

**Fresh Air Timed Purge Application Note
APP- 008**

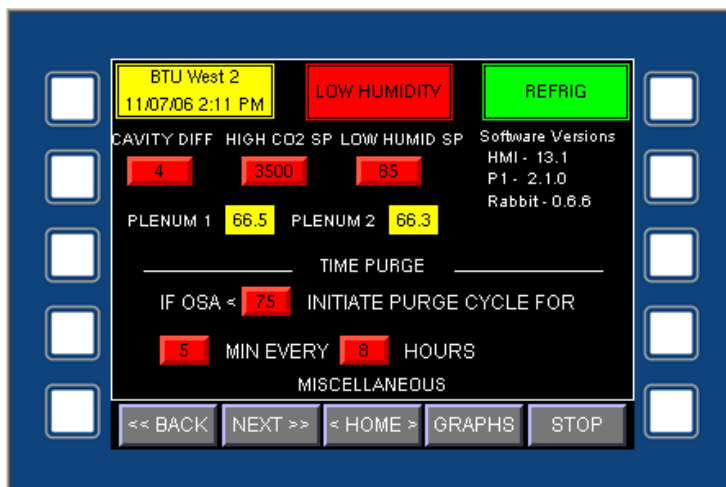
THEORY

When the XT panel has a CO2 sensor, this application of the Timed Purge will not be applicable. When the XT panel does not have a CO2 sensor, then it must rely on a timed operation to purge the CO2 build up.

CO2 can build up in a storage during very cold ambient air conditions, a Timed Run, or during a Refrigeration Run.

During times of very cold ambient air, the only way to purge the building is to turn on the Return Air heaters for a period of time. This will raise the return air temperature several degrees and force the fresh air doors open to purge the system.

For a purge during a Timed Run or a Refrigeration Run, the fresh air doors will open to a certain percentage for the purge time.



HMI software 13.1 and greater has a change to the MISCELLANEOUS screen that adds the TIME PURGE parameters.

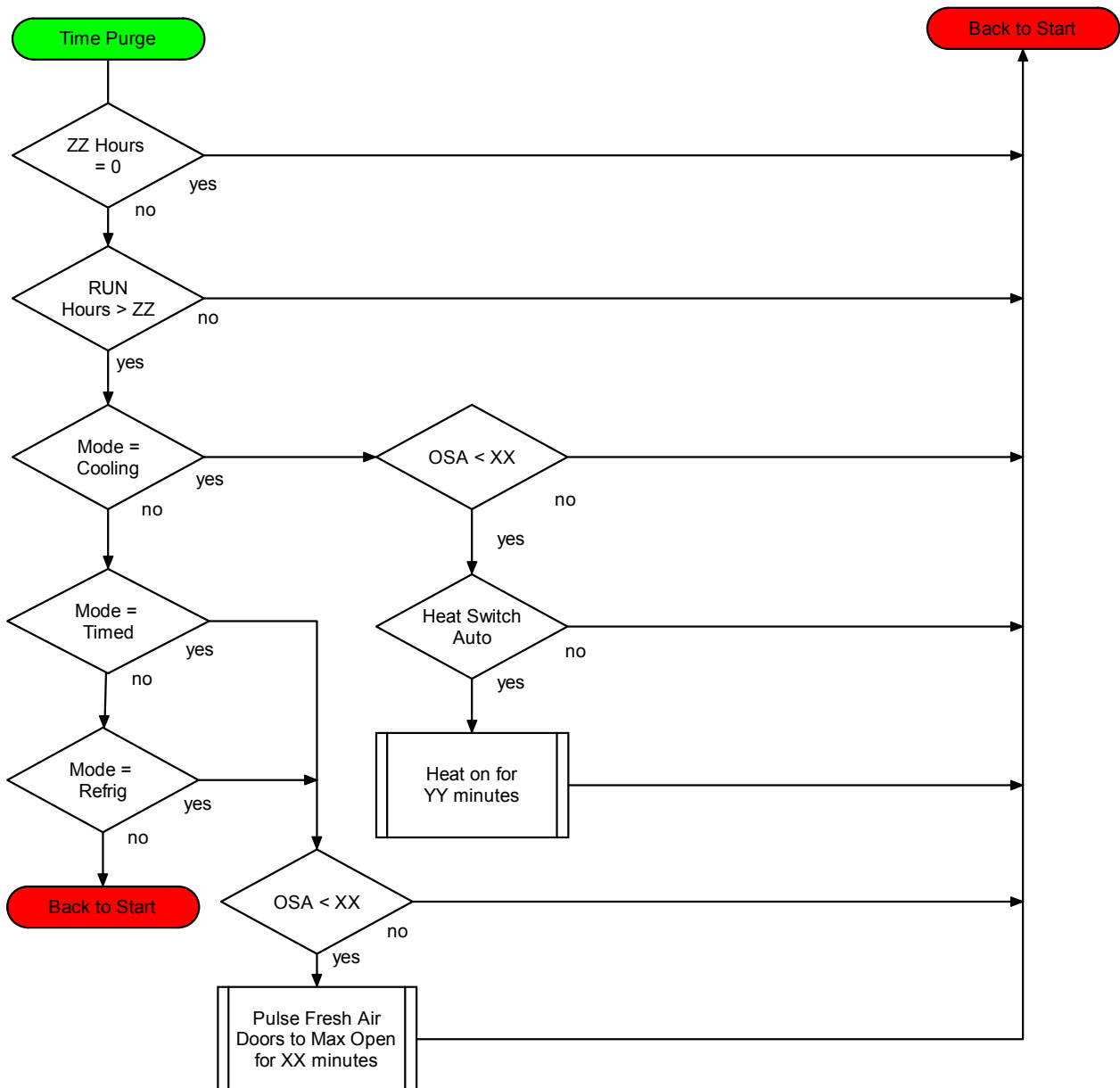
Setting the hours to 0 will disable the Time purge cycle.

COOLING OPERATION: For this example we will use the following settings. IF OSA < 15 INITIATE PURGE CYCLE FOR 5 MIN EVERY 8 HOURS. If the OSA is less than 15 degrees, and the Heat switch is in auto, the return air heater would turn on for 5 minutes every 8 hours.

NOTE - IF YOU ARE RUNNING IN A TIME PURGE MODE, YOU WILL NEED TO ADJUST THE OSA SETTING FROM THE WINTER MONTHS TO THE SPRING WHEN RUNNING IN REFRIG. THIS IS WHERE A CO2 SENSOR WILL SOLVE THE NEED FOR SETTING CHANGES.

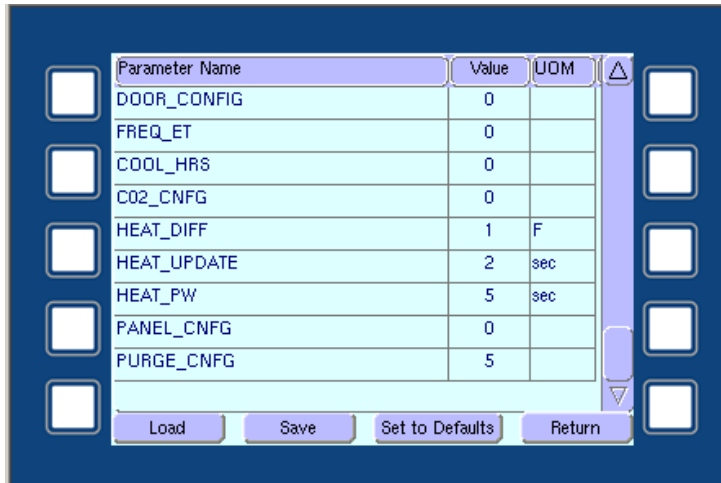
REFRIGERATION OPERATION: For this example we will use the following settings. IF OSA < 80 INITIATE PURGE CYCLE FOR 5 MIN EVERY 8 HOURS. If the OSA is less than 80 degrees, the fresh air doors would be pulsed open to the min door setting for 5 minutes every 8 hours. During this time the refrigeration would run normal.

IF OSA < XX INITIATE PURGE CYCLE FOR YY MIN EVERY ZZ HOURS



SETTING UP THE XT PURGE CYCLE:

Currently there are 6 different options to chose from for purge cycles in the XT panel. Press the outside middle left button to access the E2 parameters using the HMI.



The PURGE_CNFG byte is used to set up the different cycles. Program in a number for the desired operation.

- 0 = No Purge or ARL / CO2
- 1 = Time Purge, no ARL / CO2
- 2 = ARL, no CO2 or Time Purge
- 3 = ARL / CO2, no Time Purge
- 4 = ERV, no CO2
- 5 = ERV / CO2

Note - ERV (Energy Recovery Ventilator) is explained in another application note.