

55 Chapel Street, Newton MA 02458
Telephone 617-964-6670
Fax 617-965-4503
www.phoenixcontrols.com

**START-UP CHECKLIST CELERIS
ATC CONTRACTOR**

Project _____	Sales rep organization _____
Sales order number _____	Contractor's company name _____

Checklist Instructions to the Contractor:

Please ensure that the items listed on the following pages have been completed.

1. Verify that each item indicated on the checklist is complete and correct.
2. Place initials in appropriate boxes once verified.
3. Sign and date when entire checklist is complete.
4. Send completed checklist to the Phoenix Controls sales representative.
5. This project is now ready for:

All systems on project to be started.

Partial start-up, rooms shall include:

Phoenix Controls reserves the right to charge the contractor for expenses incurred (food, travel, lodging, time, etc.) due to any significant delays caused by items on the checklist which were not complete or correct.

To Contractor: The items in column 'B', which need your attention, are marked with a (X). Upon completion of each item, please put your initials in the adjacent column 'A'.

For all electrical terminations, consult the **Phoenix Controls** shop drawings.

A B

Valves – Supply/Exhaust

- _____ 20 psi connected to the MSV/SLP valve controller boxes.
- _____ Pneumatic connections between Phoenix Controls valves as shown on drawings.
- _____ Output from pneumatic device connected to the slave valve actuator.
- _____ Pneumatic connection from thermostat connected to valve controller box.
- _____ Pneumatic connection from the thermostat connected to slave valve actuator.
- _____ Pneumatic connection MSV valve connected to SLP actuator as shown on drawings.

- _____ _____
- _____ _____
- _____ _____
- _____ _____

*Note: **Do not** turn power on until a Phoenix Controls factory authorized start-up engineer has reviewed the installation.*

Once the required items on this checklist have been verified, please forward this document to the Phoenix Controls sales representative so that a factory-trained technician can be scheduled to start-up and calibrate the system.

Contractor signature _____ Date _____

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**START-UP CHECKLIST CELERIS
MECHANICAL CONTRACTOR**

Project _____	Sales rep organization _____
Sales order number _____	Contractor's company name _____

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All systems on project to be started.

Partial start-up, rooms shall include:

To Contractor: The items in column 'B', which need your attention, are marked with a (X). Upon completion of each item, please put your initials in the adjacent column 'A'.

A **B**

Valves – Supply/Exhaust

All valves must be installed horizontally or vertically per the instructions on the airflow direction label attached to the valve. There are no exceptions.

- _____ Verify that correct valves, i.e., supply or exhaust are installed in the correct airflow duct system (supply or exhaust).
- _____ Verify that the valves are installed in the correct air flow direction (refer to the airflow direction stickers on the valves).
- _____ Verify that horizontal valves are mounted horizontally.
- _____ Verify that vertical valves are mounted vertically.
- _____ Verify that Phoenix labels attached to the valve are visible i.e., not covered by duct sealant.
- _____ Verify that access is available to the electronic enclosure cover as indicated on the valve.
- _____ Verify that the reversing link has been connected to the actuator on all normally open valves (link is disconnected for shipping).
- _____ Verify that supply air valves are insulated (valve bodies only).

- _____ _____
- _____ _____
- _____ _____
- _____ _____

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START-UP CHECKLIST for CELERIS PROJECTS
ELECTRICAL CONTROLS / ELECTRICAL POWER CONTRACTOR

Project _____	Sales rep organization _____
Sales order number _____	Contractor's company name _____

Checklist Instructions to the Contractor:

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All systems on project to be started.

Partial start-up, rooms shall include:

To Contractor: The items in column 'B' which need your attention are marked with a (X). Upon completion of each item, please put your initials in the adjacent column 'A'.

For all electrical terminations, consult the **Phoenix Controls** shop drawings.

<u>A</u>	<u>B</u>
	Fume Hood Monitor (FHM)
_____	<input type="checkbox"/> Installation of FHM on all fume hoods.
_____	<input type="checkbox"/> Termination of multi-conductor cable from all FHMs to PEM on fume hood exhaust valves.
_____	<input type="checkbox"/> Termination of multi-conductor cable from all FHMs to Phoenix PCD100 drives.
_____	<input type="checkbox"/> Termination of multi-conductor cable from all FHMs to DIB controller box (PCD200 drives).
_____	<input type="checkbox"/> Termination of multi-conductor cable from all FHMs to MAC (Make-Up Air Control) panel, (for PCD100 drive applications).
	Sash Position Sensor (SPS) Vertical Sash – VSS series
_____	<input type="checkbox"/> Verification not required, installation to be done with authorized factory personnel.
_____	<input type="checkbox"/> Installation of SPS behind or on fume hood face.
_____	<input type="checkbox"/> Connection of SPS stainless steel retractable cable to sash or counter weight cable (ensure that full travel of the sash doesn't exceed full travel of the cable).
_____	<input type="checkbox"/> Termination of two-conductor SPS cable in FHM.
	Horizontal Sash – HSS series
_____	<input type="checkbox"/> Verification not required, installation to be done with authorized factory personnel.
_____	<input type="checkbox"/> Installation of the sensor bars such that the cable has no excessive slack and is not prone to catch on any protrusion for full movement of the sash.
_____	<input type="checkbox"/> Installation of the magnetic bars such that the magnetic side faces the sensor (only one side is magnetic).
_____	<input type="checkbox"/> Installation of the sensor/magnet combination such that there is a space of 3/4" less between the sensor bar and the magnet bar.
_____	<input type="checkbox"/> Termination of two-conductor SPS cable from each sensor bar into FHM.
	Horizontal/Vertical Combination Sash and Walk-in Hood – CSS/SSS series
_____	<input type="checkbox"/> Verification not required, installation to be done with authorized factory personnel.
_____	<input type="checkbox"/> Installation of H/V interface box on top of hood. Must have access for calibration to remove cover.
_____	<input type="checkbox"/> Termination of horizontal two-conductor SPS cable from each sensor bar into H/V interface box.
_____	<input type="checkbox"/> Termination of vertical two-conductor SPS cable into H/V interface box.
_____	<input type="checkbox"/> Termination of three-conductor cable from H/V interface box at FHM.
_____	<input type="checkbox"/> Installation of SPS behind or on fume hood face.
_____	<input type="checkbox"/> Connection of SPS stainless steel retractable cable to sash or counter weight cable (ensure that full travel of the sash does not exceed full travel of the cable).
_____	<input type="checkbox"/> Installation of the sensor bars such that the cable has no excessive slack and is not prone to catch on any protrusion for full movement of the sash.
_____	<input type="checkbox"/> Installation of the magnetic bars such that the magnetic side faces the sensor (only one side is magnetic).
_____	<input type="checkbox"/> Installation of the sensor/magnet combination such that there is a space of 3/4" or less between the sensor bar and the magnet bar.

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A

B

Zone Presence Sensor

- _____ Verification not required, installation to be done with authorized factory personnel.
- _____ Installation of unit on fume hood.
- _____ Termination of four-conductor cable from unit to fume hood monitor.
- _____ Termination of four-conductor cable from slave ZPS to master ZPS (for hoods requiring two or more units).

Valves – Supply/Exhaust (Celeris)

- _____ Twisted Shielded Pair (TSP) room level (Accel-Link) communication cable terminated (with the shield not shorted to the enclosure) for all digital valves.
- _____ End of line resistors installed at Accel-Link terminal block for the digital valve at the end of the run for the room level communication cable.
- _____ 24 vac terminated at all digital valves.
- _____ Eight conductor cable terminations made from digital valve controllers to booster valve controllers.
- _____ All conductor terminations made from the supply valves to the thermostats.
- _____ All conductor terminations made between supply valves and duct temperature sensors.
- _____ All conductor terminations made between supply valves and re-heat valve.

CCU Panel

- _____ CCU panel installed on the wall above the drop ceiling.
- _____ 24 vac and earth ground terminated at the CCU panel.
- _____ Eight conductor connections made between CCU panel and thermostats.
- _____ Twisted shielded pair (TSP) room level (Accel-Link) communication cable terminated at the CCU panel with end of line resistor installed.
- _____ Conductor terminated between CCU panel and re-heat valve.
- _____ Conductor terminated between CCU panel and duct temperature sensors.

Accel-Net Network Cable

- _____ Twisted Shielded Pair for Accel-Net communications pulled to each CCU panel.
- _____ Accel-Net communication cable including shield terminated to the Accel-Net terminal block. **Do not** plug the terminal block into the CCU panel.
- _____ Accel-Net communication cable marked to indicate routing through building.
- _____ Accel-Net communication cable routing recorded for ring out and troubleshooting test.
- _____ Accel-Net communication cable pulled to the Accel-Way Computer.

Accel-Way Computer

- _____ Accel-way computer installed.
- _____ 120 vac power outlet available for Accel-Way Computer.
- _____ Ethernet hub installed and wired for 120 vac.
- _____ 10 base T cable with RJ45 connector installed between Accel-Way computer and Ethernet hub.

Control Power

- _____ Per the Phoenix wiring diagram, do not exceed 100 VA per 24 vac transformer.
- _____ Transformer Secondary power is externally fused to current limit at 4 amps.

A

B

Power

_____ 120 vac terminated at primary input for all 24 vac transformers.

- _____ _____
- _____ _____
- _____ _____
- _____ _____

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Celeris™ Pre-Integration Checklist

Project _____	Sales rep organization _____
Phoenix IPO _____	Contractor's company name _____

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<u>A</u>	<u>B</u>
	General
_____	<input type="checkbox"/> Celeris system installed, Accel-Net™ and Accel-Link™ networks commissioned.
_____	<input type="checkbox"/> Accel-Way gateway installed and powered (see Accel-Way cut sheet for installation details).
_____	<input type="checkbox"/> Accel-Net to Accel-Way cable installed and ready for connection at the Accel-Way gateway.
_____	<input type="checkbox"/> Ethernet HUB installed and powered.
_____	<input type="checkbox"/> BMS system installed, network running.
_____	<input type="checkbox"/> BMS Operator Workstation with software installed and commissioned.
_____	<input type="checkbox"/> Integrated points list defined.
_____	<input type="checkbox"/> Accel-Map CSV file created from integrated points list and delivered to BMS technician.
	Johnson Controls Incorporated (JCI)
_____	<input type="checkbox"/> JCI BACnet System Integrator(s) (BCI) or Metasys Application Enabler(s) (MAE), and Network.
_____	<input type="checkbox"/> JCI Control Module(s) (NCM) installed, powered, commissioned.
_____	<input type="checkbox"/> Accel-Map CSV file uploaded into JCI system.
	Andover
_____	<input type="checkbox"/> Andover CX controller installed, powered, commissioned.
	Trane
_____	<input type="checkbox"/> Building Control Unit(s) (BCU) installed, powered, commissioned.
_____	<input type="checkbox"/> Customer Programming Language (CPL) code (required for alarm polling) written and ready to commission.
	Honeywell
_____	<input type="checkbox"/> TBD
	Automated Logic Corporation (ALC)
_____	<input type="checkbox"/> ALC LGRME LanGate and Portal(s) installed, powered, commissioned.
_____	<input type="checkbox"/> _____
_____	<input type="checkbox"/> _____
_____	<input type="checkbox"/> _____

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