



The Discover SP system permits the user to release unwanted gaseous byproducts from the reaction to prevent over pressurization and vial failure from gaseous buildup. This ensures safe handling of the vial during and at the end of the reaction. The ActiVent safely bleeds the solvent/vapor from the reaction vessel and releases it through the vent tube connected to the back of the system and into a controlled environment.

If the reaction generates a gaseous byproduct or an extreme amount of pressure during the reaction, the ActiVent will vent at a specific setpoint for a pre-determined number of times.

- The “Delta Pressure” is the assigned amount of pressure to drop from the pressure set point. A minimum delta of 25 PSI (1.7 BAR) is recommended.
- The “Pressure SP” is the pressure set point at which the venting will begin. The pressure vent set point should be set at a greater pressure value than the pressure control set point in the method.
- The “Times at SP” is the maximum number of times a reaction will vent during the assigned ramp and hold time. However, this parameter can be adjusted based on specific reaction conditions. For a typical reaction, 5 vents are recommended.

#### CAUTION

The ActiVent Pressure Device is designed to release excess gaseous material. Repeated venting of the solvent vapor can cause the reaction vessel to fail.

- The number of stages is stage at which the Pressure SP will be active for a multistage method. A maximum of 5 stages can be added.

## Discover

### Create a method with the vent feature

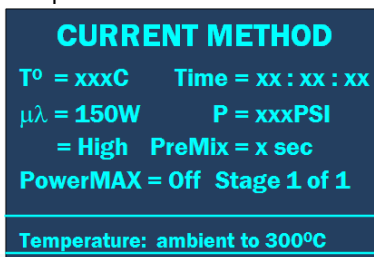
1. Press the DISCOVER key on the Discover keypad.



2. Using the “arrows” and “+/-” keys, highlight the desired method type: “Dynamic”, “Fixed Power”, or “Power Cycling”.

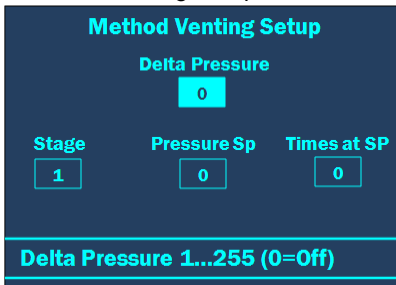
**NOTE:** The ActiVent technology can only be used with the Dynamic, Power Cycling, and Fixed Power control options.

3. Press the ENTER key to select the method type.
4. Press any of the hotkeys to enter the method parameters.

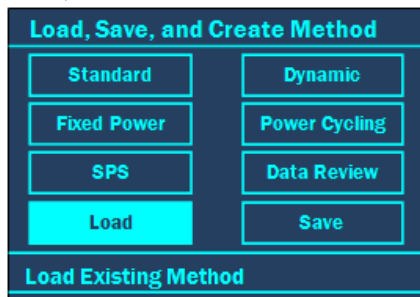


**NOTE:** The above screen illustrates the “Dynamic” method setup screen. “Power Cycling” and “Fixed Power” will have different setup screens.

5. Based on method type selected, enter the desired method parameters (see the Discover manual for programming information).
6. Press the DISCOVER key to access the “Method Venting Setup” screen.



7. Enter the desired vent parameters using the “arrow” keys to navigate between Delta pressure, Stage, PressureSP, and Times @ SP. Use the “+/-” keys to increase and decrease the numeric value.
  - Delta pressure- Assigned amount of pressure to drop from the pressure set point. A minimum delta of 25 PSI (1.7 BAR) is recommended.
  - Pressure SP- Pressure set point is the pressure at which the venting will begin. The pressure vent setpoint should be set at a greater pressure value than the pressure control setpoint in the method.
  - Times at SP- Maximum number of times a reaction will vent during the assigned ramp and hold time
  - Stage- The stage at which the PressureSP will be active. A maximum of 5 stages can be added.
8. Once all parameters have been entered, press the ENTER key to return to the method parameters screen.
9. Press the ENTER key to accept all method parameters.
10. Press the DISCOVER Key. The “Load, Save, and Create Method” screen will appear.



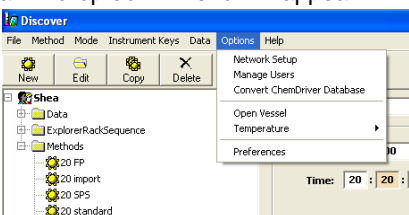
11. Use the “arrow” and “+/-” keys to highlight “Save”.
12. Press the ENTER key.
13. Using the “arrow” and “+/-” keys, highlight the first letter or number of the desired name and press the “Enter” key. Continue highlighting the letters or numbers of the name and pressing the “Enter” key for each letter/number until the name is displayed on the screen.
14. Once the name is complete, use the “arrows” and “+/-” keys to highlight “OK.”
15. Press the ENTER key to save the method.

## Synergy

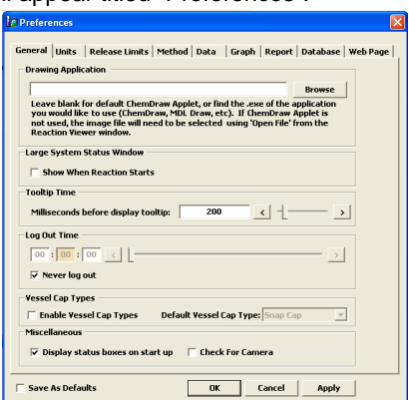
### Enable the Venting feature

Before creating the method, enable the Pressure Venting option.

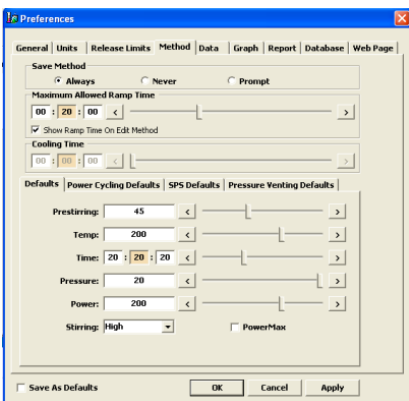
1. Select "Options" in the Synergy menu bar. A drop down menu will appear.



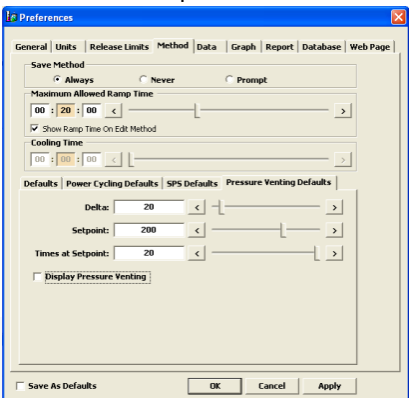
2. Select "Preferences". A new window will appear titled "Preferences".



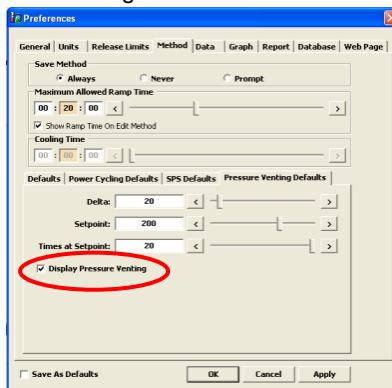
3. Select the "Method" tab.



4. Select "Pressure Venting Defaults". The desired default parameters can be entered.



- Select the checkbox titled “Display Pressure Venting”.

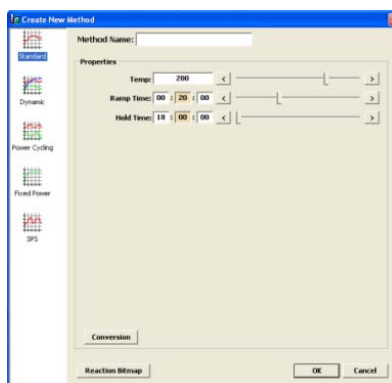


- Select “Apply”.
- Select “OK”.

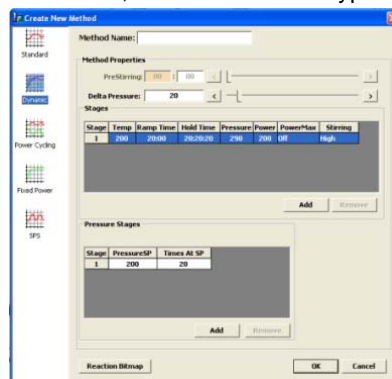
### Create a method

The ActiVent technology can only be used with the Dynamic, Power Cycling, and Fixed Power control options.

- Select the “New” button located in the top left corner of the Synergy software. A new screen will appear titled “Create New Method”.



- On the left side of the “Create New Method” screen, select the method type - Dynamic, Power Cycling, or Fixed Power.



- Enter the method name (13 characters maximum).
- Based on method type selected, enter the desired method parameters (power, time, temperature, etc.).
- The Synergy software has two (2) different vent types. Choose one of the method types.
- If the custom method type is selected, enter the desired vent parameters: Delta pressure, PressureSP, and Times At SP.
  - Delta pressure- Assigned amount of pressure to drop from the pressure set point. A minimum delta of 25 PSI (1.7 BAR) is recommended.
  - Pressure SP- Pressure set point is the pressure at which the venting will begin. The pressure vent setpoint should be set at a greater pressure value than the pressure control setpoint in the method.
  - Times at SP- Maximum number of times a reaction will vent during the assigned ramp and hold time
  - Stage- The stage at which the PressureSP will be active. A maximum of 5 stages can be added.
- Select “ok” to save the method.