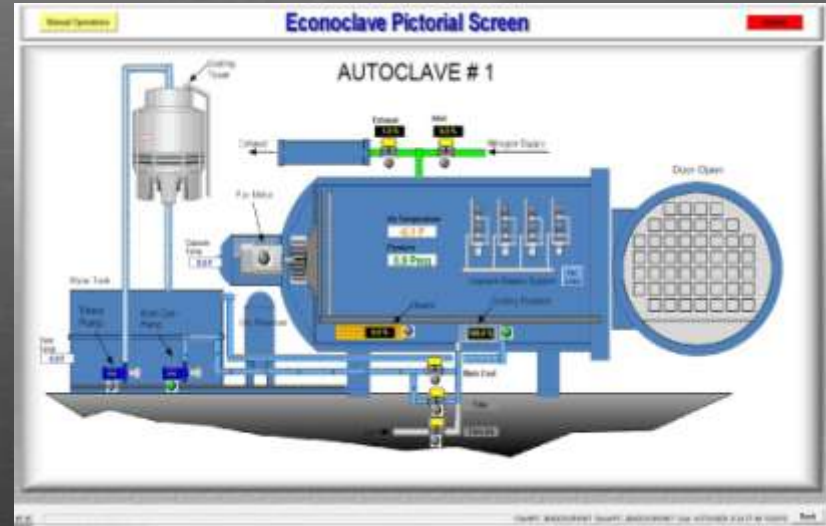
- Largest controls user base, equals lowest risk
- Thousands of hours of constant development and improvement equals robust and reliable systems.
- Ongoing R&D for future operating system compatibility.
- CPC™ Software supports multiple hardware platforms guarantees future compatibility.
- Client/Server design allows remote viewing/control within the factory Intranet or Internet environment.
- CPC™ II allows instant automatic hot swap between control PC's in the event of an interrupt.
- ASC's has the largest controls/software support staff in the industry, providing the best customer support.

ASC CPC™ II



ASC CPC™ Software

User configurable screens



- Simple to use yet very powerful
- The World's leading Autoclave/Oven control system
- Not limited to one PLC hardware type
- Multi equipment capability

ASC CPC™ Software – Part Entry



The screenshot displays the ASC CPC software interface for part entry. It features several panels:

- Batches:** A tree view on the left showing 'Autoclave', 'PreBatches', 'CurrentBatch', and 'Batch'. Buttons for 'New Batch', 'Remove Batch', 'Pre Batch', and 'Batch Report' are on the right.
- Batch Contents:** A list of items in the current batch: (1) X12354, (2) X75674, and (3) X12356.
- Part to Add:** A section with 'STANDARD PART' selected, radio buttons for 'As a Single Part' and 'As a Part-on-Tool', and buttons for 'Add to Batch' and 'Remove from Batch'.
- Part/Tool Database:** A list of parts including X12356, X56789, X75674, X78675, and X787788, with an 'Edit Database' button.
- Part Details:** A table with columns 'Name', 'Value', and 'Picture'. The 'Part#' is X12356. A picture of a curved metal part is shown.
- Select Attachments:** A table with columns 'Part TCs', 'Probes', and 'Source'. It lists attachments like PTC8, VPRB4, and VSRC4.

At the bottom, the status bar shows 'ClientPC: MASONLAPTOP | ServerPC: MASONLAPTOP | User: A | Back'.

Full-featured part database is utilised for part and batch entry. Advanced capabilities such as bar coding and photo ID are supported.

ASC CPC™ Software – Recipe Screen



Autoclave

Rev: NOT APPROVED

| | |
|---------------|--------------------------|
| Recipe | BAC5317-2 FIG 30 |
| FilePath | Recipes\BAC5317-2 FIG 30 |
| Description | 260 DEG 45 PSIG |
| Specification | BAC5317-2 |
| Equipment | Autoclave, |
| Revision | NOT APPROVED |
| Revised | 09/17/99 01:41:59 AM |
| Modified | 02/07/00 03:29:46 PM |
| Last Run | |
| Author | M. Iverson |
| Comments | |

New Revision

Transfer To Autoclave

Recipe Report

Recipe Preview

- Equipment
- Autoclave
 - Recipes\ONE STEP CORE FORMING
- Recipes
 - Survey
 - Test Cure
 - 260 30m test
 - BAC5317-2 FIG 30**
 - F-22 5PTPLB04 FIG 8
 - BAC5317-5 FIG 31
 - F-22 5PTPLB01 FIG 5
 - BAC5597 FIG 14 SANDWICH PARTS
 - BAC5597 FIG 14 LAMINATES
 - BAC5317-4 FIG 30
 - OPFRATIONAL TEST EMPTY AUTOCLAVE

New Recipe

New Folder

Delete

Segment Message
Segment Alarm

Apply vacuum & pressurize to 17 psig

CureMessage

| | Seg#1 | Seg#2 | Seg#3 | Seg#4 | Seg#5 | Seg#6 | Seg#7 | Seg#8 |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Segment Time | | 2M | | | 90M | | | |
| Control TC | HITC | | | | | LOTC | | |
| Temperature_Rate | | | | 4 | | 3 | | |
| Temperature_Value | CURR | | | 260 | | 70 | | |
| Cascade IN | 100 | | | | | | | |
| Cascade OUT | 100 | | | | | | | |
| Add Per Time | | | | | | | | |
| Pressure_Rate | 5 | | 5 | | | | 5 | |
| Pressure_Value | 17 | | 45 | | | | 0 | |
| Header1_Rate | | | | | | | | |
| Header1_Value | -27 | 0 | | | | | | |
| Header2_Rate | | | | | | | | |
| Header2_Value | -27 | 0 | | | | | | |
| Watch Item #1 | PRESS | | PRESS | LOTC | | HITC | PRESS | |
| Criterion | >15 | | >40 | >250 | | <124 | <1 | |
| Action | GO | | GO | GO | | GO | GO | |
| Alarm_Time | | | | | | | | |
| Watch Item #2 | | | | | | | | |

Add Segment

Insert Segment

Delete Segment

? This is a Recipe object. The contents are displayed to the left and below.
 ClientPC: MASONLAPTOP2
ServerPC: MASONLAPTOP2
User: Back

ASC CPC™ – Process Overview



AlarmsProcess OverviewRun Operations

Air Temp 79.3 Deg.F

Hi Part Temp 79.3 Deg.F

Low Part Temp 79.3 Deg.F

Temperature Controls

Auto Semi Autoclave Fan

Auto Semi Heating Enable

Auto Semi Cooling Enable

Air Temp Controller

Auto Semi 60.7

Heat Man +10

Off 50% +1

Cool -1

-10 -10

Part Temp Controller

Bias On Bias Off

Auto Semi 70.0

+10 **Air Setpt** 60.7

+1 **+ Air Bias** 0

-1 **Biased SP** 60.7

-10

Vacuum Controls

Auto Semi Vacuum Pump

Vacuum Pump #1 Select

Vacuum Pump #2 Select

Auto Semi Header 1 Setpt Header 1 Value 0 -0.1 InchHg -27 -10

Auto Semi Header 2 Setpt Header 2 Value 0 -0.2 InchHg -27 -10

Push the following buttons to group select all sources.

Lines to PRB Lines to SRC Lines to Part

Pressure Controls

Auto Semi Pressure Enable

Pressure Controller

Auto Man 0.0

+10

+1 **Autoclave Pressure** 0.2 Psia

-1

-10

ASC CPC™ – Manual Operations



Autoclave #4 - Manual Operations

Temperature Control

Heating Enable (Auto/Man) | Cooling Enable (Auto/Man)

Air Temperature Setpoint

Auto/Man | 70.0 | Heat/Cool

Temperature Values

Autoclave Temp #1: 96.3 Deg.F, -0.5 Deg.F/Min

High Part T.C.: 0.0 Deg.F, 0.0 Deg.F/Min

Low Part T.C.: 0.0 Deg.F, 0.0 Deg.F/Min

Part TC Readings

1:PTC1: 0.0, 1:PTC2: 79.6, 1:PTC3: 0.0, 2:PTC4: 0.0, 2:PTC5: 0.0, 3:PTC6: 0.0, 3:PTC7: 0.0, PTC8: 0.0

Pressure Control

Pressure Enable (Auto/Man)

Pressure Setpoint

Auto/Man | 0.0 | Fill/Dump

Pressure Values

Autoclave Pressure: 0.2 Psig, 0.7 Psig/Min

Vacuum Control

Set to Full Vac | Set to -3 Inch

System Vacuum

Auto/Man | -30.0 | Vac/Vent

Vacuum Values

System Vacuum: -35.9 InchHg

High Probe Reading: -21.7 InchHg

Low Probe Reading: -21.7 InchHg

Vacuum Probe Readings

1:VPRB1: [], 1:VPRB2: [], 2:VPRB3: [], 3:VPRB4: []

ClientPC: MASONLAPTOP | ServerPC: MASONLAPTOP | User: ASC | 12:18:05 PM 4/23/01 | Back

Customisable manual operations screens with critical information display

ASC CPC™ Software – System Status



Alarms Main Screen

Autoclave #3 - System Viewing Screen

Fan System

| | |
|---|-------------------|
| <input type="checkbox"/> Off | Fan Request |
| <input type="checkbox"/> Off | Fan Starting |
| <input type="checkbox"/> Off | Fan Status |
| <input type="text" value="0.6"/> | Fan Current |
| <input type="checkbox"/> Off | Fan H2O Flow |
| <input type="checkbox"/> Off | Fan H2O Flow |
| <input type="checkbox"/> Off | Bearing H2O Flow |
| <input type="checkbox"/> Off | Bearing H2O Flow |
| <input type="checkbox"/> Alarm | Bearing Oil Level |
| <input type="text" value="77.5 Deg.F"/> | Capsule Temp |

Heating System

| | |
|---|-------------|
| <input type="text" value="70.0 Deg.F"/> | PartSet |
| <input type="text" value="60.7 Deg.F"/> | AirSet |
| <input type="text" value="79.3 Deg.F"/> | Air Temp |
| <input type="text" value="0.0 %"/> | Heater |
| <input type="checkbox"/> Off | Heat Enable |
| <input type="checkbox"/> Ok | Hi Limit |

Pressure System

| | |
|--|----------------|
| <input type="text" value="0.0 Psig"/> | Setpoint |
| <input type="text" value="0.2 Psig"/> | Pressure |
| <input type="text" value="0.0 %"/> | Inlet Valve |
| <input type="text" value="100.0 %"/> | Exhaust Vlv |
| <input type="checkbox"/> Off | Press. Enable |
| <input type="checkbox"/> Off | Block Valve |
| <input type="checkbox"/> On | Blowdown |
| <input type="checkbox"/> Ok | OverPressure |
| <input type="text" value="82.5 Deg.F"/> | N2 Temperature |
| <input type="text" value="197.0 Inch WC"/> | N2 Level |
| <input type="text" value="164.7 Psig"/> | N2 Supply |

Door System

| | |
|-----------------------------------|-------------|
| <input type="checkbox"/> Open | Door Open |
| <input type="checkbox"/> False | Door Closed |
| <input type="checkbox"/> Unlocked | Door Pin |

Bridge System

| | |
|--------------------------------|------------------------|
| <input type="checkbox"/> Off | Hydraulic On |
| <input type="checkbox"/> Safe | Bridge In Place |
| <input type="checkbox"/> False | Bridge Down |
| <input type="checkbox"/> False | Bridge In Position |
| <input type="checkbox"/> False | Rotate Out |
| <input type="checkbox"/> Set | Rotate In |
| <input type="checkbox"/> False | Bridge Up Limit Switch |

Vacuum System

| | |
|---|-----------------|
| <input type="checkbox"/> Off | Vac Pump #1 |
| <input type="checkbox"/> Off | Vac #1 H2O Flow |
| <input type="checkbox"/> Off | Vac Pump #2 |
| <input type="checkbox"/> Off | Vac #2 H2O Flow |
| <input type="text" value="0.1 InchHG"/> | Header #1 |
| <input type="text" value="0.2 InchHG"/> | Header #2 |

Cooling System

| | |
|---|------------------|
| <input type="checkbox"/> Off | Cooling Enable |
| <input type="text" value="0.0 %"/> | Cool Valve |
| <input type="checkbox"/> Off | Quench Cool |
| <input type="checkbox"/> Off | Main Cool Return |
| <input type="checkbox"/> Off | Trim Cool Return |
| <input type="checkbox"/> On | Trim Cool Vent |
| <input type="text" value="74.4 Deg.F"/> | H2O Supply |
| <input type="text" value="71.9 Deg.F"/> | H2O Return |

Purge and Oxygen

| | |
|---------------------------------------|---------------|
| <input type="checkbox"/> Off | Process |
| <input type="text" value="342 Secs"/> | Purge Time |
| <input type="checkbox"/> On | Purge Enabled |
| <input type="checkbox"/> Off | Purge Fan |
| <input type="checkbox"/> Off | Purge Valve |
| <input type="checkbox"/> Off | Purge Inlet |
| <input type="text" value="22.0 %"/> | Oxygen Level |

Man Inside

| | |
|-----------------------------|-------|
| <input type="checkbox"/> Ok | Alarm |
|-----------------------------|-------|

P | ? | ClientPC: MASONLAPTOP2 | ServerPC: MASONLAPTOP2 | User: ASC | 4:43:34 AM 3/4/2004

ASC CPC™ – Sensor Displays

Configurable screens for detailed sensor viewing



Autoclave #4 - Sensor Viewing

| | |
|---------------------|---------------------|
| AIR TEMP SP | 70.0 °F |
| Air Temp | 96.3 °F |
| Air Temp Rate | 0.5 °F/Min. |
| PART TEMP SP | 70.0 °F |
| High Part TC | 0.0 °F |
| High TC Rate | 0.0 °F/Min |
| Low Part TC | 0.0 °F |
| Low TC Rate | 0.0 °F/Min |
| PRESSURE SP | 0.0 PSI |
| Pressure | 0.2 PSI |
| SYSTEM VAC | -36.9 InchHg |
| High Part Vac | VPRD1 -21.7 InchHg |
| Low Part Vac | VPRB1 -21.7 InchHg |

Part Thermocouples (°F)

| Sensor | Action | Part | Status | Alarm | Value | Rate |
|--------|--------|------|---------|-------|-------|------|
| PTC1 | | 1 | AutoOn | None | #### | #### |
| PTC2 | | 1 | AutoOn | None | 79.6 | 0.2 |
| PTC3 | | 1 | AutoOn | None | #### | #### |
| PTC4 | | 2 | AutoOn | None | #### | #### |
| PTC5 | | 2 | AutoOn | None | #### | #### |
| PTC6 | | 3 | AutoOn | None | #### | #### |
| PTC7 | | 3 | AutoOn | None | #### | #### |
| PTC8 | | None | AutoOff | None | #### | #### |

Vacuum Probes (-inHg)

| Sensor | Action | Part | Status | Alarm | Value | Rate |
|--------|--------|------|--------|-------|--------|------|
| VPRB1 | PRB | 1 | AutoOn | None | -199.8 | 0.0 |
| VPRB2 | | 1 | AutoOn | None | -202.1 | 0.0 |
| VPRB3 | | 2 | AutoOn | None | -195.3 | 0.0 |
| VPRB4 | | 3 | AutoOn | None | -208.2 | 0.0 |

[Click on the sensor readings to expose the QuickView window.](#)

Run Status:

Selected Cure Recipe:

Segment Information:

Run Time:

Segment Time:

Seg. Time Left:

ASC CPC™ – System Integrity Checks



Autoclave #1 - Integrity Checks

Global Control of All Checks

Reset All Start All Stop Checks Status RESET

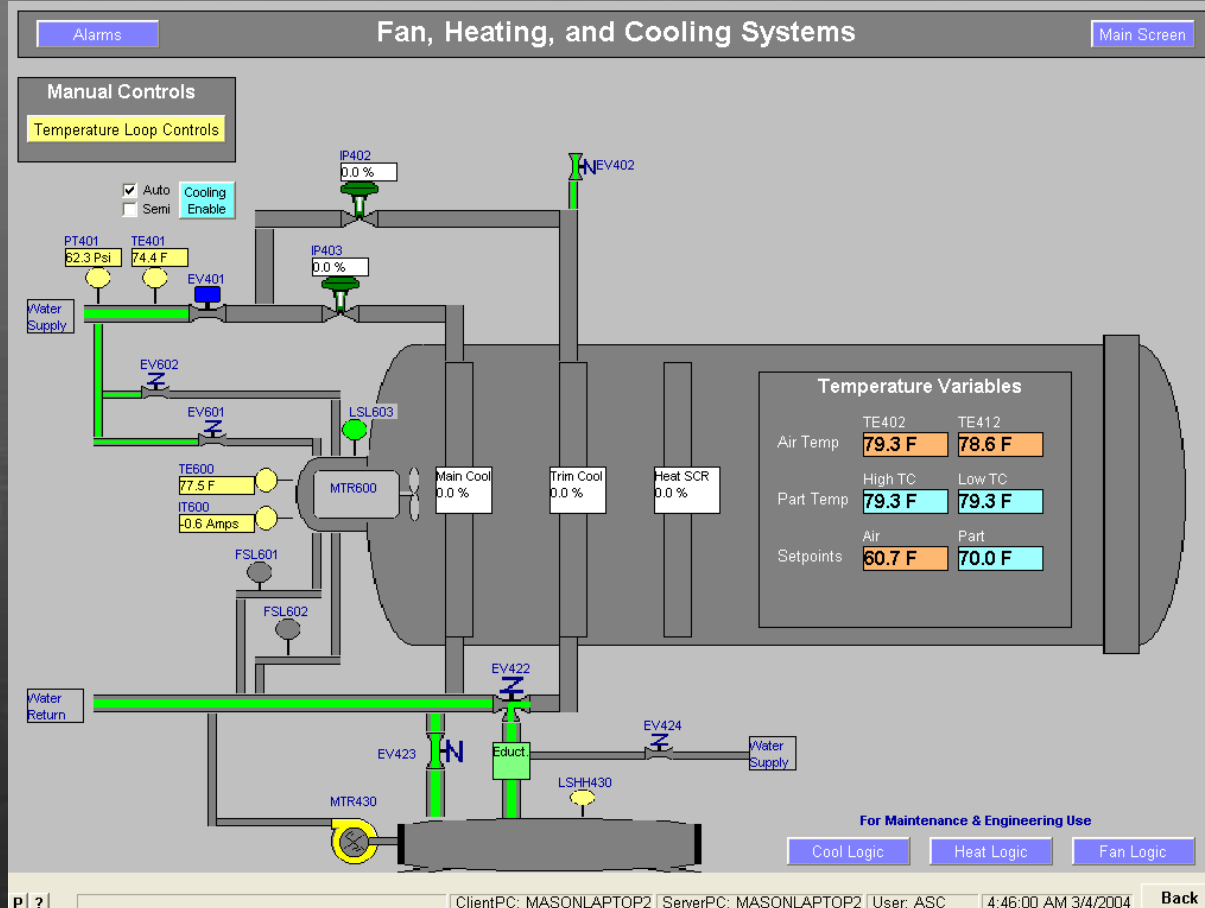
| Field Check | Sensor Check | Header Check | Drawdown Check | Leak Check | Connect Check |
|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| <input type="checkbox"/> Override | <input type="checkbox"/> Override | <input type="checkbox"/> Override | <input type="checkbox"/> Override | <input type="checkbox"/> Override | <input type="checkbox"/> Override |
| Reset | Reset | Reset | Reset | Reset | Reset |
| Start | Start | Start | Start | Start | Start |
| Stop | Stop | Stop | Stop | Stop | Stop |
| Status | Status | Status | Status | Status | Status |
| OFF | OFF | OFF | OFF | OFF | OFF |
| | | Stabilize | Stabilize | Test Time | Stage |
| | | 0S | 0S | 0S | 1 |
| | | Test Time | Test Time | | Stabilize |
| | | 0S | 0S | | 0S |
| | | | | | Stage Time |
| | | | | | 0S |
| | | | | | Test Time |
| | | | | | 0S |
| View | View | View | View | View | View |

| Sensor | Action | Part | Status | Alarm | Value | Rate |
|--------|--------|------|--------|-------|-------|------|
| PV101 | PRB | 1 | AutoOn | None | 0.1 | 0.0 |
| PV103 | PRB | 1 | AutoOn | None | 0.0 | 0.0 |
| PV105 | SRC | 1 | AutoOn | None | 0.0 | 0.0 |
| PV107 | SRC | 1 | AutoOn | None | 0.4 | 0.0 |
| PV109 | SRC | 1 | AutoOn | None | -26.8 | 0.0 |
| PV111 | SRC | 1 | AutoOn | None | 0.0 | 0.0 |
| PV113 | SRC | 1 | AutoOn | None | -26.1 | 0.0 |
| PV115 | PRB | 2 | AutoOn | None | 0.2 | 0.0 |
| PV117 | SRC | 2 | AutoOn | None | -26.8 | 0.0 |
| PV119 | SRC | 2 | AutoOn | None | -3.2 | 0.0 |

ClientPC: MASONLAPTOP2 | ServerPC: MASONLAPTOP2 | User: AUTDUSER | 3:24:46 PM 4/10/2005 Back

The control system will fully exercise every valve, motor, and component and will check the performance based on expected indications from pressure switches, limit switches, and other feedback means. Additionally, full part integrity checks are performed which validate part connections, thermocouple integrity, bag/vacuum integrity, part entry, and other factors. These “checks” create reports that are associated with the specific run data for post-run and historical analysis purposes.

ASC CPC™ – System P&I View



Autoclave & Related Equipment Images



Click the image to access the cooling and tower views

Click the image to access the burner system views

Click the image to access the instrument air views

Click the image to access the transducer panel view

Click the image to access the Purge/O2 Monitoring view

Click the image to access the power panel view

Click the image to access the Platform Oil View

Click the image to access the Capture View screen

Click the image to access the Cooling System maintenance viewing screen

Click the image to access the Nitrogen System View

Click the image to access the pressure valve view

ASC Autoclave - Maintenance & Support Screen

This is the Maintenance & Support Screen for the CPC-NT system on ASC Autoclave

ClearPC: DMASON | ServerPC: DMASON | User: ASC | 12:59:42 PM 7/26/2001 | Back

Click on individual views for detailed information of the particular part with supplier information, part numbers and operational data

ASC CPC™ – Calibration & Certification



Alarms | **PV Calibration**

| | | | |
|-----------------|---------------|----------------|-----------------|
| 1:S:PV101: -0.1 | P:PV126 -24.4 | P:PV151 -0.3 | 1:S:PV204: -0.1 |
| 1:S:PV102: -0.2 | P:PV127 -2.7 | P:PV152 -25.5 | 1:S:PV206: 0.2 |
| 1:S:PV103: 0.0 | P:PV128 -26.9 | P:PV153 -17.2 | 1:S:PV206: -0.2 |
| PV104 DeCert | P:PV129 -0.4 | P:PV154 -27.0 | 1:S:PV207: -0.2 |
| 1:S:PV105: 0.0 | P:PV130 -21.5 | P:PV155 -26.9 | 1:S:PV208: -0.7 |
| 1:S:PV106: -0.1 | P:PV131 0.0 | P:PV158 -27.0 | 1:S:PV209: -0.2 |
| 1:P:PV107: 0.4 | P:PV132 -0.8 | P:PV157 -3.6 | 1:S:PV210: 0.3 |
| PV108 DeCert | P:PV133 -0.1 | P:PV158 -4.3 | 1:S:PV211: 0.3 |
| P:PV109 -26.8 | PV134 DeCert | P:PV159 -8.4 | 1:P:PV212: 0.3 |
| 1:S:PV110: -0.2 | P:PV135 -0.2 | P:PV160 -26.9 | 1:S:PV213: 0.1 |
| P:PV111 0.0 | P:PV136 -11.7 | P:PV161 -26.8 | P:PV214 0.2 |
| 1:S:PV112: 0.0 | P:PV137 -4.7 | P:PV162 -25.4 | 1:S:PV215: -0.2 |
| P:PV113 -26.1 | P:PV138 -4.0 | P:PV163 -26.9 | P:PV216 0.2 |
| P:PV114 -25.5 | P:PV139 -26.4 | P:PV164 -13.2 | P:PV217 0.3 |
| P:PV115 -0.2 | P:PV140 -22.6 | P:PV165 -9.0 | P:PV218 0.1 |
| P:PV116 -11.9 | P:PV141 -25.2 | P:PV166 -26.9 | P:PV219 0.2 |
| P:PV117 -26.8 | P:PV142 -21.0 | P:PV167 -26.8 | P:PV220 0.2 |
| P:PV118 -0.5 | P:PV143 -7.7 | P:PV168 -27.1 | P:PV221 0.2 |
| P:PV119 -3.2 | P:PV144 -25.5 | P:PV169 -18.1 | P:PV222 0.0 |
| P:PV120 -26.8 | P:PV145 -3.1 | P:PV170 -7.5 | P:PV223 0.2 |
| P:PV121 -4.8 | PV146 DeCert | P:PV171 -5.3 | P:PV224 0.2 |
| P:PV122 -0.8 | PV147 DeCert | P:PV172 -26.9 | HEADER1: -0.1 |
| P:PV123 -1.1 | P:PV148 -19.6 | PV201 DeCert | HEADER2: -0.2 |
| P:PV124 -2.6 | P:PV149 -26.2 | 1:S:PV202: 0.1 | PRESS1: 0.0 |
| P:PV125 -27.4 | P:PV150 -27.1 | PV203 DeCert | PRESS2: 0.2 |

Click on a sensor to expose the QuickView window and Calibration access button.

Lines to PRB | Lines to SRC | Lines to Part

Step #1: Press to turn on pumps ; set to -30 ; and place lines in cal position.

Step #2: Access the Calibration form by clicking on the PV101 sensor and selecting Calibrate from the QuickView form.

Step #3: Select the Sensor range for calibration (ie Enter 96 for count). Perform the calibration procedure. You'll need to enter the header setpoints to a low reading (-30) and high reading (0) in order to achieve a good calibration.

Step #4: Press to reset lines to normal (non-Cal) position.

Header #1 Setpoint: 0 | Header #1 Value: -0.1 inchHg
Header #2 Value: -0.2 inchHg

- Easy-to-use calibration screens
- Designed for each exact autoclave application