



**SERIES 100 PACKAGED ROOFTOP WITH IPU CONTROL**

**MECHANICAL CONTRACTOR INSTALLATION CHECKLIST AND UNIT SETUP DATA SHEET**

CUSTOMER: \_\_\_\_\_ JOB NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ LOCATION: \_\_\_\_\_  
PHONE: \_\_\_\_\_ CUSTOMER ORDER NO: \_\_\_\_\_  
JCI TEL NO: \_\_\_\_\_ JCI ORDER NO: \_\_\_\_\_ JCI CONTRACT NO: \_\_\_\_\_

**UNIT MODEL NO:** \_\_\_\_\_ **UNIT SERIAL NO:** \_\_\_\_\_  
The work (as checked below) is in process and will be completed by: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
Month Day Year

The following work must be completed in accordance with installation instructions:

**A. Installing Contractor Checklist**

- 1. Has the ductwork been connected to the unit? .....
- 2. Has all the power wiring been completed? .....
- 3. Has all the control wiring been completed? .....
- 4. If the unit is constant volume, has a thermostat or zone sensor been installed? .....
- 5. If the unit is SZVAV, has a hardwired or communicated zone sensor been installed? .....
- 6. If applicable, has the Building Automation System been connected to the unit? .....
- 7. If applicable, has all pneumatic tubing been installed between duct static, and building static pressure transducers to their proper location per IOM manual? .....
- 8. If applicable, has the outdoor pressure reference and tubing been installed? .....
- 9. Have all the condensate drains been properly installed and primed? .....
- 10. If applicable, has the gas line been installed and purged of air? Is the incoming gas pressure within the specified range? .....
- 11. If applicable, has the hot water/ steam piping been completed? .....
- 12. If applicable, have clean filters been installed? .....
- 13. Has the unit been air balanced? .....
- 14. If applicable, has there been freeze stats installed downstream of the unit to protect hot water/steam coils in VAV boxes. ....
- 15. Has a list of setpoints been supplied to the startup technician? These will vary by unit application and size. ....

If Johnson Controls is performing the startup, all applicable items MUST be completed before the startup can be performed. If any of the items are not complete, it will be at the discretion of the JCI branch whether to perform startup or not. Any extra time needed to perform the startup due to non completion of the above list will be charged to the installing contractor.

**Owner's operating personnel is responsible for ensuring all installation work is complete:**

Name: \_\_\_\_\_  
Phone Number: \_\_\_\_\_  
Name: \_\_\_\_\_  
Phone Number: \_\_\_\_\_  
Name: \_\_\_\_\_  
Phone Number: \_\_\_\_\_

## UNIT SETUP DATA SHEET

If startup is to be performed by a JCI service branch, please fill in the appropriate values on the below checklist. Please determine your unit type (Constant Volume (CV), Variable Air Volume (VAV), Single Zone Variable Air Volume (SZVAV) or FlexSys) and fill in the appropriate settings. Some settings may be used in multiple unit types.

Please refer to the "Parameter Descriptions and Options" list on page 43 of Start-Up Guide, Form 100.50-SU5 for more detailed explanations, or to the appropriate Installation, Operation, and Maintenance Manual.

Any values that are not filled in will be left at the factory default setting. If a Johnson Controls Technician is required to return to enter a value left blank, the installing contractor may be charged.

### OPTIONS

1. Push the OPTIONS key.
2. Scrolling to the left and right will show the headings of the different system components.
3. Scrolling up and down will show the different options for the system components.
4. Compare the options installed to the Options List sticker on the front of the unit or the Factory Order Form to be sure they match.
5. Use the checklist below to verify that all installed OPTIONS are input into the controller.

#### A. UNIT DATA

##### Unit Type

Range = Constant Volume, Variable Air Volume, Single Zone VAV, Flexsys  
 Default = Constant Volume ..... **Unit Setting:**

##### Control Method

Range = Staged / Wired Zone Temp / Comm Zone Temp  
 Default = Staged Input ..... **Unit Setting:**

##### SAT Reset Method

Range = Hardwired / Outside Air / Return Air / Supply Fan Speed  
 Default = Hardwired ..... **Unit Setting:**

##### Smoke Purge Seq 1

Range = Purge / Pressurization / Evacuation  
 Default = Purge ..... **Unit Setting:**

##### Smoke Purge Seq 2

Range = Purge / Pressurization / Evacuation  
 Default = Pressurization ..... **Unit Setting:**

##### Smoke Purge Seq 3

Range = Purge / Pressurization / Evacuation  
 Default = Evacuation ..... **Unit Setting:**

### PROGRAM

1. Push the PROGRAM key.
2. Scrolling to the left and right will show the headings of the different system components.
3. Scrolling up and down will show the different Program parameters for the system components.
4. Verify that all features that are installed are ENABLED.
5. Use the checklist below to verify that all PROGRAM features installed are ENABLED.

#### A. UNIT DATA

##### Fast Comp Start (70-150 tons Mod F or G only)

Range = User Enabled/User Disabled  
 Default = User Enabled ..... **Unit Setting:**

## UNIT SETUP DATA SHEET (CONT'D)

### B. COOLING

#### Dew Point Reset (Flexsys Only)

Range = User Enabled / User Disabled  
 Default = User Disabled ..... Unit Setting:

#### Active Slab Control (Flexsys Only)

Range = User Enabled / User Disabled  
 Default = User Disabled ..... Unit Setting:

#### Sup Air Tempering

Range = User Enabled / User Disabled  
 Default = User Disabled ..... Unit Setting:

### C. HEATING

#### Morn Warm Up

Range = User Enabled / User Disabled  
 Default = User Disabled ..... Unit Setting:

#### \* Adapt Morn Warm Up

Range = User Enabled / User Disabled  
 Default = User Disabled ..... Unit Setting:

#### \*\* Night Set Back

Range = User Enabled / User Disabled  
 Default = User Disabled ..... Unit Setting:

#### HW Valve Action

Range = Direct / Reverse  
 Default = Direct ..... Unit Setting:

### D. VENTILATION

#### Continuous Vent

Range = User Enabled / User Disabled  
 Default = User Enabled ..... Unit Setting:

#### Comfort Ventilation

Range = User Enabled / User Disabled  
 Default = User Disabled ..... Unit Setting:

## SETPOINTS

1. Push the SETPOINTS key.
2. Scrolling to the left and right will show the headings of the different system components.
3. Scrolling up and down will show the different SETPOINTS parameters for the system components.
4. Record the final value of each SETPOINTS parameter.
5. Some SETPOINTS may need to be changed in order to make the unit or certain features operate.

### A. UNIT DATA

#### Unit Design Airflow

Range = 7500 to 52000 CFM  
 Default = 7500 ..... Unit Setting:

### B. COOLING

#### Occ Zone Cooling Setpoint

Range = 2.0° F Above Occ Zone Heating Setpoint To 85.0° F  
 Default = 72.0° F ..... Unit Setting:

#### Unocc Zone Cooling Setpoint

Range = 2.0° F Above Unocc Zone Heating Setpoint To 95.0° F  
 Default = 85.0° F ..... Unit Setting:

### UNIT SETUP DATA SHEET (CONT'D)

<b>RAT Cooling SP</b> <input type="checkbox"/> Range = 2.0° F Above RAT Heating Setpoint To RAT For High SAT Default = 70.0° F .....	Unit Setting:	<input type="text"/>
<b>Maximum Bypass (FlexSys)</b> <input type="checkbox"/> Range = 20.0% To 40.0% Default = 40.00% .....	Unit Setting:	<input type="text"/>
<b>1st Stage Cooling Setpoint</b> <input type="checkbox"/> Range = 55.0° F To 65.0° F Default = 60.0° F .....	Unit Setting:	<input type="text"/>
<b>2nd Stage Cooling Setpoint</b> <input type="checkbox"/> Range = 50.0° F To 60.0° F Default = 55.0° F .....	Unit Setting:	<input type="text"/>
<b>SAT Low Setpoint</b> <input type="checkbox"/> Range = 50.0° F To SAT High Limit Default = 55.0° F .....	Unit Setting:	<input type="text"/>
<b>SAT High Setpoint</b> <input type="checkbox"/> Range = 55.0° F To 65.0° F Default = 65.0° F .....	Unit Setting:	<input type="text"/>
<b>MX Supply Air Temp Setpoint (Flexsys only)</b> <input type="checkbox"/> Range = 50.0° F To 65.0° F Default = 60.0° F .....	Unit Setting:	<input type="text"/>
<b>OAT Setpoint For Low SAT</b> <input type="checkbox"/> Range = OAT For High SAT To 90.0° F Default = 80.0° F .....	Unit Setting:	<input type="text"/>
<b>OAT Setpoint For High SAT</b> <input type="checkbox"/> Range = 60.0° F To OAT For Low SAT Default = 70.0° F .....	Unit Setting:	<input type="text"/>
<b>RAT Setpoint For Low RAT</b> <input type="checkbox"/> Range = RAT Setpoint For High RAT + 5.0° F To 90.0° F Default = 80.0° F .....	Unit Setting:	<input type="text"/>
<b>RAT Setpoint For High SAT</b> <input type="checkbox"/> Range = RAT Cooling Setpoint To RAT Setpoint For Low SAT - 5.0° F Default = 70.0° F .....	Unit Setting:	<input type="text"/>
<b>Fan Speed SP For Low SAT</b> <input type="checkbox"/> Range = Fan Speed Setpoint For High SAT To 100.0% Default = 90.00% .....	Unit Setting:	<input type="text"/>
<b>Fan Speed SP For High SAT</b> <input type="checkbox"/> Range = 50.0% To Fan Speed Setpoint For Low SAT Default = 70.00% .....	Unit Setting:	<input type="text"/>
<b>Evap Leaving Air Temp High (Flexsys only)</b> <input type="checkbox"/> Range = Evap Leaving Air Temp Low To 60.0° F Default = 60.0° F .....	Unit Setting:	<input type="text"/>
<b>Evap Leaving Air Temp Low (Flexsys only)</b> <input type="checkbox"/> Range = 50.0° F To Evap Leaving Air Temp High Default = 50.0° F .....	Unit Setting:	<input type="text"/>
<b>*Mech Clg Lockout Temp</b> <input type="checkbox"/> Range = 0.0° F To 65.0° F Default = 50.0° F .....	Unit Setting:	<input type="text"/>

\* Only active with Low ambient package. If no low ambient package installed, mech clg lockout will be 50 ° F, and is not changeable.

## UNIT SETUP DATA SHEET (CONT'D)

### C. COMPRESSOR SYSTEM

#### Comp System 1 System Unloading Pressure

- Range = 450 Psig - 650 Psig  
Default = 620 Psig.....

Unit Setting:

#### Comp System 2 System Unloading Pressure

- Range = 450 Psig - 650 Psig  
Default = 620 Psig.....

Unit Setting:

#### Comp System 3 System Unloading Pressure

- Range = 450 Psig - 650 Psig  
Default = 620 Psig.....

Unit Setting:

### D. SUPPLY SYSTEM

#### Duct Static Reset Low SP

- Range = 0.0" WC To Duct Static High Limit  
Default = 1.5" WC .....

Unit Setting:

#### Duct Static Reset High SP

- Range = Duct Static Low Limit To Duct Static Sensor Span  
Default = 2.5" WC .....

Unit Setting:

#### Duct Static Over Pressure

- Range = 0.0" WC To 5.0" WC  
Default = 3.0" WC .....

Unit Setting:

#### Fan Speed Instability Time

- Range = 15 Sec To 300 Sec  
Default = 120 Sec .....

Unit Setting:

#### Fan Speed Instability Limit

- Range = 10% To 50%  
Default = 25% .....

Unit Setting:

\*Fan speed instability time and instability limit are not applicable at this time.

### E. HEATING

#### Occ Zone Heating Setpoint

- Range = 60.0° F To 2.0° F Below The Occupied Zone Cooling  
Default = 68.0° F .....

Unit Setting:

#### Unocc Zone Heating Setpoint

- Range = 50.0° F To 2.0° F Below The Unoccupied Zone Heating  
Default = 60.0° F .....

Unit Setting:

#### RAT Heating SP

- Range = 55.0° F To 2.0° F Below The RAT Cooling Setpoint  
Default = 68.0° F .....

Unit Setting:

#### Heat Limit Temperature

- Range = 100.0° F To 150.0° F  
Default = 130.0° F .....

Unit Setting:

#### Heating SAT

- Range = 80.0° F To 115.0° F  
Default = 100.0° F .....

Unit Setting:

#### 1st Stage Heating Setpoint

- Range = 80.0° F To 95.0° F  
Default = 85.0° F .....

Unit Setting:

### UNIT SETUP DATA SHEET (CONT'D)

**2nd Stage Heating Setpoint**

Range = 95.0° F To 115.0° F  
Default = 100.0° F ..... **Unit Setting:**

**Morning Warmup Max Time**

Range = 15 Min To 240 Min  
Default = 120 Min ..... **Unit Setting:**

**F. ECONOMIZER**

**Outside Air Enthalpy Setpoint**

Range = 22.0 BTU# To 40 BTU#  
Default = 28 BTU# ..... **Unit Setting:**

**G. VENTILATION**

**CO<sub>2</sub> Offset Setpoint**

Range = 100 PPM To 1000 PPM  
Default = 500 PPM ..... **Unit Setting:**

**OA Damper Minimum Position**

Range = 0.0 % To OA Damper Maximum Position  
Default = 15.00% ..... **Unit Setting:**

**OA Damper Maximum Position**

Range = OA Damper Minimum Position To 100.0%  
Default = 30.00% ..... **Unit Setting:**

**Outside Air Maximum Flow**

Range = 0.0 CFM To 45000 CFM  
Default = 0.0 CFM ..... **Unit Setting:**

**Outside Air Minimum Flow**

Range = 0.0 CFM To 45000 CFM  
Default = 0.0 CFM ..... **Unit Setting:**

**Minimum OA Flow Setpoint**

Range = 0.0 CFM To 45000 CFM  
Default = 0.0 CFM ..... **Unit Setting:**

**H. EXHAUST**

**Building Pressure Active Setpoint**

Range = -0.15" WC TO +0.15" WC  
Default = 0.0" WC ..... **Unit Setting:**

**Building Pressure Cntrl Offset**

Range = 0.01" WC TO 0.05" WC  
Default = 0.0 " WC ..... **Unit Setting:**

**Econo Output For Fan Start**

Range = Econo Output For Fan Stop To 100.0 %  
Default = 10.0% ..... **Unit Setting:**

**Econo Output For Fan Stop**

Range = 0.0% To Econo Output For Fan Start  
Default = 5.0% ..... **Unit Setting:**

**Exhaust Output For Fan Start**

Range = Exhaust Output For Fan Off To 100.0%  
Default = 10.0% ..... **Unit Setting:**

**Exhaust Output For Fan Stop**

Range = 0.0% To Exhaust Output For Fan Start  
Default = 5.0% ..... **Unit Setting:**





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