PREPAIR G2-25

Installation Manual

Heat Recovery Ventilator
G2-25

DUNCAN STUART TODD

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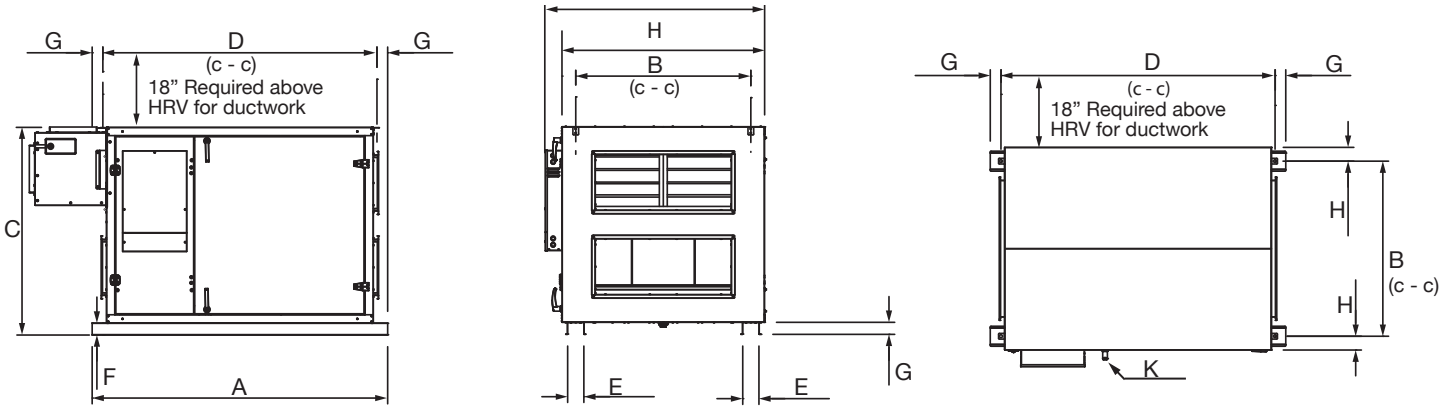
V5/20

TABLE OF CONTENTS

OVERVIEW

Dimensions



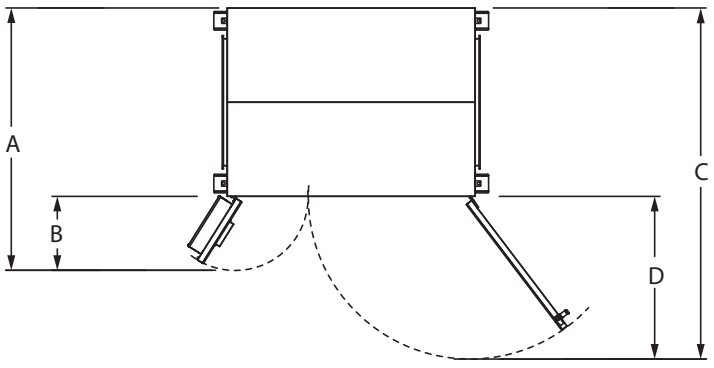
A		B		C		D		E		F	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
73 7/16	1865	43 1/2	1105	51 1/16	1311	68 1/8	1730	4	102	2 7/8	73
G		**H**		**I**		**K (Drain 2X)**		**Duct Dimensions**			
in	mm	in	mm	in	mm	in	mm	in	mm		
2 11/16	68	50 3/8	1278	54 1/2	1384	3/4 NPT	19 NPT	14x34	352x859		

Dimensions B and D are centered to the mounting holes (0 3/4")

Weight

MODELS	kg	lbs
G2-25	386	850

Space Required



A		B		C		D	
in	mm	in	mm	in	mm	in	mm
69 1/2	1763	19 1/2	497	93	2360	43	1094

PREPARATION ROOM AIRFLOW ILLUSTRATIONS

**** Drawings are illustrations only and actual port locations and airflow directions may vary. See DST manufacturer's illustration drawings.***

**** DST PrepAir systems do not have dehumidification capability. In regions of high humidity a separate stand-alone dehumidifier may be required. DST does not offer dehumidification products.***

It is the responsibility of the installer to ensure all ductwork is sized and installed as designed to ensure the system will perform as intended. The amount of air (CFM) that an HRV will deliver is directly related to the total external static pressure (E.S.P.) of the system. Static pressure is a measure of resistance imposed on the blower by length of duct work/number of fittings used in duct work, duct heater etc.

Fully Dedicated System

- Stale air drawn from areas of contamination
- Fresh air supplied to main areas
- HRV airflow should be balanced
- DST furnished external heating and cooling coil must be installed per instructions.

Operation diagram

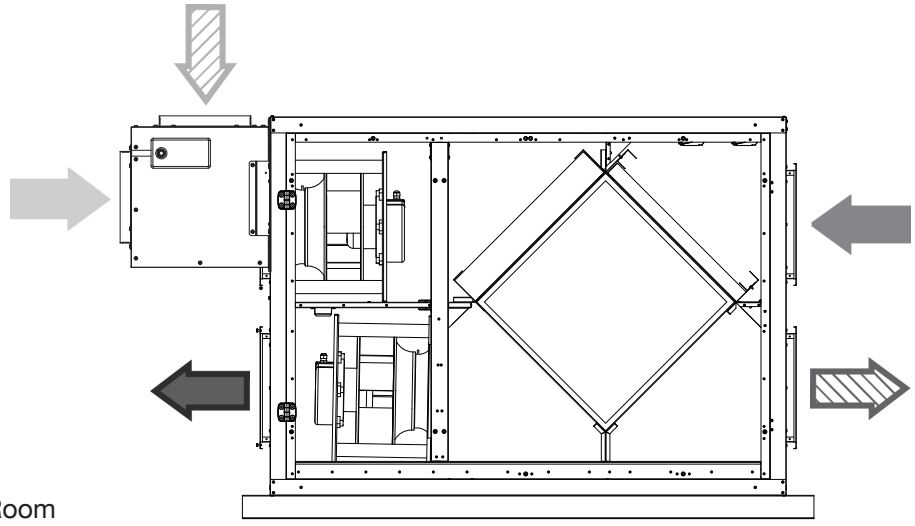
= fresh air to inside

= fresh air from outside

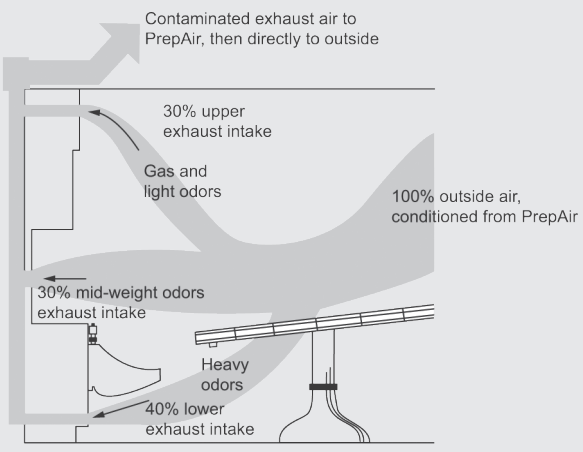
= stale air from inside

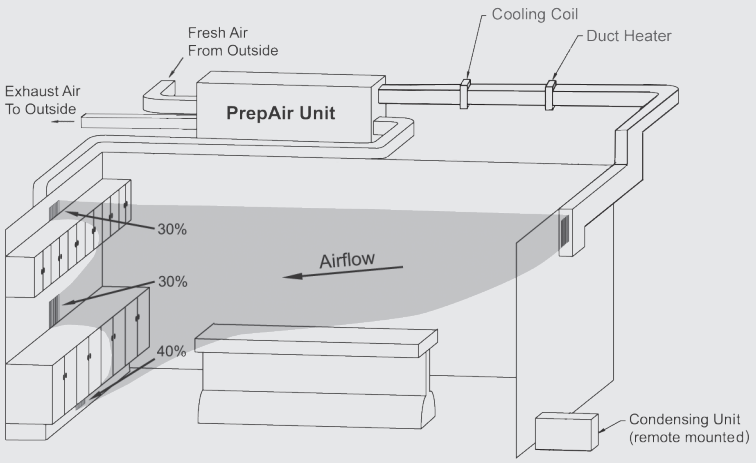
= stale air to outside

= recirculated air from Prep Room



Typical Preparation Room Layout





INSTALLATION

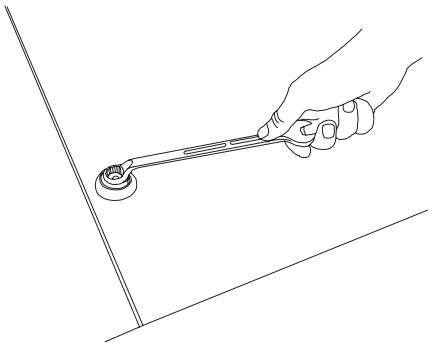
Inspection

The PrepAir G2-25 is delivered on a pallet. Handles and necessary components are placed inside the unit.
The inspection hatches are opened by the use of a 5/8” (16 mm) cap key, see figure below. To facilitate opening and closing of the inspection hatches, install the 2 handles that are placed inside the unit on delivery.

The door handles must be locked before the unit is put into operation to ensure the required level of safety for the unit. (Hex size: 5/16 in (8 mm)

As an extra precaution, inspect the unit and verify that all ordered equipment is delivered before starting the installation. Any discrepancies from the ordered equipment must be reported to DST.

Equipment List



- Heat recovery ventilator with installation kit
- By Pass Module (BPM)
- Cooling coil
- Pre-heat electric strip (if required in your region, see materials proposal)
- Comfort heat electric strip
- Two motorized dampers
- RAWAL valve system
- Interior grills
- PrepAir control switch
- RED/GREEN visual signal
- Pre-heat thermostat (if required in your region, see materials proposal)
- Matched exterior condenser

Location

The HRV must be protected from the elements (rain, snow, etc) at all times.

The HRV must be located in a conditioned space where it will be possible to conveniently service the unit. Refer to DST sheets PA1 and PA2 for the unit’s location.

Conditioned Space must meet the following conditions:

- Space temperature must be above freezing conditions at all times and preferably maintained above 12°C (54 °F).
- The condensate drain (if included) must be installed so that the condensate drains and is protected from freezing.
- The space is easily accessible for equipment maintenance and inspection.
- The space meeting any and all code requirements for mechanical equipment spaces.

The unit must be mounted level and may be hung with threaded rod with a minimum of 1/2” and a maximum of 3/4” in diameter (field supplied and specified) through the protruding frame at the base of the unit (see figure page 3 for dimensions). Do not block access to unit doors as indicated. Rubber or seismic vibration isolation may be required in some regions (field supplied and specified).

NOTICE: Products are designed and manufactured to provide reliable performance, but they are not guaranteed to be 100% free of defects. Even reliable products will experience occasional failures, and this possibility should be recognized by the user. If these products are used in a life support ventilation system where failure could result in loss or injury, the user should provide adequate back-up ventilation, supplementary natural ventilation or a failure alarm system, or acknowledge willingness to accept the risk of such loss or injury.

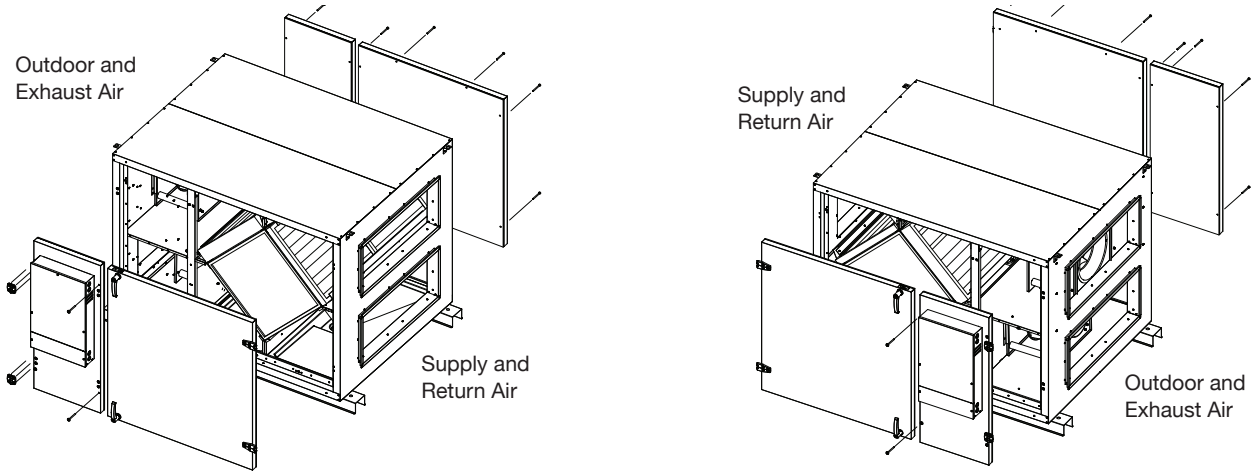
Your ventilation system should be installed in accordance with the local building code that is in effect. In absence of such requirements, it is recommended to check with local authorities having jurisdiction in your area prior to installing this product.

INSTALLATION, cont.

Port Configuration

The unit has hinged access doors on the front and removable panels on the back. The front left and right access doors are hinged for easy access to the filters, exchanger and fan motors while the back left and right panels are fastened to the unit.

When facing the front access doors the outdoor and exhaust air duct connections are on the left side of the unit and the supply and return air duct connections are on the right side of the unit. If this factory configuration is not suitable for the HRV designated space, the front access doors and back panels are interchangeable in order to get an alternate configuration for duct connections as shown below.

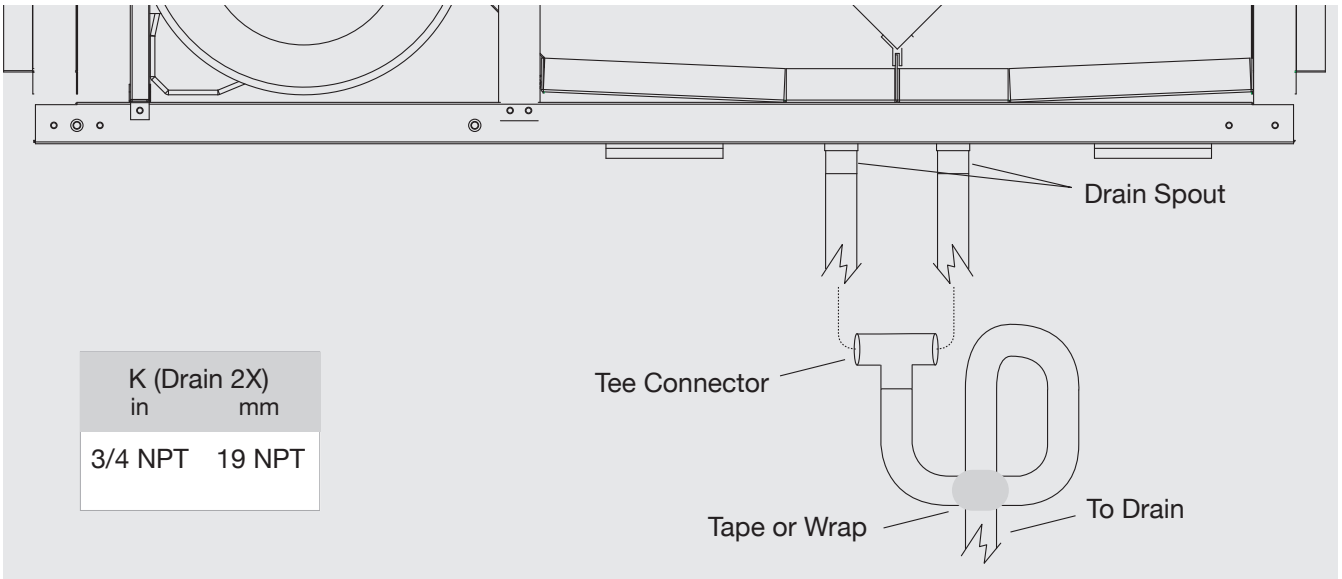


Factory configuration (left). Configuration can be reversed on site for alternate duct layout (right).

Installing Drain Line

Through normal operation and including defrost mode, the HRV may produce some condensation. This water should flow into a nearby drain, or be taken away by a condensate pump. The HRV and all condensate lines must be installed in a space where the temperature is maintained above the freezing point. A “P” trap should be made in the drain line. This will prevent odors from being drawn back up into the unit.

Install the drain hose, making a “P” trap

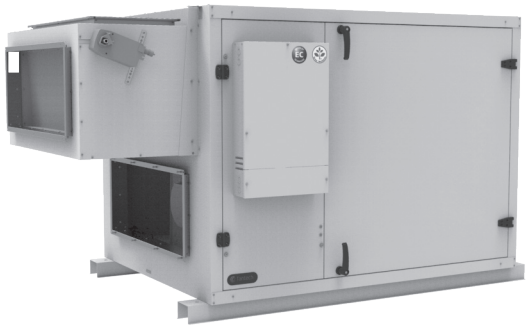


K (Drain 2X)	
in	mm
3/4 NPT	19 NPT

INSTALLATION, cont.

Installing the BYPASS module (BPM1434 module) accessory

The BPM module accessory is an insulated recirculation damper box that is mounted on the side of the unit, over the outdoor air duct connection of the unit. Install per the provided installation manual that comes with the BPM.



The unit control has a dedicated 24VAC digital output to energize the BPM module. See the “BPM module actuators” section on page 11 of this manual for more information on wiring the BPM module.

Weather hoods, louvers, ducts and dampers

The outdoor air intake weather hood or louver must be positioned well away from any source of contamination. The outdoor air intake and the exhaust air weather hoods or louvers must be adequately spaced, 10 feet (3 m) apart minimum, to prevent cross-contamination. They must be located such that they are high enough off the ground or other horizontal surfaces, 18 inches (460 mm) minimum, to be clear of any snow accumulation or other possible obstructions or as required per local building code.

In order to minimize the friction losses, the open area of the weather hoods or louvers must be adequate for the required airflow of the ventilation system. It is recommended that the velocity through the open area of a weather hood or louver be kept below 500 FPM (2.5 m/s) to minimize the rain water entrainment.

The weather hoods or louvers must have a screen with 1/4 inch (6 mm) mesh to prevent birds and rodents from entering the ductwork. Do not use smaller mesh as it may be more susceptible to getting clogged.

The outside perimeter of weather hoods or louvers must be adequately sealed to prevent leakage into the building envelope.

The ducts should be fabricated of galvanized sheet metal. In order to minimize the friction losses, ductwork should be sized adequately and be kept short with as few bends or elbows as possible. Favor 45° elbows over 90° elbows and use “Y” tees over standard 90° tees if possible. Account for dampers and/or other duct mounted accessories as part of the duct design.

All duct joints must be fastened and sealed with proper duct sealant to minimize air leakage.

Ducts connecting the unit to the outside weather hoods should be adequately insulated in order to prevent any condensate to form on the surface of the ducts.

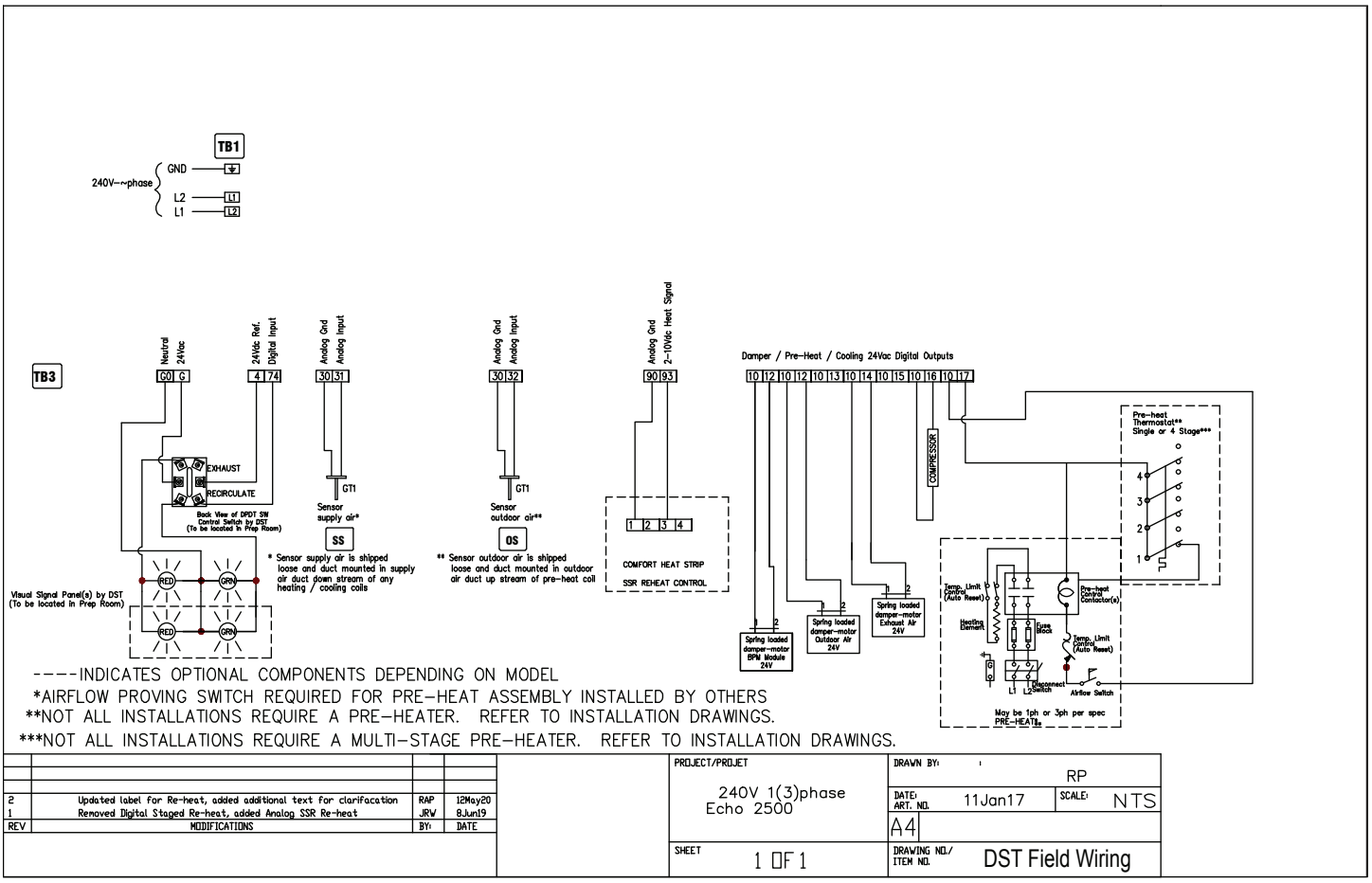
Dampers are provided on both the supply & exhaust airstreams for proper unit operation and are often required to conform to regional requirements for ventilation systems. Dampers prevent unconditioned air infiltrating the space when the unit is stopped or during the exchanger defrost sequence. The outdoor air and exhaust air dampers should be fitted, fastened and sealed to the ducts with proper duct sealant to minimize air leakage.

Dampers fitted to the ductwork connecting the unit to the outside weather hoods should be adequately insulated in order to prevent any formation of condensate on the outside surface.

The unit control has dedicated 24VAC digital outputs to energize both the outdoor air damper and the exhaust air damper.

UNIT COMPONENTS AND ELECTRICAL CONNECTIONS

DST Field Wiring Diagram



----INDICATES OPTIONAL COMPONENTS DEPENDING ON MODEL
*AIRFLOW PROVING SWITCH REQUIRED FOR PRE-HEAT ASSEMBLY INSTALLED BY OTHERS
**NOT ALL INSTALLATIONS REQUIRE A PRE-HEATER. REFER TO INSTALLATION DRAWINGS.
***NOT ALL INSTALLATIONS REQUIRE A MULTI-STAGE PRE-HEATER. REFER TO INSTALLATION DRAWINGS.

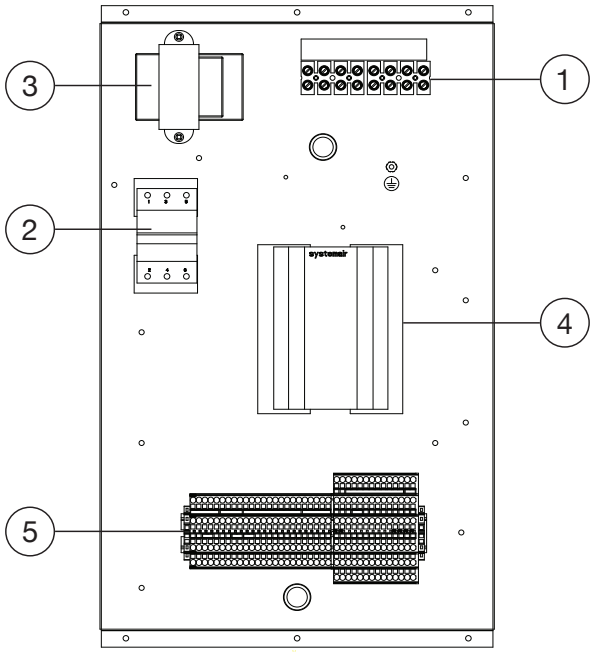
REV	MODIFICATIONS	BY:	DATE
2	Updated label for Re-heat, added additional text for clarifacation	RAP	12May20
1	Removed Digital Staged Re-heat, added Analog SSR Re-heat	JRW	8Jun19

PROJECT/PROJET: 240V 1(3)phase Echo 2500	DRAWN BY: RP		
	DATE: 11Jan17	SCALE: NTS	
	ART. NO. A4		
SHEET: 1 OF 1	DRAWING NO./ ITEM NO. DST Field Wiring		

UNIT COMPONENTS AND ELECTRICAL CONNECTIONS, cont.

Electrical connection box

All electrical connections are made in the electrical connection box found on the front of the unit. Remove the access panel by unscrewing the fasteners.

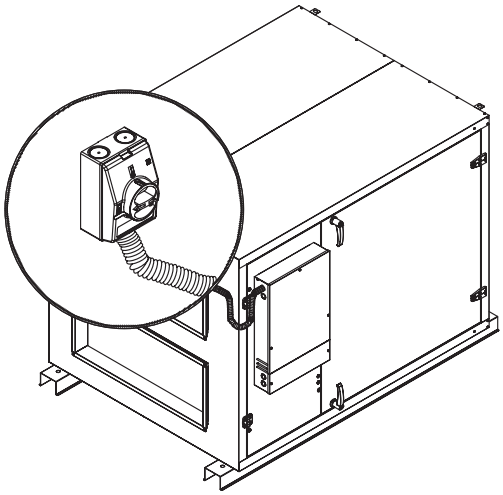


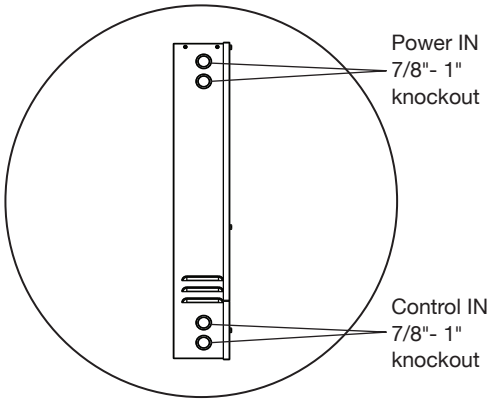
POSITION	DESCRIPTION
1	Terminal block for main power voltage to the unit (TB1)
2	Resettable fuse (Not a safety disconnect)
3	Transformer 240/24 VAC
4	Unit controller (Corrigo™)
5	Terminal block for low voltage / controls connections (TB3)

UNIT COMPONENTS AND ELECTRICAL CONNECTIONS, cont.

Main power & circuit breaker connection

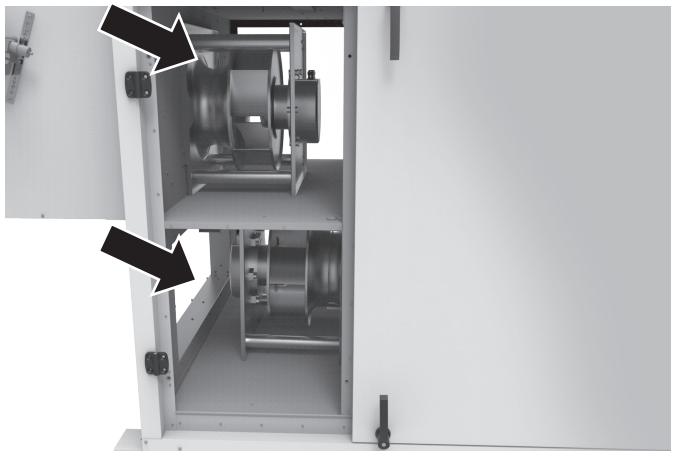
The main power connection of this unit must be preceded by an all pole circuit breaker. The connection from this circuit breaker to the unit main power knockout must be run in flexible conduit (field supply & specify) for the reason that the unit electrical connection box is mounted on a hinged access panel used to service the fan motors.





EC fan motor assemblies

This unit is equipped with two (2) electronically-commutated (EC) fan motors referred to as SF & SAF (supply air/fan) or EF & EAF (exhaust air/fan) (see unit wiring diagram). Both fan motors can be accessed by opening the smaller hinged access panel.

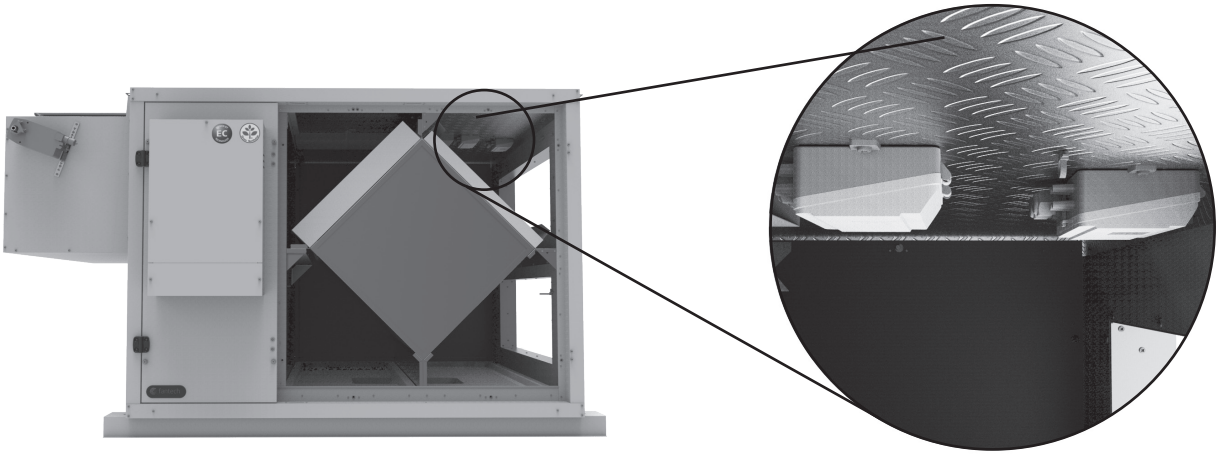


The speed of these EC fan motors are controlled by analog outputs from the unit controller. With feedback from the unit's built in pressure transducer modules, the controller will modulate the fan speed in order to maintain the airflow set point. This method of controlling the unit airflow is called Constant Air Volume (CAV). More details in the "Pressure transducer modules" section.

UNIT COMPONENTS AND ELECTRICAL CONNECTIONS, cont.

Pressure transducer modules

As mentioned in the previous section, this unit is equipped with two (2) pressure transducer modules referred to as Pressure transducer exhaust (PTE) and Pressure transducer supply (PTS) (see unit wiring diagram). They are located inside of the unit on the return air side and can be accessed by opening the larger hinged access panel.



Each module has two (2) pressure transducers.

The first pressure transducer on the PTE module measures the pressure drop over the inlet ring of the exhaust air fan in order to control the fan speed. The second one measures the pressure drop over the supply air filter for the dirty filter alarm.

The first pressure transducer on the PTS module measures the pressure drop over the inlet ring of the supply air fan in order to control the fan speed. The second one measures the pressure drop over the exhaust air filter for the dirty filter alarm.

More details on the pressure transducers in the “Airflow control” & “Alarm handling” sections.

Wiring the BPM module actuators

A BPM module has been supplied with the unit. Once the BPM has been mounted as per the provided installation instructions, the electrical connection can now be made.

The outdoor air damper is connected to terminal TB3 10-12 (see unit wiring diagram) using the harness provided with the accessory.

The exhaust air damper is connected to terminal TB3 10-14 (see unit wiring diagram) using the harness provided with the accessory.

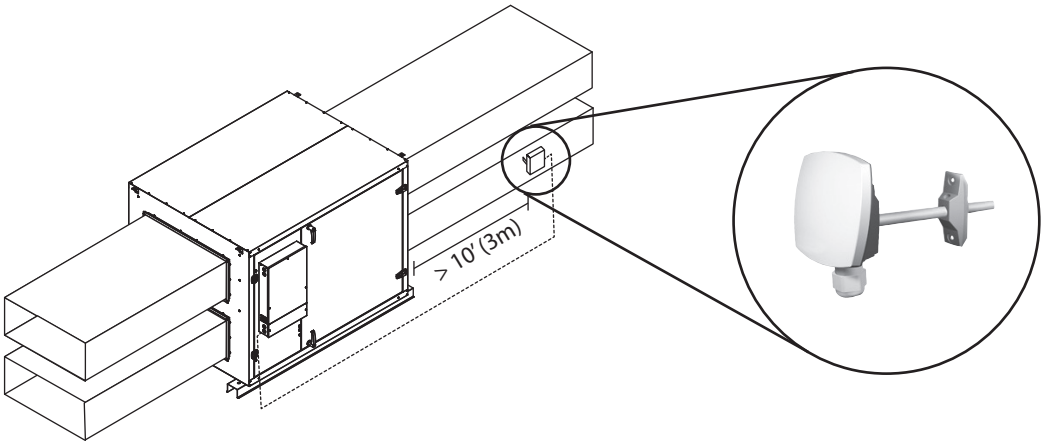
The BPM module is connected to terminal TB3 10-12 (see unit wiring diagram) using the harness provided with the accessory.

The dampers and/or BPM module must be installed and wired back to the electrical connection box as indicated above for the unit to function properly. Ensure this is done before proceeding.

UNIT COMPONENTS AND ELECTRICAL CONNECTIONS, cont.

Installing the supply air temperature sensor

A temperature sensor as seen in the illustration below is enclosed in the unit packaging on delivery. This temperature sensor is the supply air sensor and it must be mounted in the supply air duct no closer than 10 ft. (3m) away from the unit. Using a two (2) wire conductor (field supplied and specified) connect the supply air sensor to terminal TB3 30-31 (see unit wiring diagram).



The supply air sensor must be installed and wired back to the elecctrical connection box as indicated above for the unit to function. Ensure this is done before proceeding.

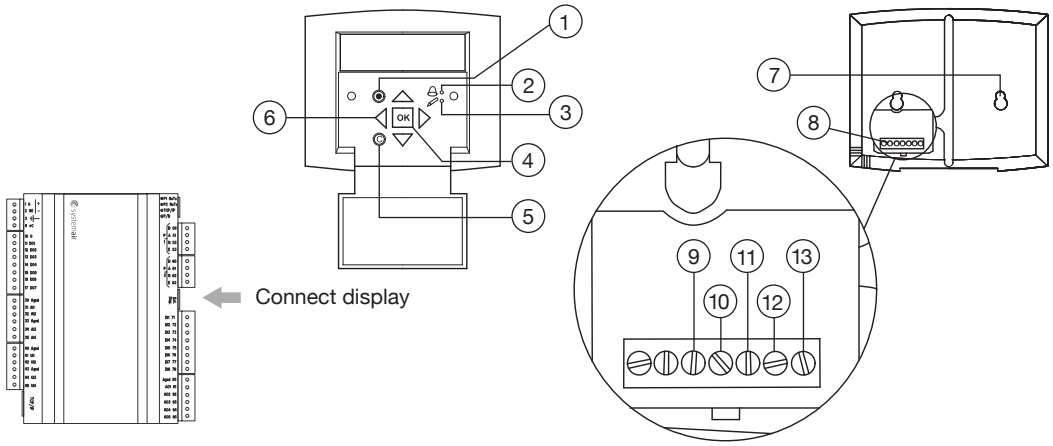
UNIT COMPONENTS AND ELECTRICAL CONNECTIONS, cont.

Installing the unit external display

The unit external display is delivered with a 32 ft. (10 m) cable that is used to connect the display to the Corrigo™ controller in the electrical connection box. See figure below for instruction on wiring the cable to the display. Find an appropriate place to install the display within 32 ft. (10 m) of the unit.

Supplied cable comes with a connector to connect the display to the Corrigo.

The unit external display is required for the start up and the commissioning of the unit. Ensure it is installed as indicated below before continuing.



POSITION	EXPLANATION
1	Alarm button: Gives access to the alarm list.
2	Alarm LED: Indicates alarm by flashing red light.
3	Write LED: Indicates by flashing yellow light that parameters can be set or changed.
4	OK button: Press this button to be able to change or set parameters whenever possible. Also used to move between changeable parameters in one dialogue window frame.
5	Cancel button: Used to abort a change and return to the initial setting.
6	RIGHT/LEFT & UP/DOWN buttons: Used to move up, down, left & right in the menu tree. UP/DOWN buttons are also used to increase values when setting or changing parameters.
7	Mounting holes.
8	Connection block.
9	Connection to yellow cable.
10	Connection to orange cable.
11	Connection to red cable.
12	Connection to brown cable.
13	Connection to black cable.
	Supplied Cable

CONFIGURING G2-25 FOR DST APPLICATION

Controller display & start screen

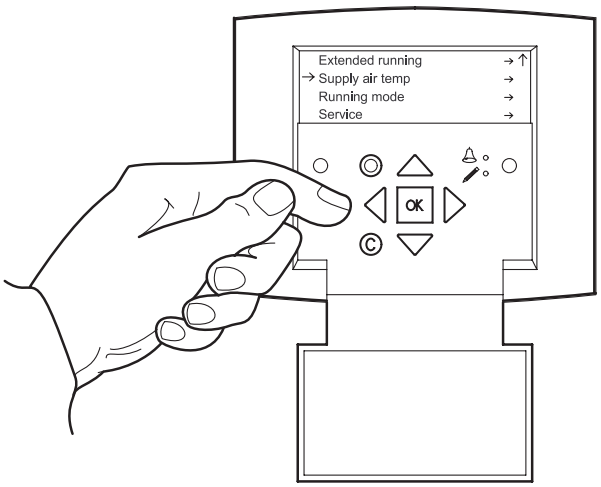
On startup, the start screen will be visible on the unit controller's external display. The first line is the unit model name followed by the date and time (24h clock) and the current system operation mode.

```
H2800Xi

YYYY-MM-DD                HH : MM

SYSTEM: STOPPED
```

The unit external display is used to configure & commission the unit. It is also used to troubleshoot and handle alarms generated by the controller. Navigate through the menus from the start screen by using the:

- UP/DOWN arrows to navigate the menus
- LEFT/RIGHT arrows to access and exit submenus
- OK button to access the changeable parameters
- UP/DOWN arrows to change the value of a parameter
- OK button to accept changes to a parameter
- Cancel button © to clear parameter values
- Alarm button ◉ to access the alarm log

There are also 2 LEDs by the arrow buttons. The upper LED to the right of the bell icon will blink red when an alarm is triggered and the lower LED to the right of the pencil icon will blink yellow when a menu with changeable parameters is accessed.



CONFIGURING G2-25 FOR DST APPLICATION, cont.

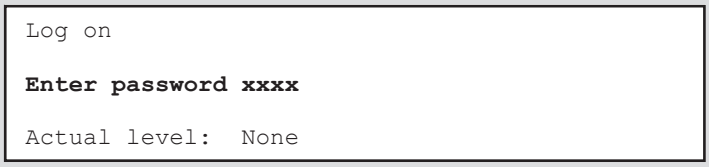
Access right

In order to change parameters, access rights are required. Follow the instruction below to logon as administrator in order to change unit parameters.

1. Access rights
Go to *Access Rights* by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.

2. Log on
Select *Log on* by pressing the RIGHT arrow button.

3. Password
Enter password *1111* by pressing OK followed by the UP/DOWN arrow buttons. Select next digit by pressing the RIGHT arrow button. Press OK when all 4 digits have been entered.



Go back 2 steps using the LEFT arrow button.

CONFIGURING G2-25 FOR DST APPLICATION, cont.

Airflow control (CAV & airflow set points)

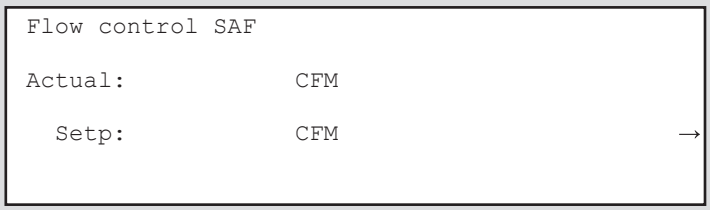
By monitoring the pressure drop over the inlet ring of both fans, the unit controller can determine and display the airflow provided by each fan. The unit controller will modulate the 0-10Vdc output signal sent to each EC fan motor in order to maintain a given airflow set point. Follow the steps below to enter the airflow set points of the supply and exhaust air fans, for your application.

1. Air Control

Go to *Air control* by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.

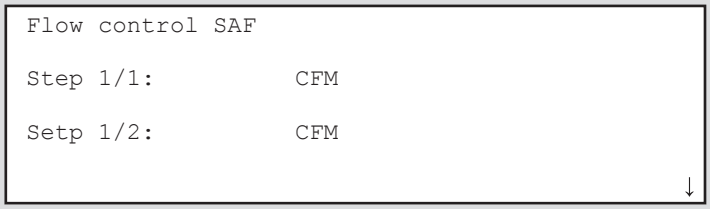
2. Flow Control SAF

From this submenu, the actual supply airflow measured is displayed along with the set point for the current unit operation mode (0 for unit OFF model). Press the RIGHT arrow button to access the next submenu.



3. Flow Control SAF

From this submenu, the set points for normal speed (1/1) and reduced speed (1/2) for the supply air fan can be entered. Press the OK button once to access normal speed (1/1). Enter the desired normal speed cfm set point by using the UP/DOWN arrow buttons to increment/decrement the value and the RIGHT/LEFT arrow buttons to move between the digits. Once the desired normal speed airflow has been set, press the OK button to save. The cursor will flash on the first digit of the reduced speed airflow (1/2). Press OK to save. No reduced speed is required for this application.

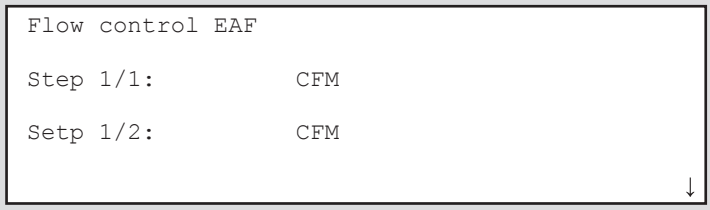


Go back 1 step using the LEFT arrow button.

CONFIGURING G2-25 FOR DST APPLICATION, cont.

4. Flow Control EAF

Go to *Flow control EAF* by pressing the DOWN arrow button. Select by pressing the RIGHT arrow button. From this submenu, the set points for normal speed (1/1) and reduced speed (1/2) for the exhaust air fan can be entered. Press the OK button once to access normal speed (1/1). Enter the desired normal speed cfm set point by using the UP/DOWN arrow buttons to increment/ decrement the value and the RIGHT/LEFT arrow buttons to move between the digits. Once the desired normal speed airflow has been set, press the OK button to save. The cursor will flash on the first digit of the reduced speed airflow (1/2). Press OK to save. No reduced speed is required for this application.



Go back 2 steps using the LEFT arrow button.

The airflow read on the unit external display is accurate to +/-5% of the measured value in a laboratory setting. According to the Field Performance Measurements of Fan Systems published by AMCA (AMCA 203-90), airflow field measurements typically have an uncertainty of up to 10%. If you are unsure of what is acceptable in your application, we recommend you contact a qualified air tester & balancer in your area.

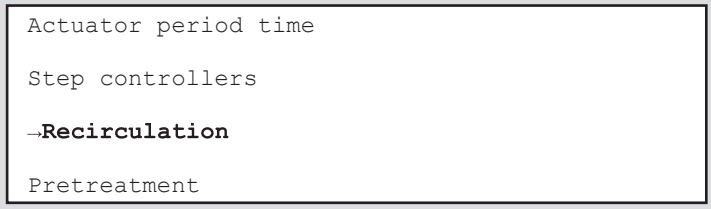
Configuring the recirculation mode

1. Configuration

Go to *Configuration* by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.

2. Recirculation

Locate *Recirculation* submenu by using the UP/DOWN arrow buttons and select it by pressing the RIGHT arrow button.



CONFIGURING G2-25 FOR DST APPLICATION, cont.

3. Recirculation

Using the UP/DOWN arrow buttons, locate the *use extra time group 5* field. Press the OK button and set the field value to Yes using the UP/DOWN arrow button. Press OK to save.

Go back 2 steps using the LEFT arrow button.

Time settings & schedule

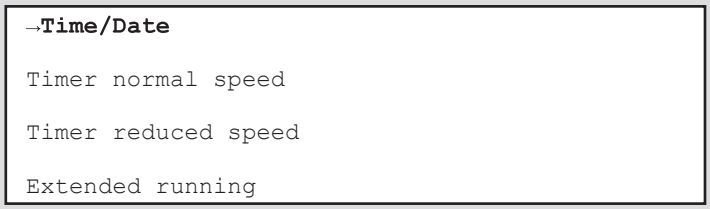
The unit controller has a year-based 24h clock function. This means that a weekly schedule with holiday periods for a full year can be set. The clock also has an automatic daylight saving time change-over. To set the date and time follow the steps below.

1. Time settings

Go to *Time settings* by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.

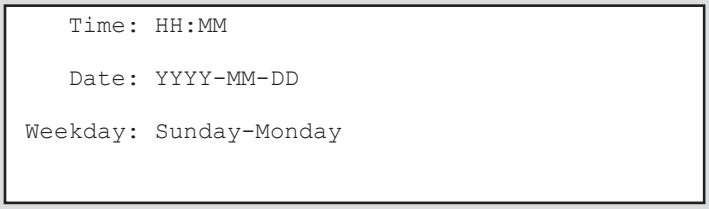
2. Time/Date

Go to *Time/Date* by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.



3. Time/Date

Press the OK button to access the field, use the UP/DOWN arrow buttons to change the digits. Select next digit by pressing the RIGHT arrow button. Press OK twice to save the value. Note the time parameter format is 00:00 to 24:00



Go back 1 step using the LEFT arrow button.

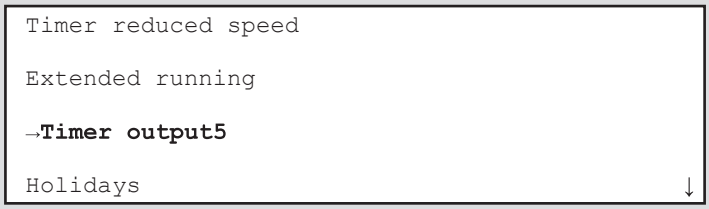
This application requires the unit to run in recirculation mode 24/7.

CONFIGURING G2-25 FOR DST APPLICATION, cont.

Exhaust mode will be achieved by an external switch which will over-ride the recirculation mode when required. To configure the unit to run in recirculation mode 24/7, follow the steps below.

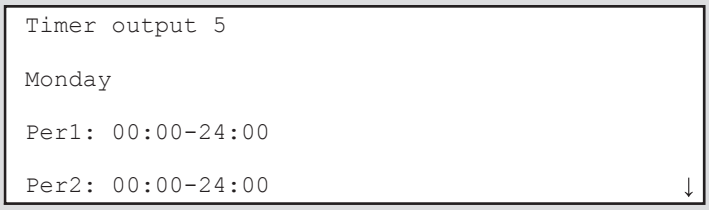
4. Timer output 5s

Go to *Timer output 5* using the UP/DOWN arrow buttons and select it by pressing the RIGHT arrow button.



5. Timer output 5

Use the UP/DOWN arrow buttons to toggle between weekdays. Press the OK button to access the field. Use the UP/DOWN arrow buttons to change the digits. Select next digit by pressing the RIGHT arrow button to set the *Per1* value at 00:00-24:00 and press OK again to save the value. Set the *Per2* values also at 00:00-24:00. Repeat sequence for each day of the week (Monday-Sunday).



Once all values are successfully set for each day of the week, **Go back 2 steps** using the LEFT arrow button.

Configuring the re-heat, pre-heat and cooling

1. Configuration

Go to *Configuration* by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.

2. Inputs/Outputs

Locate *Inputs/Outputs* submenu by using the UP/DOWN arrow buttons and select it by pressing the RIGHT arrow button.

CONFIGURING G2-25 FOR DST APPLICATION, cont.

3. AO

Go to *AO* by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.

4. AO3

Press the DOWN arrow button twice to access *AO3.* Press the OK button once. The cursor will flash next to *Sign*. Set *Sign* to *Y1 heating* by using the UP/DOWN arrow buttons. Select by pressing the OK button. The cursor will flash on *Value*. Press the OK button again. The cursor will flash on *Auto.* Press the OK button again to clear the cursor.

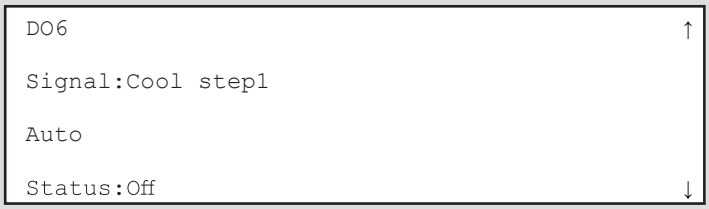
Go back 1 step using the LEFT arrow button.

5. DO

Go to *DO* by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.

6. DO6

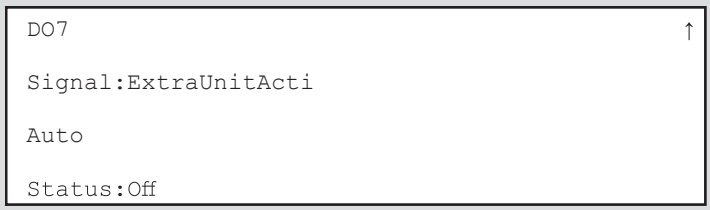
Press the DOWN arrow button 5 times to access the *DO6*. Press the OK button once. The cursor will flash next to *Signal*. Set *Signal* to *Cool step1* by using the UP/DOWN arrow buttons. Select by pressing the OK button. The cursor will flash on *Auto*. Press OK to clear the cursor.



CONFIGURING G2-25 FOR DST APPLICATION, cont.

7. DO7

Press the DOWN arrow button once to access the *DO7*. Press the OK button once. The cursor will flash next to *Signal*. Set *Signal* to *ExtraUnitActi* by using the UP/DOWN arrow buttons. Select by pressing the OK button. The cursor will flash on *Auto*. Press OK to clear the cursor.



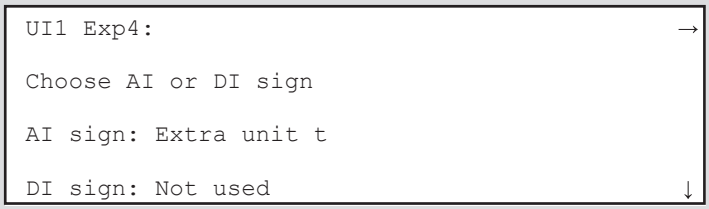
Go back 1 step using the LEFT arrow button.

8. UI exp4

Go to *UI exp4* (**Not** *UI* or *UI exp3*) by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.

9. AI

Press the OK button once. The cursor will flash next to *AI sign*. Using the UP/DOWN arrow buttons, set *AI sign* to *Extra unit t*. Press OK button to save. The cursor will flash next to *DI sign*. Press OK to clear the cursor.



Go back 1 step using the LEFT arrow button.

10. AI

Go to *AI* (**Not** *AI exp3* or *AI exp4*) by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.

CONFIGURING G2-25 FOR DST APPLICATION, cont.

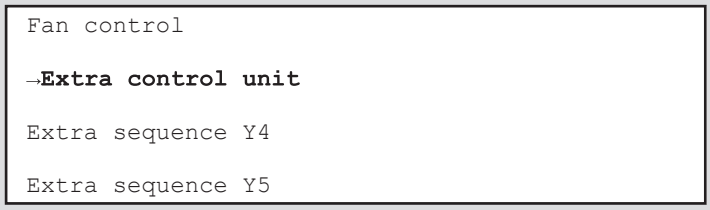
11. AI2

Press the DOWN arrow button once to AI2. Press OK, the cursor will flash next to the *Sign*. Use the UP/DOWN arrow buttons to set *sign* to *Outd temp*. Press OK to save. The cursor will flash next to *Compensation*. Press OK to clear the cursor.

Go back 2 steps using the LEFT arrow button.

12. Extra control unit

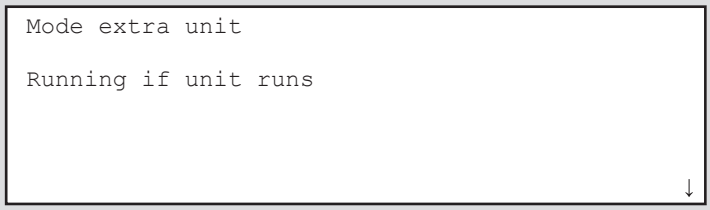
Press the DOWN arrow button to go to *Extra control unit*. Use the RIGHT arrow button to select.



13. Mode extra unit

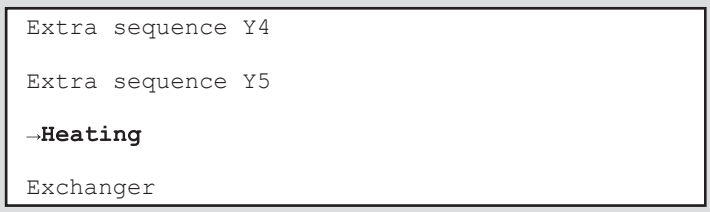
Press OK to select. Use the UP/DOWN arrow buttons to set function to *Running if unit runs*. Press OK to select.

Go back 1 step using the LEFT arrow button.



14. Heating

Use the UP/DOWN arrow button to display *Heating*. Use the RIGHT arrow button to select.



15. Electric

Press OK to select. Use the UP/DOWN arrow button to set function to *Electric*. Press OK to select.

Go back 1 step using the LEFT arrow button.

CONFIGURING G2-25 FOR DST APPLICATION, cont.

16. Cooling

Use the UP/DOWN arrow button to display *Cooling*. Use the RIGHT arrow button to select.

```
Heating
Exchanger
→Cooling
Pump Control
```

17. DX

Press OK to select. Use the UP/DOWN arrow buttons to set function to *DX*. Press OK to select.

Go back 1 step using the LEFT arrow button.

```
Cooling
Not connected
                    ↓
```

18. Type of actuator

Use the UP/DOWN arrow button to display *Type of actuator*. Use the RIGHT arrow button to select.

```
External setpoint
Run ind/Motor prot
→Type of actuator
Actuator run time
```

19. DX

Press OK to select. Use the UP/DOWN arrow buttons to set *Type of actuator Y1* heating to *2-10V*. Press OK 3 times to select.

Go back 2 steps using the LEFT arrow button.

```
Type of actuator
Y1 heating: 0-10V
Y2 exchan: 0-10V
Y3 cooling: 0-10V    ↓
```

20. Temperature

Use the UP/DOWN arrow buttons to go to *Temperature*. Press the RIGHT arrow button to select.

```
Running mode
→Temperature
Air control
Timer settings
```

CONFIGURING G2-25 FOR DST APPLICATION, cont.

21. Supply air temp

Press the RIGHT arrow button to access the *Supply air temperature* setpoint. Press OK button. The cursor will flash next to Setp. Use the UP/DOWN arrow buttons to increment/decrement the temperature setpoint of the supply air required for your application. Use the LEFT/RIGHT arrow buttons to go to the next digit. Press OK button to save.

Go back 1 step using the LEFT arrow button.

22. Extra unit

Use the UP/DOWN arrow button to display *Extra unit*. Press OK. The cursor will flash next to Setp. Use the UP/DOWN arrow buttons to increment/decrement the temperature of the pre-heater setpoint. Use the LEFT/RIGHT arrow buttons to go to the next digit, set this value to 23°F. Press OK button to save.

Go back 1 step using the LEFT arrow button.

Set up is now complete.

UNIT OPERATION

System operation modes

The unit has the following operation modes:

- Starting up: The unit is performing the start sequence
- Normal run: Normal speed or reduced speed ventilation active
- Stop fan: The unit is performing the stop sequence
- Stopped: Ventilation stopped
- Recirculation: Exhaust air fan is stopped. Supply air fan is active and BPM module is open, room air is recirculated through the unit (Only available if unit is equipped with BPM module).

The unit will automatically change from one operation mode to another based on start and stop conditions. The unit will remain stopped until a start condition is met. If the unit is in normal run or recirculation, it will run until a stop condition is met.

Unit Start conditions and sequence

The unit, when powered, will start and run when any of the following conditions is met:

1. The programmable schedule for normal speed or reduced speed is **active**.
2. The extended run digital input is active.
3. If a CO2 sensor is equipped and configured on the dedicated analog input channel, the unit will start if the CO2 level reading reaches the preset lower limit value.
4. A BPM module is equipped, timer schedule 5 is configured, and the current time falls within the assigned start/stop times for this time group.

Once any of the conditions listed above is met, the unit will initiate the start sequence:

1. Operation mode changes from *stopped* to starting up.
2. The digital outputs for the fresh air damper, the exhaust air damper, and the recirculation damper (BPM) are activated.
3. The exhaust air fan and the supply air fan will start after a preset time. Note that the delay for each fan to start might be different, meaning that one can come on before the other.
4. Operation mode changes from *starting up* to *normal run* or *recirculation*.

Note that the Starting up sequence might take up to a minute. Once the unit is in normal run or recirculation it may take another minute to reach the airflow set point.

Unit Stop conditions and sequence

The unit will be stopped when any of the following conditions is met:

1. None of the starting conditions are met.
2. The external switch digital input is **active**. More details in the “External switch” section.
3. The fire alarm digital input is **active**. More details in the “Fire alarm” section.
4. A systems alarm is **active** and forcing the unit to stop. More details in the “Alarm handling” section.

Once any of the conditions listed above is met, the unit will initiate the stop sequence:

1. Operation mode changes from *normal run* or *recirculation* to *stop fan.*
2. The exhaust air fan and the supply air fan will stop after a preset time. Note that the delay for each fan to stop might be different, meaning that one can turn off before the other.
3. The digital outputs for the fresh air damper and the exhaust air damper are deactivated.
4. All other remaining digital and analog outputs are deactivated.
5. Operation mode changes from *stop fan* to *stopped*.

UNIT OPERATION, cont.

Fire Alarm

Unless otherwise required by the Building Inspector/code regulations, the fire alarm capabilities of the G2-25 are optional.

The fire alarm digital input can be used to connect the unit to fire alarms or the building management system (BMS) in order to stop the unit in case of a fire. If the fire alarm input is triggered the unit will initiate the stop sequence and stop the ventilation. A controller alarm will also appear on the unit external display to indicate that the fire alarm input is active.

Check if the unit's operation, as explained above in case of a fire, conforms to the local building code or the authorities having jurisdiction in your area.

The fire alarm(s) or BMS output has to be wired to terminals TB3 75 & 4, DI5 & +24VDC respectively (see wiring diagram). Remember to cut the power to the unit at the all pole circuit breaker before performing any electrical work.

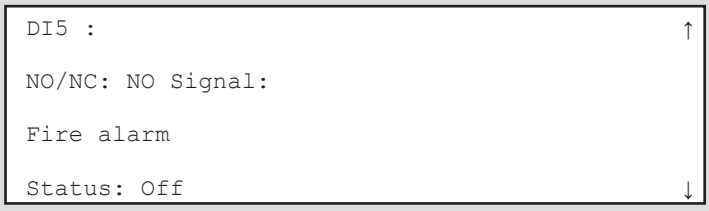
The fire alarm input is configured on DI5 from the factory and is set as a normally open contact (NO) by default. If you require a normally closed contact (NC) follow the steps below.

1. Configuration
Go to *Configuration* by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.

2. Inputs/Outputs
Locate *Inputs/Outputs* submenu by using the UP/DOWN arrow buttons and select it by pressing the RIGHT arrow button.

3. DI
Go to *DI* by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.

4. Configuring DI5
From this submenu, use the UP/DOWN arrow buttons to locate DI5 and select it by pressing the RIGHT arrow button. Press OK again to access the *NO/NC* field to set the digital input contact to either normally open (NO) OR normally closed (NC) based on what will be used to trigger the input.



UNIT OPERATION, cont.

External switch

The external switch digital input can be used to stop the unit remotely. If the external switch input is triggered the unit will initiate the stop sequence and stop the ventilation. A controller alarm will also appear on the unit external display to indicate that the external switch is active.

A means of triggering the input will be required (field supplied and specified) and wired to TB3 76 & 4, DI6 & +24VDC respectively (see wiring diagram). Remember to cut the power to the unit at the all pole circuit breaker before performing any electrical work.

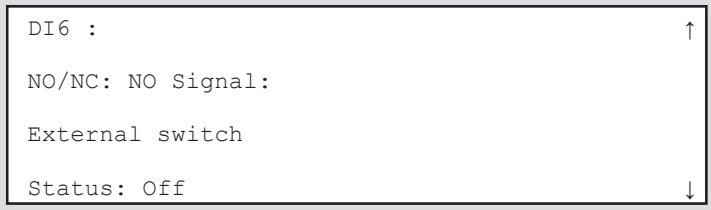
The external switch input is configured on DI6 from the factory and is set as a normally open contact (NO) by default. If you require a normally closed contact (NC) follow the steps below.

1. Configuration
Go to *Configuration* by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.

2. Inputs/Outputs
Locate *Inputs/Outputs* submenu by using the UP/DOWN arrow buttons and select it by pressing the RIGHT arrow button.

3. DI
Go to *DI* by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.

4. Configuring DI6
From this submenu, use the UP/DOWN arrow buttons to locate DI6 and select it by pressing the RIGHT arrow button. Press OK again to access the *NO/NC* field to set the digital input contact to either normally open (NO) OR normally closed (NC) based on what will be used to trigger the input.



ALARM HANDLING

The unit controller comes with preprogrammed alarms to ensure it functions properly and to help troubleshoot problems when they occur. Active alarms are indicated by the flashing red LED on the unit external display.

These alarms have different characteristics. Alarms related to safe operation of the unit (alarms class A and B) will, when triggered, stop the ventilation until the alarm has been acknowledged and the alarm conditions are no longer met. Alarms of lower priority (Class C) will not stop the ventilation and will auto reset once the alarm conditions are no longer met. Each alarm has a delay which is the time period the alarm conditions have to be met before the alarm is triggered. The table below lists all the preconfigured alarms of the unit with their descriptions and other characteristics. See table below.

ALARM	#	≥DESCRIPTION	STOP	AUTO RESET	DELAY
Malfunction supply air fan	1	Alarm text: Run error supply air fan Cause: No feedback from supply air fan	Yes	No	300s (5 min)
Malfunction extract air fan	2	Alarm text: Run error extract air fan Cause: No feedback from extract air fan	Yes	No	300s (5 min)
Filter guard 1	6	Alarm text: Check supply air filter Cause: Supply air filter is dirty	No	No	300s (5 min)
Fire alarm	10	Alarm text: Fire alarm Cause: Fire alarm DI is active	Yes	No	0s
External switch	11	Alarm text: External switch Cause: External switch DI is active	Yes	Yes	0s
High supply air temp	15	Alarm text: High supply air temp Cause: Supply air temp ≥ 86°F [30°C]	No	No	300s (5 min)
Low supply air temp	16	Alarm text: Low supply air temp Cause: Supply air temp ≤ 50°F [10°C].	Yes	No	300s (5 min)
High Extract air temp	21	Alarm text: High extract air temp Cause: Extract air temp ≥ 86°F [30°C]	No	No	300s (5 min)
Low extract air temp	22	Alarm text: Low extract air temp Cause: Extract air temp ≤ 50°F [10°C].	No	No	30 min
Sensor error outdoor temp	27	Alarm text: Sensor error outdoor temp Cause: No signal from outdoor air sensor	No	No	5s
Supply air fan pressure control error	31	Alarm text: Supply air fan control error Cause: Supply air fan cannot maintain airflow setpoint	No	No	4 min
Extract air fan pressure control error	32	Alarm text: Extract air fan control error Cause: Extract air fan cannot maintain airflow setpoint	No	No	4 min
Manual supply air control	36	Alarm text: Manual supply air control Cause: manual control of supply temp	No	Yes	0s
Manual supply air fan freq control	38	Alarm text: Manual supply air fan freq control Cause: manual control of extract air fan	No	Yes	0s
Manual extract air fan freq control	40	Alarm text: Manual extract air fan freq control Cause: manual control of extract air fan	No	Yes	0s
Internal battery error	48	Alarm text: Internal battery error Cause: Controller battery malfunction	Yes	No	0s

ALARM HANDLING, cont.

ALARM	#	≥DESCRIPTION	STOP	AUTO RESET	DELAY
Sensor error supply air temp	49	Alarm text: Sensor error supply air temp Cause: No signal from supply air sensor	No	No	5s
Sensor error extract air temp	50	Alarm text: Sensor error extract air temp Cause: No signal from extract air sensor	No	No	5s
Sensor error exhaust air temp	53	Alarm text: Sensor error exhaust air temp Cause: No signal from exhaust air sensor	No	No	5s
Sensor error SAF pressure	55	Alarm text: Sensor error SAF pressure Cause: No signal from SAF pressure sensor	No	No	5s
Sensor error EAF pressure	56	Alarm text: Sensor error EAF pressure Cause: No signal from EAF pressure sensor	No	No	5s
Sensor error CO2	59	Alarm text: Sensor error CO2 Cause: No signal from CO2 sensor (only if an AI is configured with the CO2 function)	No	No	5s
Communication error expansion unit 1	81	Alarm text: Communication error expansion unit 1 Cause: Lost communication with expansion unit 1	No	Yes	0s
Communication error expansion unit 2	81	Alarm text: Communication error expansion unit 2 Cause: Lost communication with expansion unit 2	No	Yes	0s
Output in manual mode	85	Alarm text: Output in manual mode Cause: one or more I/O's in manual mode	No	Yes	0s
Filter guard 2	90	Alarm text: Check extract air filter Cause: Extract air filter is dirty	No	No	300s (5 min)

All alarms can be monitored and acknowledged using the unit external display. Follow the steps below to handle active alarms.

1. Access the alarm log

Press the alarm button to access the alarm log when the red LED is flashing to indicate that an alarm has been triggered. Once the alarm log is accessed, the alarm will be displayed with the date and time it was triggered. Use the UP/DOWN arrow buttons to see all active alarms in the log.

2. Acknowledge an alarm

Press the OK button to acknowledge an alarm. Once an alarm has been acknowledged and the alarm conditions are no longer met, the alarm will be cleared from the log.

ALARM HANDLING, cont.

3. Acknowledged alarms

If an alarm is acknowledged but the alarm conditions are still present, the alarm will remain in the log and the red LED will be on instead of flashing to indicate that the alarm is still active. Some alarms auto reset after the conditions are no longer met, therefore they will clear from the log automatically.

There is an option to block alarms but it is strongly recommended that no alarms be blocked since they are required for safe operation of the unit. The alarm settings should also not be changed to avoid any complications.

CONFIGURING BACnet MS/TP (port 1)

The unit controller ships with native BACnet MS/TP configured on communication port 1. The device name will be seen on the network as *CorrigoVentilation* after connectivity is established. In order to establish connectivity between the network and the unit controller, the unit controller MAC address, device ID, and baud rate may need to change (ship as MAC address = 10, BACnet device ID = 2640, and baud rate = 9600 as default).

1. Configuration
Go to *Configuration* by using the UP/DOWN arrow buttons. Select by pressing the RIGHT arrow button.

2. Communication
Go to *Communication* by using the UP/DOWN arrow buttons and select it by pressing the RIGHT arrow button.

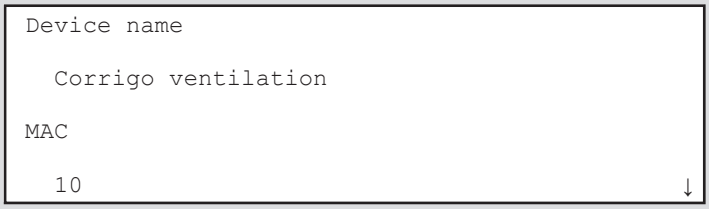
3. Function port1 Slave
Select *Function port1 Slave* by pressing the RIGHT arrow button.

4. BACnet MS/TP communication port1
Select *BACnet MS/TP communication port1* by pressing DOWN arrow button followed by the RIGHT arrow button.

CONFIGURING BACnet MS/TP (port1), cont.

5. Set MAC Address (default value = 10)

Select *MAC* address by pressing the OK button until the cursor flashes on the first digit of the value below MAC. Use the UP/DOWN arrow buttons to increase/decrease the selected digit value and the RIGHT/LEFT arrow buttons to move the cursor between digits. Once the required MAC address is displayed, press the OK button to store it in the unit controller.



6. Set Device ID (default value = 2640)

Go to *Device ID* by pressing the DOWN arrow. For device IDs that are 4 digits or less, only the Device ID low is used. For Device IDs greater than 4 digits, both Device ID low and Device ID high are used (example1: ID required = 1973, Device ID low = 1973 & Device ID high = 0. Example 2: ID required = 27039, Device ID low = 7039 & Device ID high = 2). Press the OK button to select Device ID low. The cursor will flash on the first digit of *Device ID low*. Use the UP/DOWN arrow buttons to increase / decrease the selected digit value and the RIGHT/LEFT arrow buttons to move the cursor between digits. Once the required Device ID low is displayed, press the OK button to store it in the unit controller.

The cursor will then flash on the first digit of *Device ID high*. If the device ID high is NOT required (device ID < 10000) set this value to 0. If the device ID high IS required (device ID ≥ 10000), use the UP/DOWN arrow buttons to increase / decrease the selected digit value and the RIGHT/LEFT arrow buttons to move the cursor between digits. Once the required Device ID high is displayed, press the OK button to store it in the unit controller.

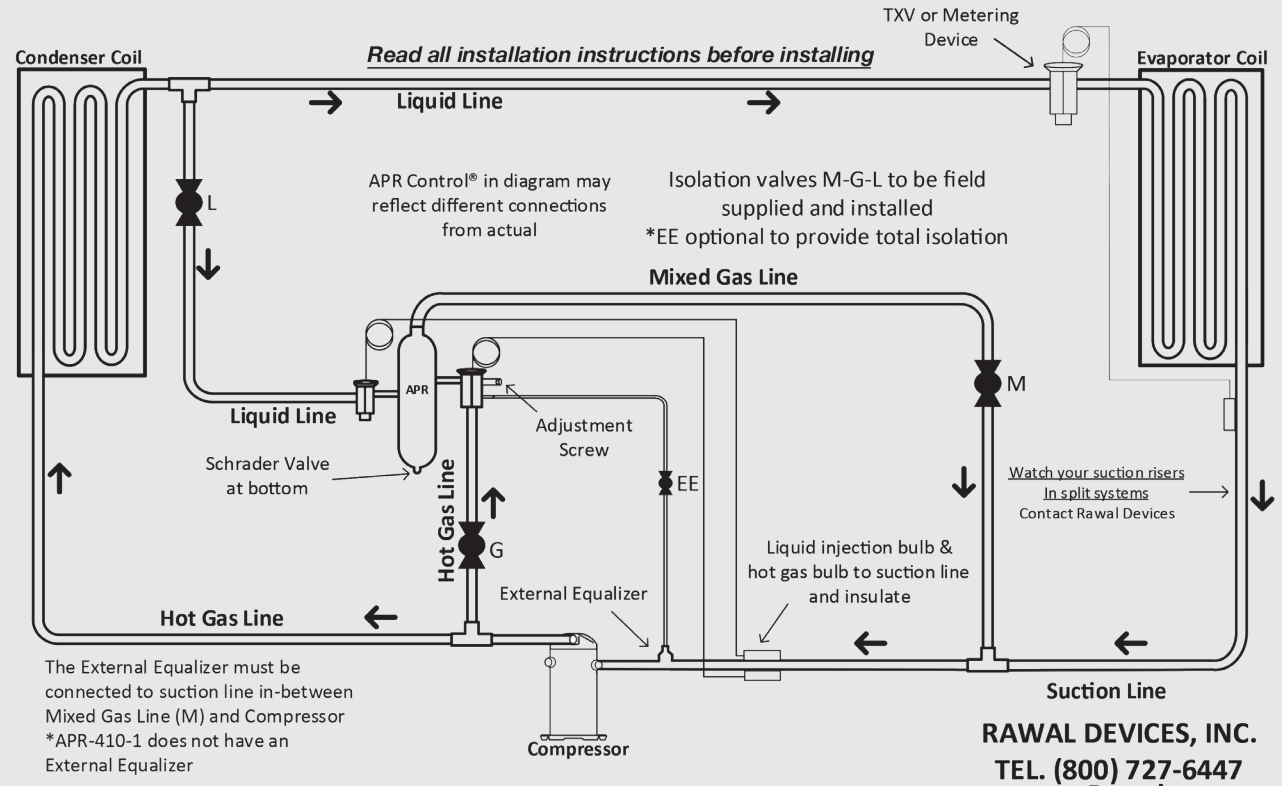
7. Set Baud rate (default=9600)

Go to Speed by pressing the DOWN arrow. To set baud rate, press the OK button. The cursor will flash on the first digit below *Speed*. Use the UP/DOWN arrow buttons to cycle through the baud rate (speed) options (9600 bps, 19200 bps, 38400 bps, 76800 bps) until the desired value is shown. Press the OK button twice to store it in the unit controller. Use the LEFT arrow button to return to the previous menus.

RAWAL APR VALVE INSTALLATION

FREE 20-MINUTE ONLINE PRE-INSTALLATION TRAINING AVAILABLE

APR CONTROL® FOR R-410A IN SINGLE EVAPORATOR MODE



RAWAL DEVICES, INC.
TEL. (800) 727-6447
www.Rawal.com
techsupport@rawal.com

*Drawing for illustrative purposes only
Please call for assistance

DOC#410A-SEM-01

RAWAL APR VALVE INSTALLATION, cont.

APR CONTROL - R-410A - SPEC. & DIMENSION SHEET

			Unit Dimensions			Connection Dimensions (OD)				
Model #	Modulation Capacity	PrepAir Model	X	Y	Z	EE	L	M	G	Application
APR-410-1	1.5 tons	G2-6, 8,10,12	8.5"	8"	4"	N/A	3/8"	5/8"	3/8"	G - BOTTOM CONNECTION
APR-410-2	2.5 tons	G2-25	8.5"	8"	4"	1/4"	3/8"	5/8"	3/8"	G - BOTTOM CONNECTION

The APR Control Hot Gas Valve should be set to begin opening at approximately *118 PSI* ~40°F

SUPPLY BALL SHUT-OFF VALVES FOR ALL CONNECTIONS

SUPPLY TEE FOR SUCTION LINE CONNECTION

SUPPLY TEE FOR HOT-GAS CONNECTION

SUPPLY TEE FOR LIQUID LINE CONNECTION

APR Control Selection:

System or Stage size is reduced by the Modulation Capacity listed above

Oil entrainment in suction line must be addressed

Please refer to Rawal Devices Fast Selection Chart or Consult with Rawal Devices Engineers

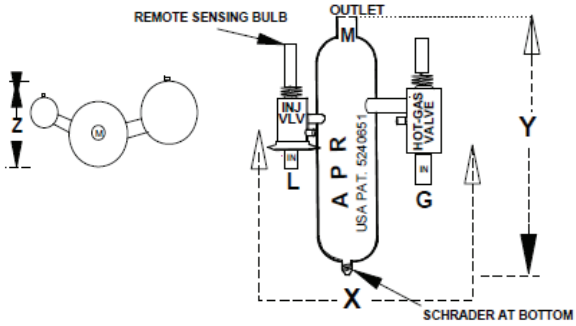
WHEN REQUIRED, SUPPLY TEE FOR EE CONNECTIONS EXTERNAL EQUILIZERS - EE - HAVE 1/4" SWEAT CONNECTION TEE EE CONNECTIONS INTO SUCTION LINE

BOTH SENSING BULBS ON LIQ INJ VALVE AND HOT GAS VALVE MUST BE ATTACHED AND INSULATED TO SUCTION LINE BETWEEN TEE TO APR CONTROL DISCHARGE COMING FROM TOP OF THE CHAMBER AND COMPRESSOR

ONLY WHEN NECESSARY:

REMOVE CAPS FROM ADJUSTMENT STEMS PRIOR TO ADJUSTING

TO ADJUST VALVES WHEN FACING ADJUSTING STEM CLOCKWISE DECREASES PRESSURE / TEMPERATURE. COUNTER-CLOCKWISE INCREASES PRESSURE / TEMPERATURE.



RAWAL DEVICES, INC.

Call Tech Support: (800) 727-6447 WWW.RAWAL.COM

 DOC#410A-SDS

APR Control Installation Instructions APR-410A

If possible pump down system and lock existing refrigerant in the receiver or condenser. If you cannot secure existing system charge, use proper refrigerant recovery methods to save and store the refrigerant charge. Before installing the APR Control, make sure your system is clean –if not, or in doubt a new filter / strainer must be used to protect the APR Control to isolate and remove the system contaminants. Particles of dirt can settle on the valve seat of the hot gas bypass valve and prevent it from closing, leading to possible compressor overheating and system damage.

After you install the APR Control, use standard evacuation procedures and follow the directions listed below. All connections between the system and the APR Control can be made in the condensing section. The APR Control may be mounted outside the condensing unit housing if space or access are a problem. The APR Control should be mounted vertical, with discharge from the desuperheating chamber UP or an orientation so chamber discharge is above Schrader valve at bottom. Manual Shut off valves to isolate the APR Control connections to liquid, hot gas and suction lines ***are to be field supplied and installed***. Functionally, isolation valves will assist in charging the systems and troubleshooting should difficulty with set-up arise.

Connections to the refrigerant circuit can be on horizontal or vertical pipes, but discharge from the APR Control desuperheating chamber to the suction line must be into the top of the suction line to prevent oil from draining into the APR Control chamber.

All connections to the APR Control should be made with Stay-Silv® 15 or equivalent Brazing Alloy. Keep in mind when brazing that the exterior of the APR Control is stainless while the interior is copper clad.

Always use plenty of wet rags or heat absorbing paste on the valves and aim your flame away from valve bodies to prevent possible damage.

1) Tee in a line shut off valve (G) at the compressor hot gas discharge line, (size to APR hot gas valve inlet) where strainer is supplied, install it in the APR hot gas inlet only.
2) Tee in a line shut off valve (M) at the suction line prior to compressor, (size to APR mixed gas discharge outlet at top of desuperheating chamber).
3) Tee in a line shut off valve (L) at the liquid line near the condenser coil or receiver outlet, size to APR injection valve inlet.
4) Mount APR Control securely in the condensing unit.
5) Connect hot gas from the line valve (G) to the hot gas inlet on hot gas valve connected to APR Control. Hot Gas valve inlet marked with Red Hot Gas sticker.
6) Connect suction from the line valve (M) to the mixed gas outlet on top of APR Control desuperheating chamber.
7) Connect liquid from the line valve (L) to the liquid injection valve (TXV) inlet on APR Control.
8) External equalizers on sides of APR Control hot gas valve should be connected to the suction line between mixed gas discharge connection from the APR Control and compressor inlet.
9) The injection valve bulb and Hot Gas Bypass valve bulb *must* be mounted, and insulated, to the suction line between compressor and mixed gas discharge connection from the APR Control.
10) Leak test system and evacuate. Before charging system close all APR Control line valves, do not leave the APR Control open when charging the system. No additional charge is required for the APR Control to operate.
11) For R-410a High Temperature Systems – **Hot Gas Bypass valve of the APR Control has been set to**
12) **Open at 118 psig (40° F)**. See adjustment sheet if you require further instructions.
13) **APR Control injections valve is set to open at around 65° F (or 20° superheat) to protect the compressor from overheating**.

***Please refer to the Spec. & Dimension sheet for connection sizes for specific model APR Control.**

***Adjustment settings to all APR-410A valves need to be confirmed in the field.**

DOC#410A-INST

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APR Control Operation and Adjustment (R-410A)

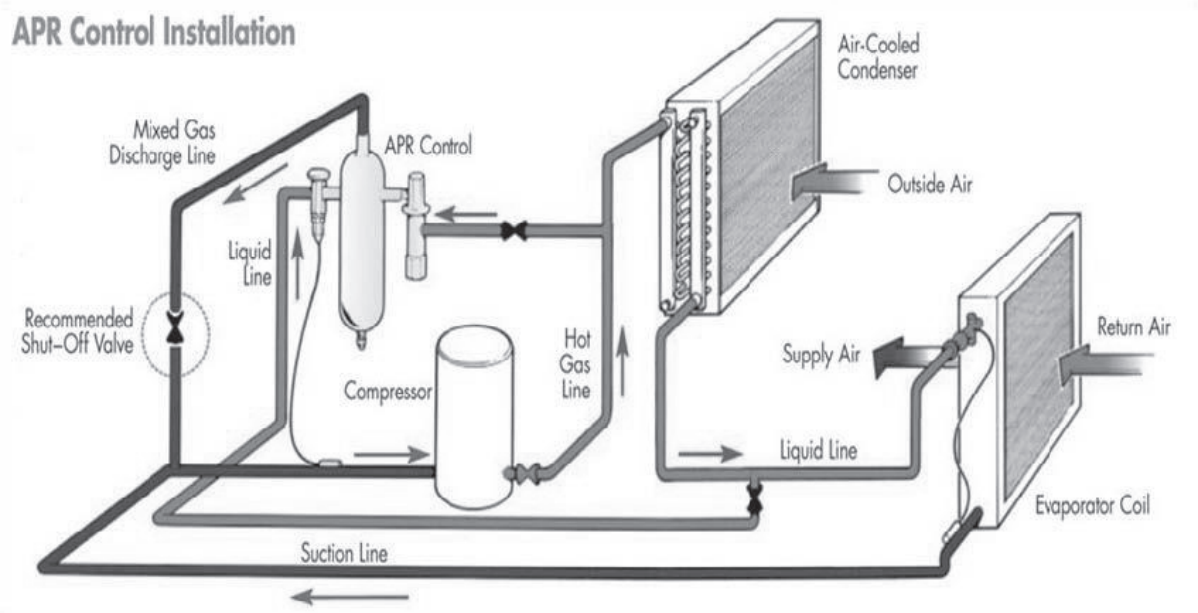
The APR Control® valve is a capacity modulation and dehumidification device that modulates the air conditioning system's refrigeration (circuit) capacity to match the varying load conditions of the space. Often utilized to minimize the challenges of oversized air conditioning systems, the APR Control is a device that operates in response to suction pressure of an active air conditioning system. As the heat load (including occupancy, ventilation and solar loads, for example) of the conditioned space drops, your suction pressure drops to the point the APR Control begins to open. A portion of hot gas gets sent through the desuperheating chamber, then back to the suction line. A liquid injection valve mixes liquid with the hot gas in the desuperheating chamber when the mixed gas temperature reaches approximately 20°superheat returning to the compressor.

The APR Control externally unloads the compressor, keeping the evaporator coil at a constant temperature below dew point, thereby dehumidifying during the extended run time achieved. Extended run time is achieved by keeping the thermostat from being satisfied too quickly (a standard cause of short cycling).

The APR Control comes factory set at approximately 120psig[1] and typically does not require adjustment. During part-load conditions, as the heat content of the return air (including the sensible temperature) drops, the saturated suction temperature will drop, resulting in a drop in suction pressure. As the suction pressure falls to 120psig the APR Control will begin to open and attempt to stabilize the system suction pressure at approximately 120psig.

However, if the runtime is inadequate or low load operation fails to cause suction pressure to fall low enough (the point at which the APR Control starts to open), you may need to adjust the APR Control® hot gas valve. The adjustment port can be found on the side or the bottom of the hot gas valve. Remove the cap to access the set screw. A standard hex wrench can be used to turn the screw and adjust the pressure setting. The pressure setting will adjust in the range of 5 lbs per 360° turn[2]. Turning the wrench counter-clockwise (out) will increase the pressure setting and turning the wrench clockwise (in) will lower the pressure setting. The maximum pressure setting that most APR Controls can be adjusted to is approximately 130psig and the minimum is 95psig. As you adjust the APR Control, it will to reduce system capacity in order to match capacity to changing load conditions beginning at the new setting.

1: The factory setting for the **APR-410-5** is **105psig**, with an **adjustment range of 95 - 115psig**.
2: The pressure setting of the **APR-410-5** will **adjust 2.5 lbs per 360° turn**. Also note that turning the adjustment screw counter-clockwise (out) will ***decrease*** the pressure setting while turning it ***clockwise*** (in) will increase the pressure setting.



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MAINTENANCE

MAKE SURE POWER TO THE UNIT IS DISCONNECTED AND LOCKED OUT BEFORE ATTEMPTING ANY MAINTENANCE WORK

The following components should also be inspected regularly and well maintained.

THE MOTOR: The motors are factory balanced and lubricated for life. They require no maintenance.

THE UNIT: The inside of the unit should be wiped clean as needed.

CONDENSATION PAN: Units with drain hoses should have their line and connection checked regularly

OUTSIDE HOODS: The outside hoods need to be checked every season to make sure there are no leaves or insects blocking the airflow. Check regularly that there are no pollutants near the intake hood. Make sure they are clear of any snow accumulation during the winter months.

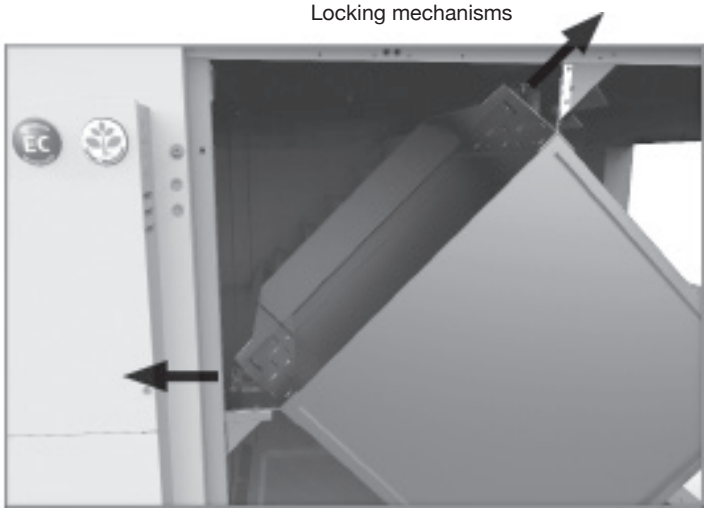
FILTERS: The filters cannot be cleaned and must be replaced when necessary. Operation time between filter changes depends on the air pollution at the installation site. A differential pressure switch indicates when it's time to change the filters. This will trigger an alarm in the control panel.

HRV core:

Inspect the HRV core every 3-6 months and clean as needed.

1. Open access door & remove filters.
2. Unlock the core by pushing the 2 brackets securing the cores towards the outside of the unit (see figure on the right)
3. Carefully grip ends of core and pull evenly outward. Core may be snug, but will slide out of the channel.
4. Wash the core in warm soapy water or light coil solution.
5. Install clean core
6. Install the clean filters
7. Close access door

Locking mechanisms



TO INSTALL THE CLEAN CORE AND FILTERS:

1. First mount the bottom flange of the core guide into the bottom channel approximately 1/4" (6mm)
2. Mount the left or right side flange of the core guide approximately 1/4" (6mm) followed by the other side
3. Mount the top flange of the core guide into the top channel approximately 1/4" (6mm)
4. With all four corners in place and the core straight and even, push hard in the center of the core until the core stops on the back of the cabinet.
5. Push bracket back into place to secure the cores.

LIMITED WARRANTY

- The heat recovery aluminum core has a **lifetime warranty**.
- DST's HRV's have a warranty that is limited to 3 years on all parts from the date of purchase, including parts replaced during this time period. If there is no proof of purchase available, the date associated with the serial number will be used for the beginning of the warranty period.
- The motors found in all HRVs require no lubrication, and are factory balanced to prevent vibration and promote silent operation.
- The limited warranty covers normal use. It does not apply to any defects, malfunctions or failures as a result of improper installation, abuse, mishandling, misapplication, unfortunate occurrence or any other circumstances outside DST's control.
- Inappropriate installation or maintenance may result in the cancellation of the warranty.
- Any unauthorized work will void the warranty.
- DST is not responsible for any incidental or consequential damages incurred in the use of the ventilation system.
- DST is not responsible for providing an authorized service center near the purchaser or in the general area.
- DST reserves the right to supply refurbished parts as replacements.
- Transportation, removal and installation fees are the responsibility of the purchaser.
- The purchaser is responsible for adhering to all codes in effect in his area.
- DST does not cover labor only parts.
- This warranty is the exclusive and only warranty in effect relative to the ventilation system and all other warranties either expressed or implied are invalid.

Your ventilation system must be installed in conformance with the current edition of the National Building/ Mechanical Codes and/or ASHRAE's "Good Engineering Practices".

DST reserves the right to modify, at any time and without notice, any or all of its' products features, designs, components and specifications to maintain their technological leadership position. Please visit duncanstuarttodd.com or contact us directly for more detailed technical information.

V. 9/19

DUNCAN STUART TODD, LTD. PO Box 3578 Boulder, CO 80307

DUNCAN STUART TODD

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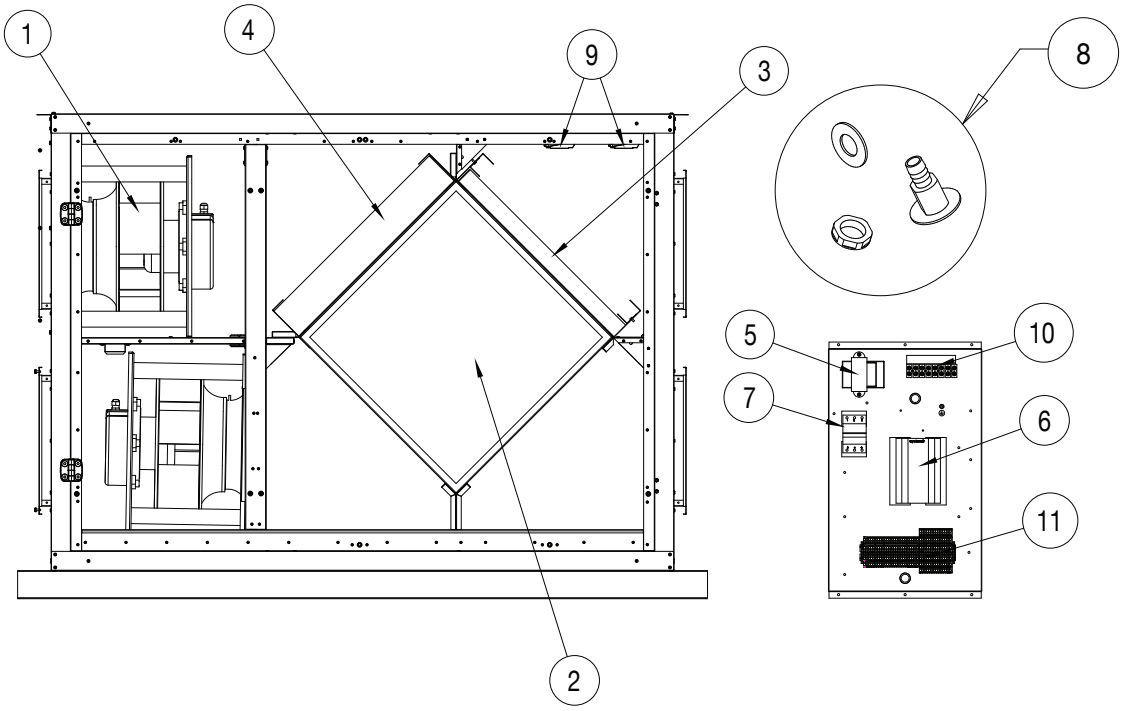
PARTS LIST



BOM #	DESCRIPTION	G2-25 95750
1	R3G 355-PG60-25	414457
2	Replacement core (3 cores per units)	414493
3	Filter,Merv8,H2800Xi,Rep.Kit	422991
4	Filter,Merv13,H2800Xi,Rep.Kit	422992
5	TFMR,480/240/208/120v-24V,75VA	412749
6	Controlunit E283 WEB Small	209664
7	Auto.fuse C32	413759
8	Drain,Plug,3/4",Threaded,Black	414476
9	Pressigo Duo 2500	209651
10	Terminal Block, 4 Pole, X.Large	413551
11	Term.Block,TR Low Volt,Rev-2	414451
	Wiring Diagram	422871
	Installation Manual	422974
	Supplied Cable	