



# APPLICATION GUIDE

Exalt Solo 110-155-199 & Combi 155-199

## NOTICE

- This manual is applicable to all Exalt boilers with AB in the serial number after the S or C (e.g. EX110SAB000001) which also operates with display software version 0.40 or later.
- If this guide does not apply to your boiler, Please visit [idealusa.com](http://idealusa.com) to obtain the correct application guide.
- Customer must register unit within thirty (30) days of installation in order to gain warranty coverage. See Warranty Card for details.
- Leave all documentation received with appliance with the owner for future reference.

## WARNING

- This document is intended to be used by a factory trained and qualified heating contractor or service technician only. Read all Instructions within this document and within the relevant Boiler Installation and Maintenance Manual before proceeding. It is recommended to follow the procedures in the steps given. Skipping or missing procedural steps could result in substantial property damage, serious injury, or death.
  - To maintain the safety & longevity of your appliance, read and follow the Installation and Maintenance Manual prior to installation.
  - If the information in this manual is not followed exactly, a fire or explosion may result causing substantial property damage, serious injury, or death.
- ### FOR YOUR SAFETY
- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
  - **WHAT TO DO IF YOU SMELL GAS**
    - Do not try to light any appliance
    - Do not touch any electrical switch; do not use any phone in your building.
    - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
    - If you cannot reach your gas supplier, call the fire department.



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## 1. Boiler Pump Presets

The boiler comes preconfigured for several preset pump outputs.

1. To access the Installer screen, touching simultaneously the up and down soft keys for 3 seconds as shown in Fig. 1.

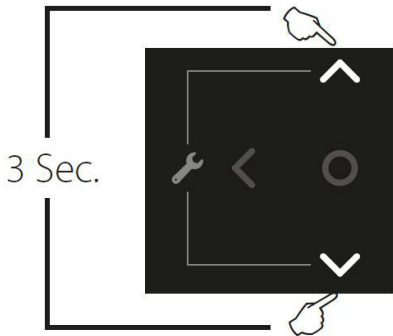


Fig. 1: Installer Button

2. Enter the installer access code “054” by using the **LEFT** and **RIGHT** buttons to select a digit and the **UP** and **DOWN** buttons to change the digit. Press the OK button to enter the access code.



Fig. 2: Installer Access Code

3. Press the OK button while the **CH & DHW Settings** icon is highlighted.

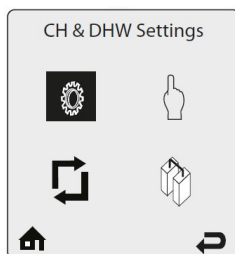


Fig. 3: CH & DHW Settings

4. Press the OK button while the **Boiler Settings** icon is highlighted.

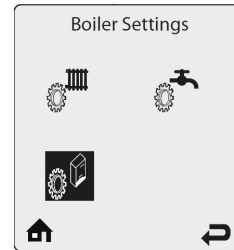


Fig. 4: Boiler Settings

5. Press the OK button while the **Pump Settings** option is highlighted.

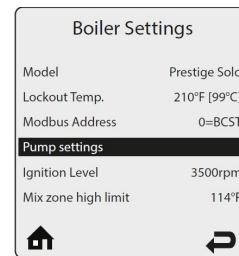


Fig. 5: Pump Settings

6. Press the OK button while the **Pump Settings** option is highlighted.

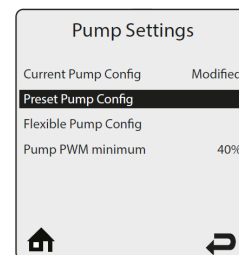


Fig. 6: Preset Pump Configuration

7. Scroll down the preset pump list and select one of the following options shown in Table 1.

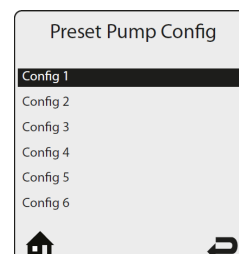


Fig. 7: Preset Pump Configuration

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Table 1: Exalt Preset Pump Configurations

<b>Preset Configuration</b>	<b>Boiler Pump</b>	<b>CH1 Pump</b>	<b>CH2 Pump</b>	<b>DHW Pump</b>
Out of the Box Settings	CH1 Call CH2 Call DHW Call	CH1 Call	CH2 Call	DHW Call

Note: Other Presets are shown as available. These are non functional in the Exalt Boilers

## 2. Flexible Pump Configuration

This allows the installer to customize the flexible Pump Output (relays) to a specific installation arrangement that is not addressed in the Preset Pump Configuration options. There is a total of six Pump Output(relays) that must be set.

1. To access the Installer screen, touching simultaneously the up and down soft keys for 3 seconds as shown in Fig. 8.

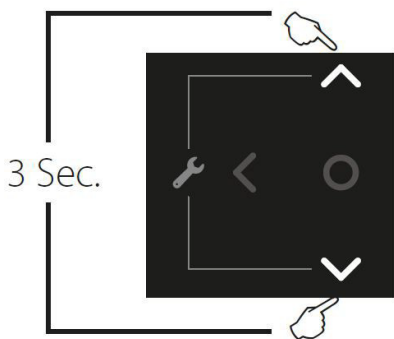


Fig. 8: Installer Button

2. Enter the installer access code “054” by using the **LEFT** and **RIGHT** buttons to select a digit and the **UP** and **DOWN** buttons to change the digit. Press the OK button to enter the access code.



Fig. 9: Installer Access Code

3. Press the OK button while the **CH & DHW Settings** icon is highlighted.

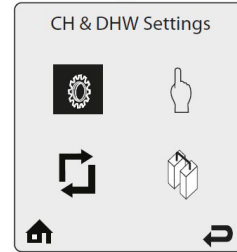


Fig. 10: CH & DHW Settings

4. Press the OK button while the **Boiler Settings** icon is highlighted.

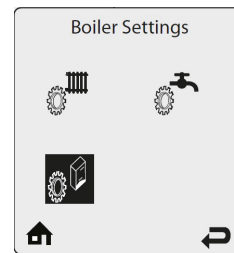


Fig. 11: Boiler Settings

5. Press the OK button while the **Pump Settings** option is highlighted.

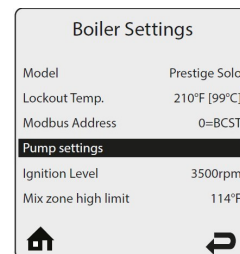


Fig. 12: Pump Settings

6. Press the OK button while **Flexible Pump Config** option is highlighted.

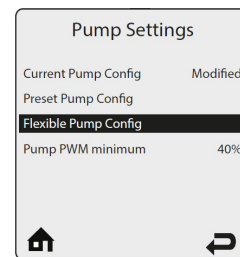


Fig. 13: Flexible Pump Config

- A list of 5 Flex Relays are clickable. These are the Boiler actions to be edited.

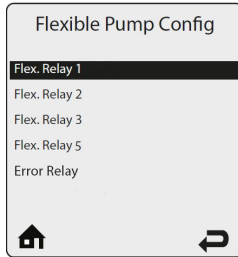


Fig. 14: Flex. Relays

- When selecting Flex Relay 1, the boiler pump actions are being edited.
  - When selecting Flex Relay 2, the DHW pump actions are being edited.
  - When selecting Flex Relay 3, the CH2 pump actions are being edited.
  - When selecting Flex Relay 5, the CH1 pump actions are being edited.
- Select the relay to be changed. Choose whether the relay will be on or off for any of the following calls: *CH1*, *CH2*, *DHW*, *MIX OPEN*, *MIX CLOSE*, *ERROR*, *FLAME*.

- When selecting CH1, the relay is activated at CH1 demand.
- When selecting CH2, the relay is activated at CH2 demand.
- When selecting DHW, the relay is activated at DHW demand.
- Mix Open is not functional in the Exalt Boilers.
- Mix Close is not functional in the Exalt Boilers.
- When selecting ERROR, the relay is activated on error.
- When selecting FLAME, the relay is activated when appliance is running and a flame signal has been detected.

- Once the Relay's actions have been selected, scroll down and hit enter on the **Save and Exit** option at

the bottom. This relay shown in Fig. 15 is set to turn on the pump wired to the boiler pump terminal for CH1, CH2 and DHW calls.



Fig. 15: Flex. Relay 1 Settings



Fig. 16: Flex. Relay 1 Save Option

## NOTICE

*The options will not be saved when quick exiting (hitting the house or back arrow at the bottom of the menu).*

# Exalt Application Guide



## 3. Pump Selection

Refer to Table 1 for the Boiler pump recommendations when using primary secondary piping.

Table 2: Exalt Solo Pump Requirements

Model	Heating Capacity	Temperature Rise	Required Boiler Flow	Minimum Boiler Pipe Size	Minimum Boiler Pump Size		
					Grundfos	Taco	Wilco
Exalt Solo 110	102 MBH	20° F	10.2 GPM	1"	UPS 15-58FC	0015-MSF3	Star S 21 F
		25° F	8.2 GPM	1"	UPS 15-58FC	007-F5	Star S 21 F
		30° F	6.8 GPM	1"	UPS 15-58FC	007-F5	Star S 21 F
		35° F	5.8 GPM	1"	UPS 15-58FC	007-F5	Star S 21 F
Exalt Solo 155	143 MBH	20° F	14.3 GPM	1.25"	UPS 26-99FC	0013-MSF1	Star S 33 FC
		25° F	11.4 GPM	1.25"	UPS 26-99FC	0013-MSF1	Star S 33 FC
		30° F	9.5 GPM	1"	UPS 15-58FC	0015-MSF3	Star S 21 F
		35° F	8.2 GPM	1"	UPS 15-58FC	007-F5	Star S 21 F
Exalt Solo 199	185 MBH	20° F	18.5 GPM	1.5"	UPS 43-100 F	2400-30-3P	Top S 1.25 x 35
		25° F	14.8 GPM	1.25"	UPS 26-99FC	0013-MSF1	Star S 33 FC
		30° F	12.3 GPM	1.25"	UPS 26-99FC	0013-MSF1	Star S 33 FC
		35° F	10.6 GPM	1"	UPS 15-58FC	0015-MSF3	Star S 21 F

## 4. Exalt Solo Piping Diagrams

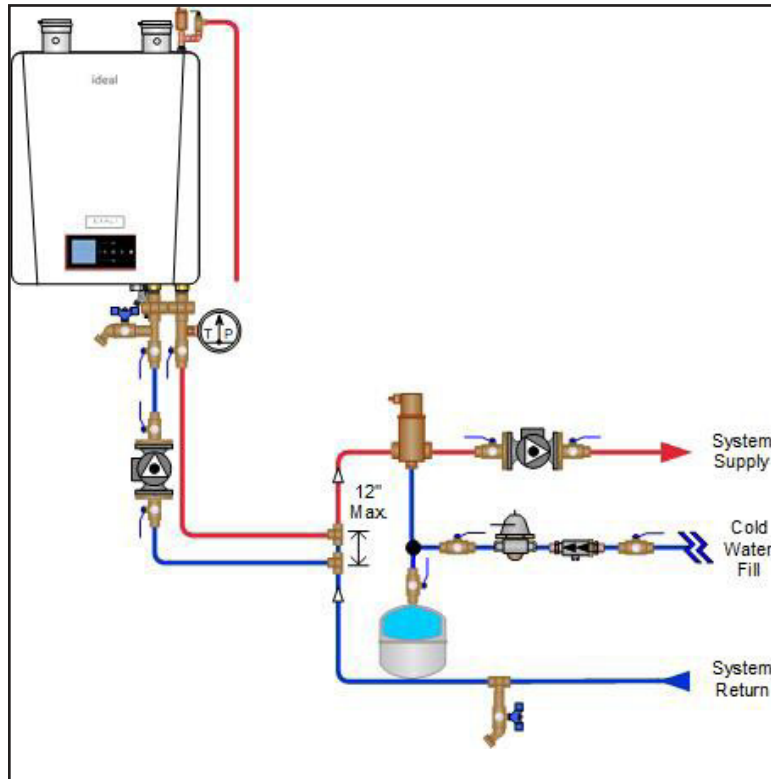


Fig. 17: Exalt Solo Near Boiler Piping with Closely Spaced Tees

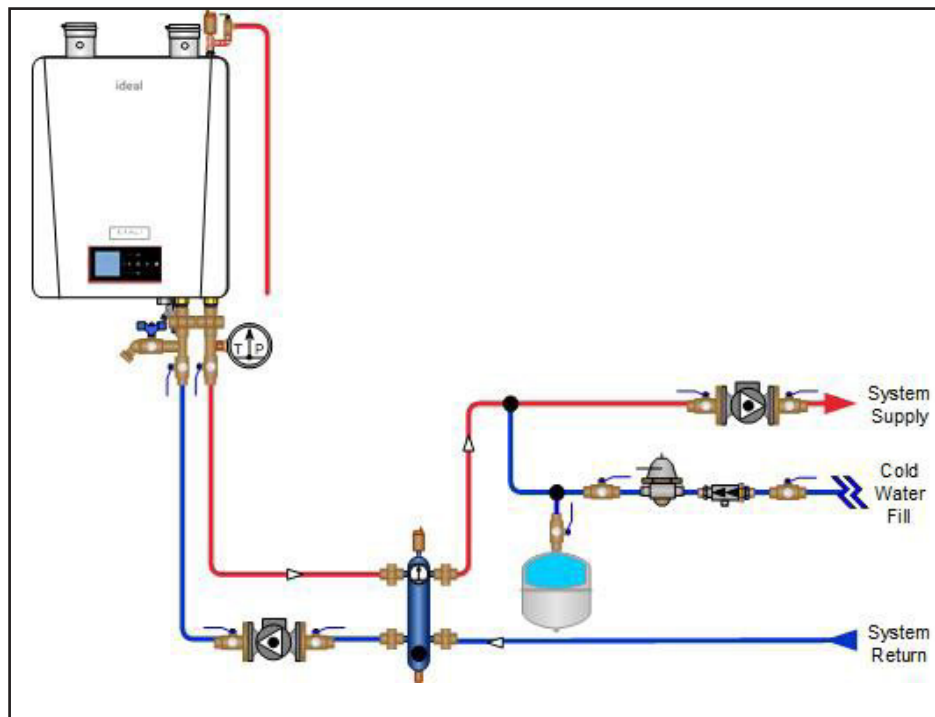


Fig. 18: Exalt Solo Near Boiler Piping with Hydraulic Separator



# Exalt Application Guide



Heat Call	Boiler Pump	CH1 Pump	CH2 Pump	DHW Pump
CH1	ON	ON	OFF	OFF
CH2	ON	OFF	ON	OFF
DHW	ON	OFF	OFF	ON

Note: the boiler is set up in this configuration out of the box

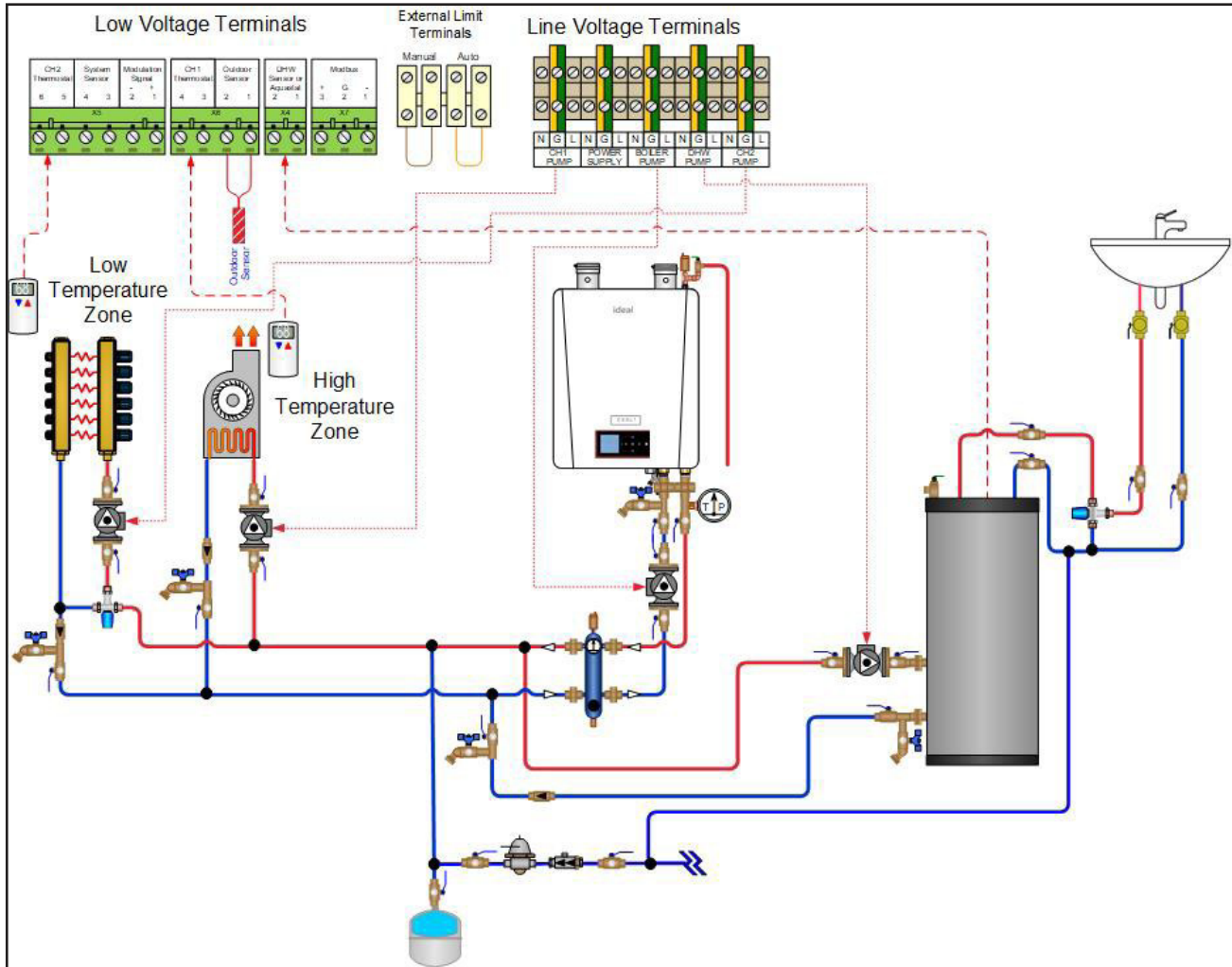


Fig. 19: Exalt Solo - Multiple Temperature Zones with Circulators

## NOTICE

Piping layout is shown with a Hydraulic Separator. Closely spaced tees and an air separator can be used as shown in Fig. 17 on page 8.

Layout is shown with separate Circulator and check valve. If using a circulator with internal check valve, the corresponding check valve is unnecessary.

# Exalt Application Guide



Heat Call	Boiler Pump	CH1 Pump	CH2 Pump	DHW Pump
CH1	ON	ON	OFF	OFF
CH2	ON	OFF	ON	OFF
DHW	ON -> OFF	OFF	OFF	ON

Note: Custom pump settings are required for this output

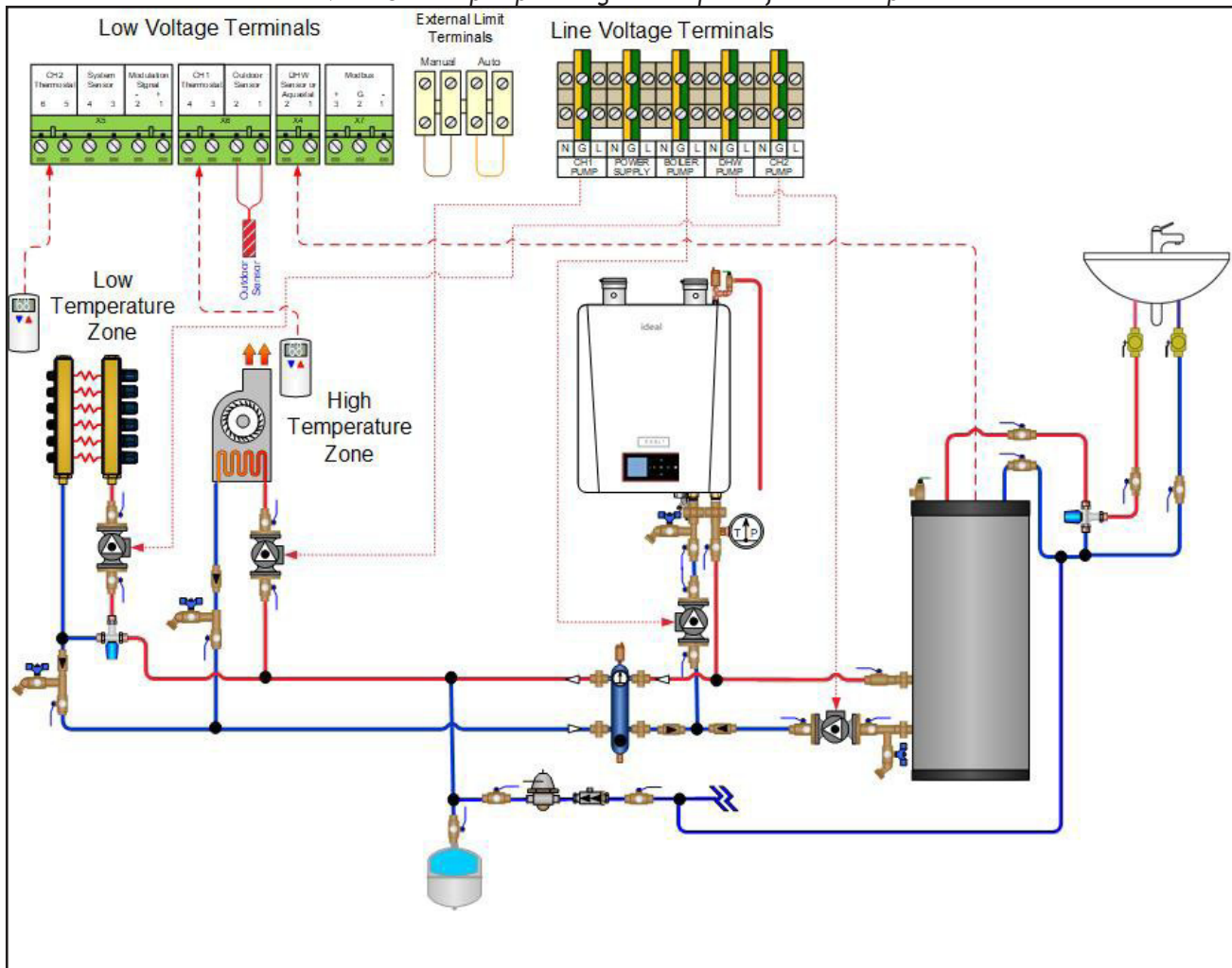


Fig. 20: Exalt Solo - Multiple Temperature Zones with Circulators - Alternate domestic piping

## NOTICE

Piping layout is shown with a Hydraulic Separator. Closely spaced tees and an air separator can be used as shown in Fig. 17 on page 8.

Layout is shown with separate Circulator and check valve. If using a circulator with internal check valve, the corresponding check valve is unnecessary.

Alternate domestic piping shown here is possible on all heat only boilers shown in the manual.

# Exalt Application Guide



Heat Call	Boiler Pump	CH1 Pump	CH2 Pump	DHW Pump
CH1	ON	ON	OFF	OFF
CH2	ON	OFF	ON	OFF
DHW	ON	OFF	OFF	ON

Note: the boiler is set up in this configuration out of the box

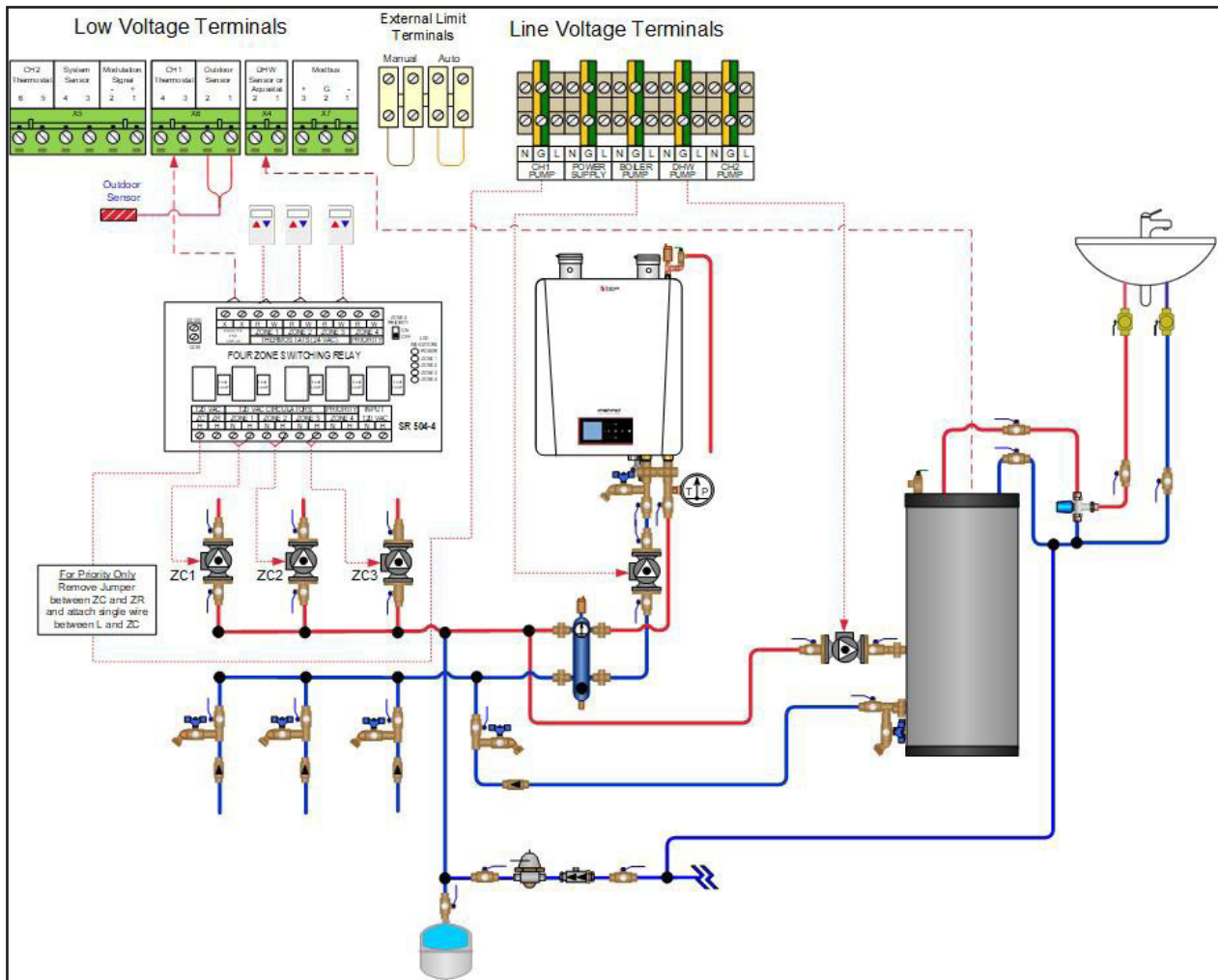


Fig. 21: Exalt Solo - Multiple Zones with Circulators

## NOTICE

Piping layout is shown with a Hydraulic Separator. Closely spaced tees and an air separator can be used as shown in Fig. 17 on page 8.

Layout is shown with separate Circulator and check valve. If using a circulator with internal check valve, the corresponding check valve is unnecessary.

# Exalt Application Guide



Heat Call	Boiler Pump	CH1 Pump	CH2 Pump	DHW Pump
CH1	ON	ON	OFF	OFF
CH2	ON	OFF	ON	OFF
DHW	ON	OFF	OFF	ON

Note: the boiler is set up in this configuration out of the box

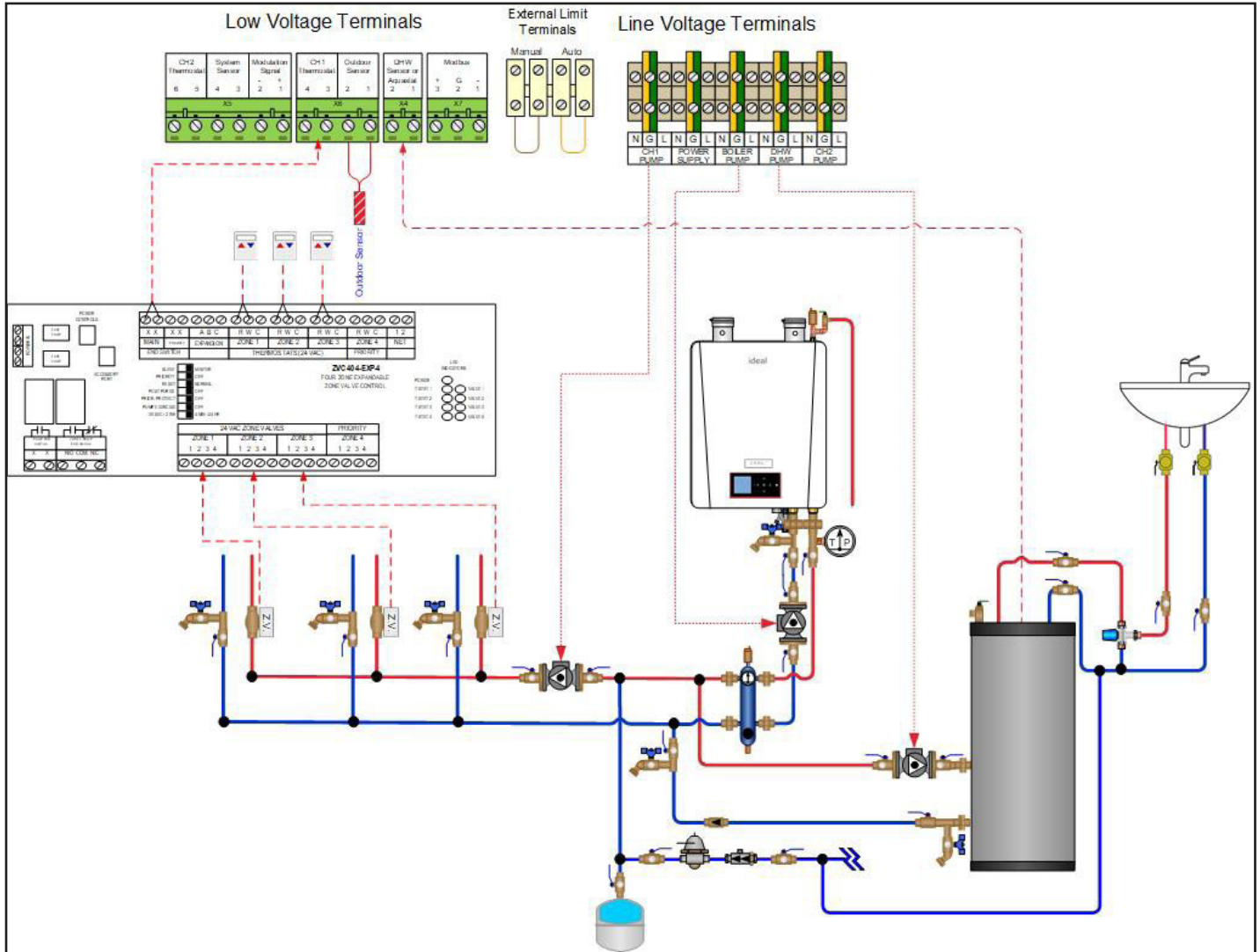


Fig. 22: Exalt Solo - Piping with Zone Valves and Zone Valve Control Panel

## NOTICE

Piping layout is shown with a Hydraulic Separator. Closely spaced tees and an air separator can be used as shown in Fig. 17 on page 8.

# Exalt Application Guide



Heat Call	Boiler Pump	CH1 Pump	CH2 Pump	DHW Pump
CH1	ON	ON	OFF	OFF
CH2	ON	OFF	ON	OFF
DHW	ON	OFF	OFF	ON

Note: the boiler is set up in this configuration out of the box

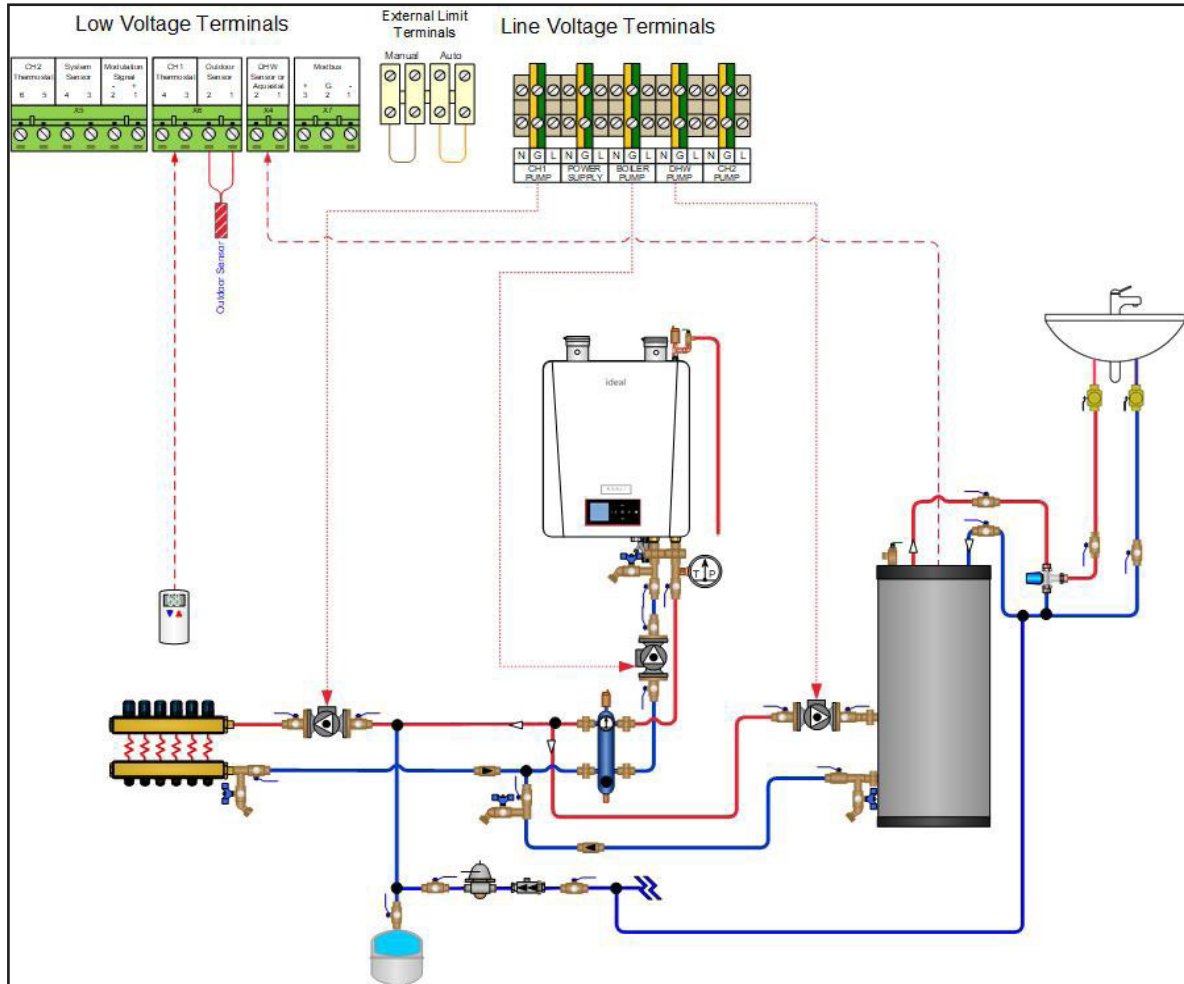


Fig. 23: Exalt Solo - Single Zone with Circulator

## NOTICE

Piping layout is shown with a Hydraulic Separator. Closely spaced tees and an air separator can be used as shown in Fig. 17 on page 8.

Layout is shown with separate Circulator and check valve. If using a circulator with internal check valve, the corresponding check valve is unnecessary.

# Exalt Application Guide



Heat Call	Boiler Pump	CH1 Pump	CH2 Pump	DHW Pump
CH1	ON	ON	OFF -> ON	OFF
CH2	ON	OFF	ON	OFF
DHW	ON	OFF	OFF	ON

Note: Custom pump settings are required for this layout

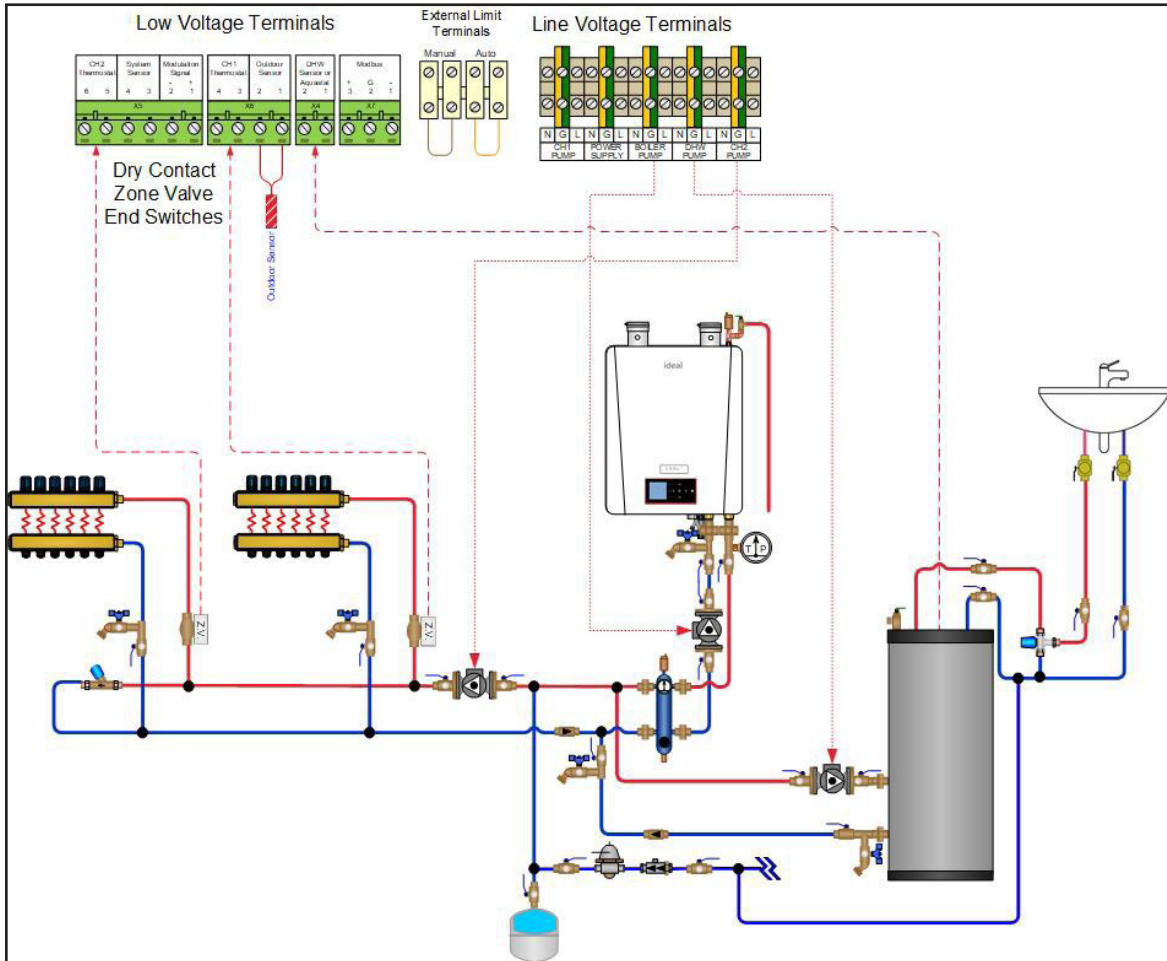


Fig. 24: Exalt Solo - Piping with Zone Valves

## NOTICE

Piping layout is shown with a Hydraulic Separator. Closely spaced tees and an air separator can be used as shown in Fig. 17 on page 8.

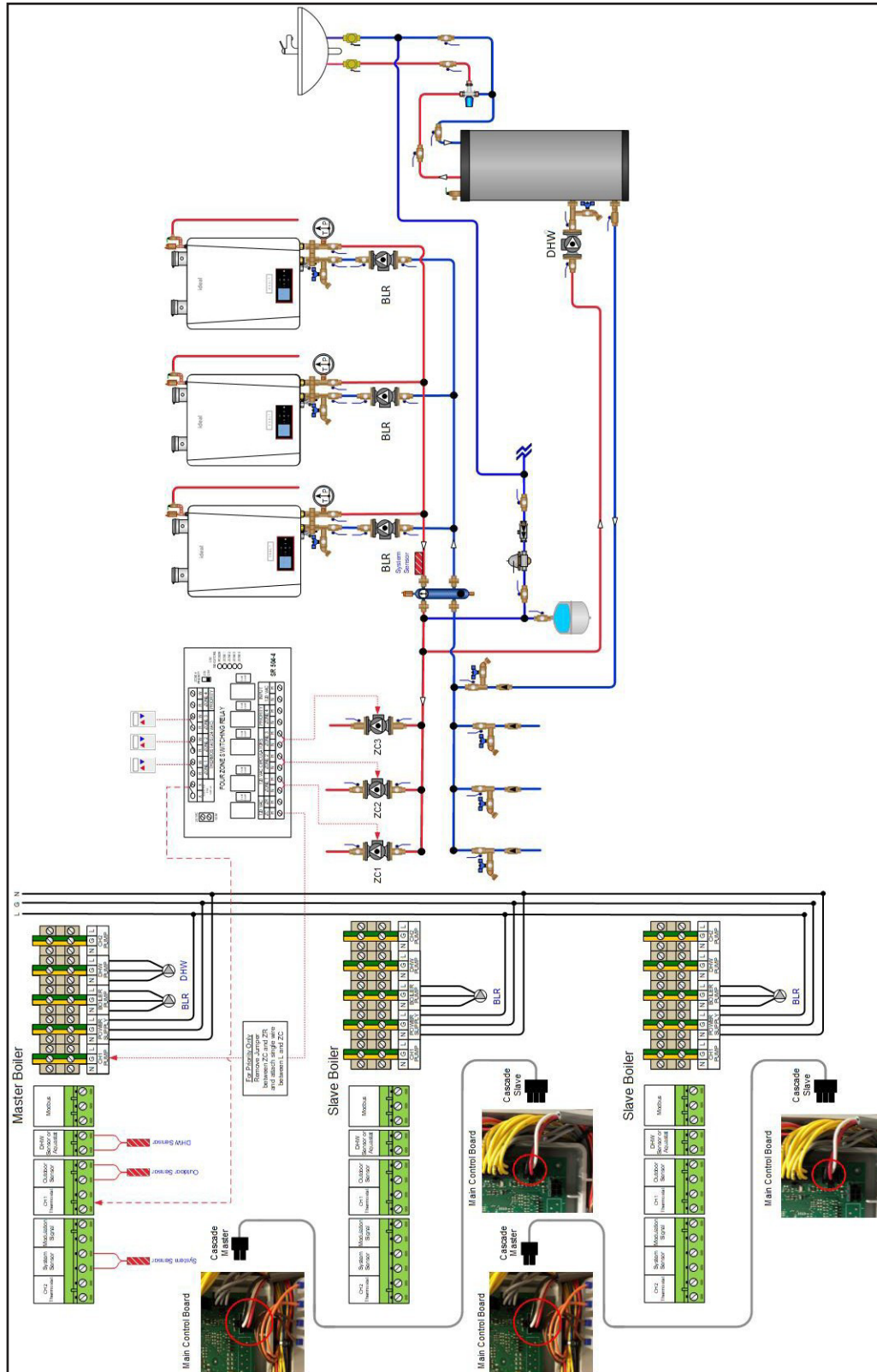


Fig. 25: Exalt Solo - Cascade Layout

## 5. Exalt Combi Piping Diagrams

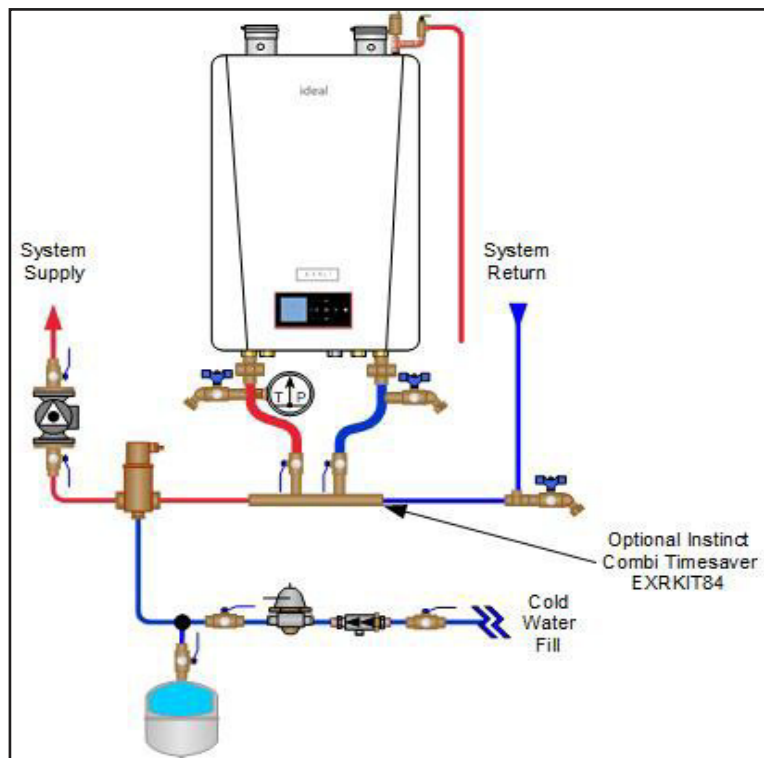


Fig. 26: Exalt Combi Near Boiler Piping with Timesaver Manifold

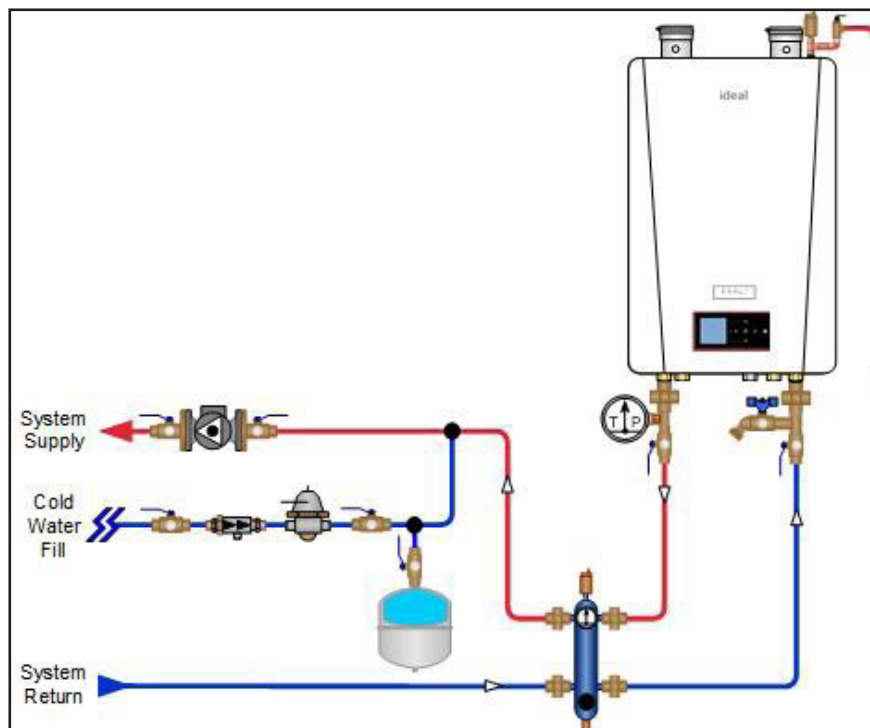


Fig. 27: Exalt Combi Near Boiler Piping with Hydraulic Separator



# Exalt Application Guide



Heat Call	Boiler Pump	CH1 Pump	CH2 Pump	DHW Pump
CH1	ON	ON	OFF	OFF
CH2	ON	OFF	ON	OFF
DHW	ON	OFF	OFF	ON

Note: the boiler is set up in this configuration out of the box

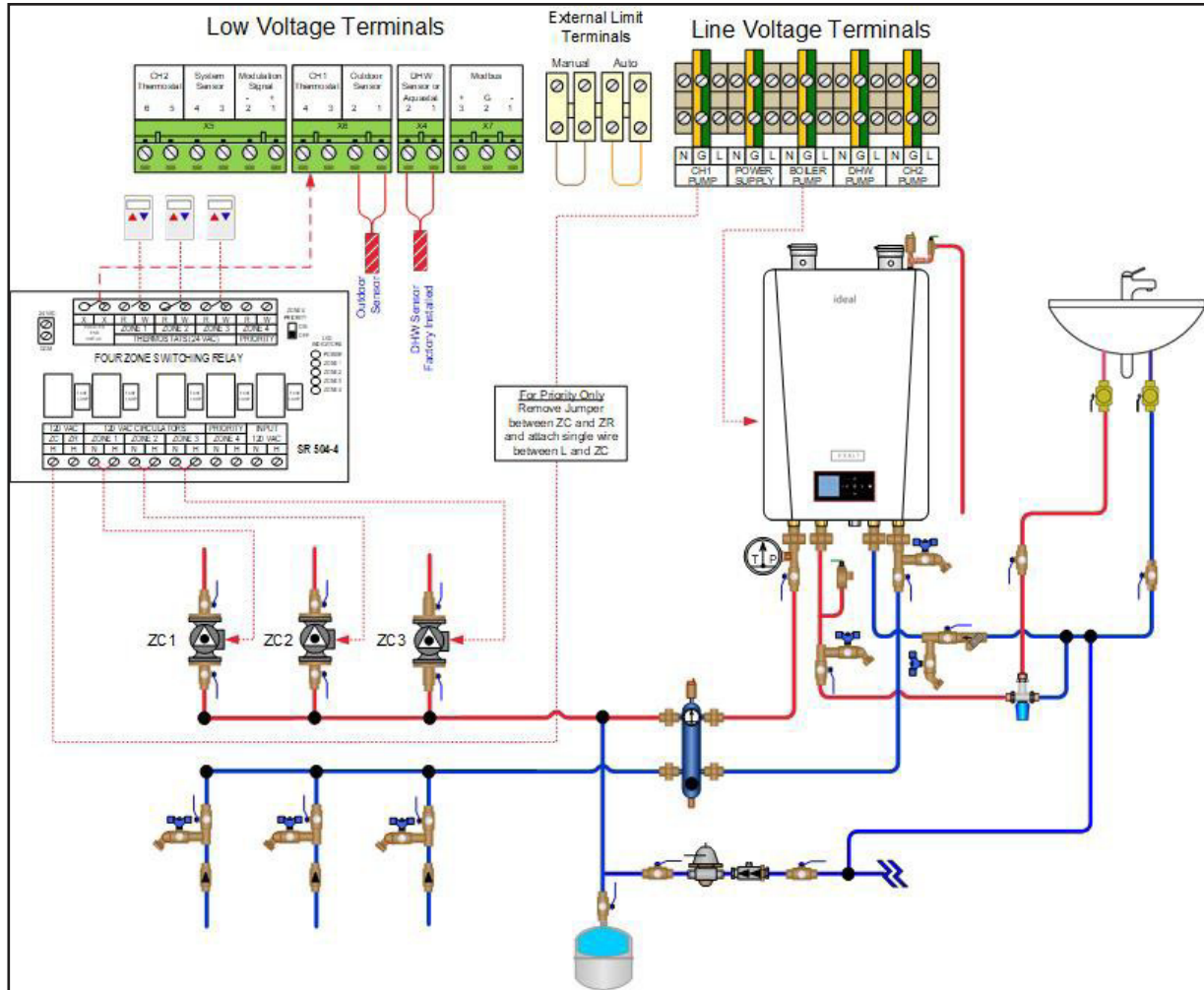


Fig. 28: Exalt Combi - Multiple Zones with Circulators

## NOTICE

Piping layout is shown with a Hydraulic Separator. The Timesaver manifold (EXRKIT84) and air separator can be used as shown in Fig. 25 on page 16.

Layout is shown with separate Circulator and check valve. If using a circulator with internal check valve, the corresponding check valve is unnecessary.

Heat Call	Boiler Pump	CH1 Pump	CH2 Pump	DHW Pump
CH1	ON	ON	OFF	OFF
CH2	ON	OFF	ON	OFF
DHW	ON	OFF	OFF	ON

Note: the boiler is set up in this configuration out of the box

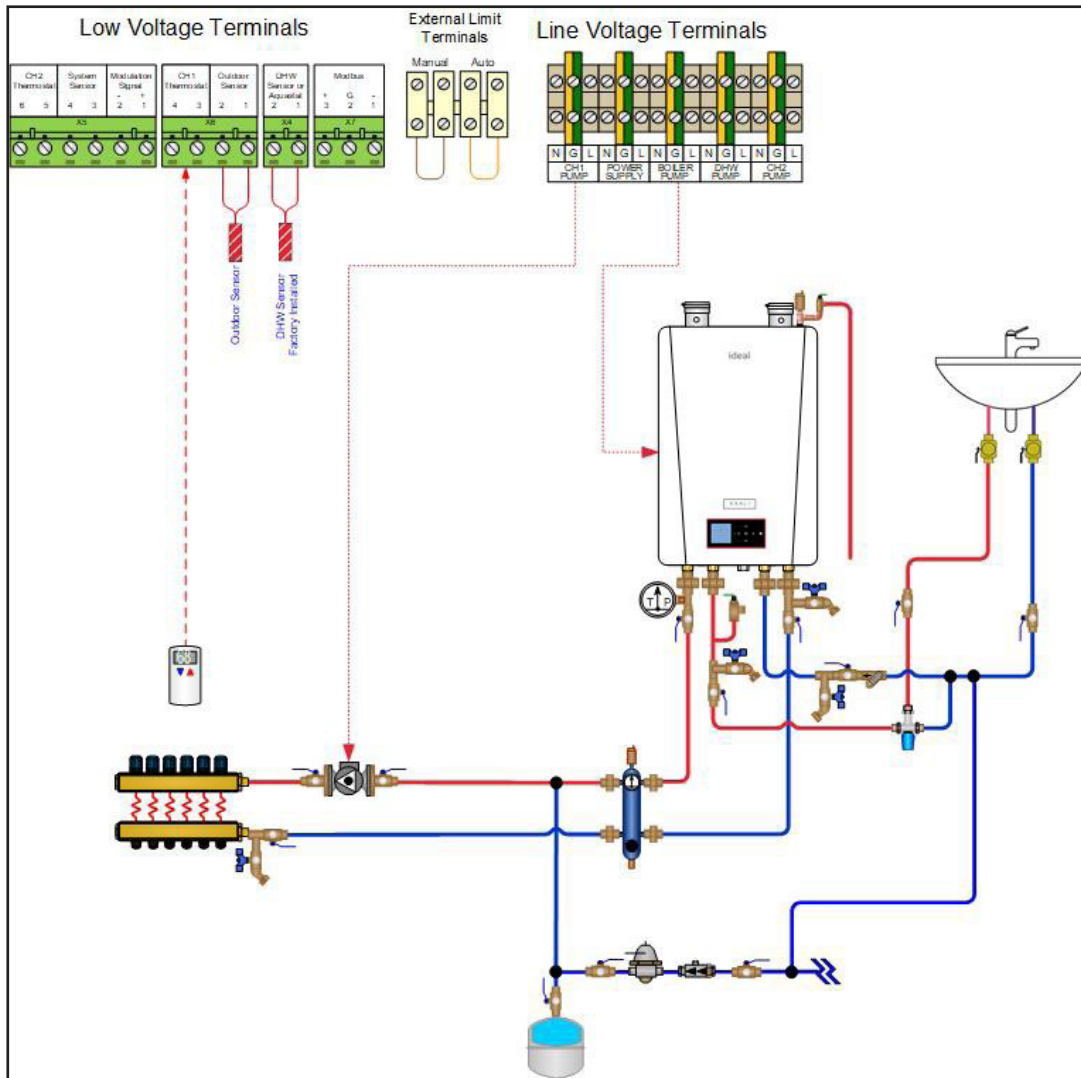


Fig. 29: Exalt Combi - Single Zones with Circulator

## NOTICE

Piping layout is shown with a Hydraulic Separator. The Timesaver manifold (EXRKIT84) and air separator can be used as shown in Fig. 25 on page 16.

Layout is shown with separate Circulator and check valve. If using a circulator with internal check valve, the corresponding check valve is unnecessary.

# Exalt Application Guide



Heat Call	Boiler Pump	CH1 Pump	CH2 Pump	DHW Pump
CH1	ON	ON	OFF	OFF
CH2	ON	OFF	ON	OFF
DHW	ON	OFF	OFF	ON

Note: the boiler is set up in this configuration out of the box

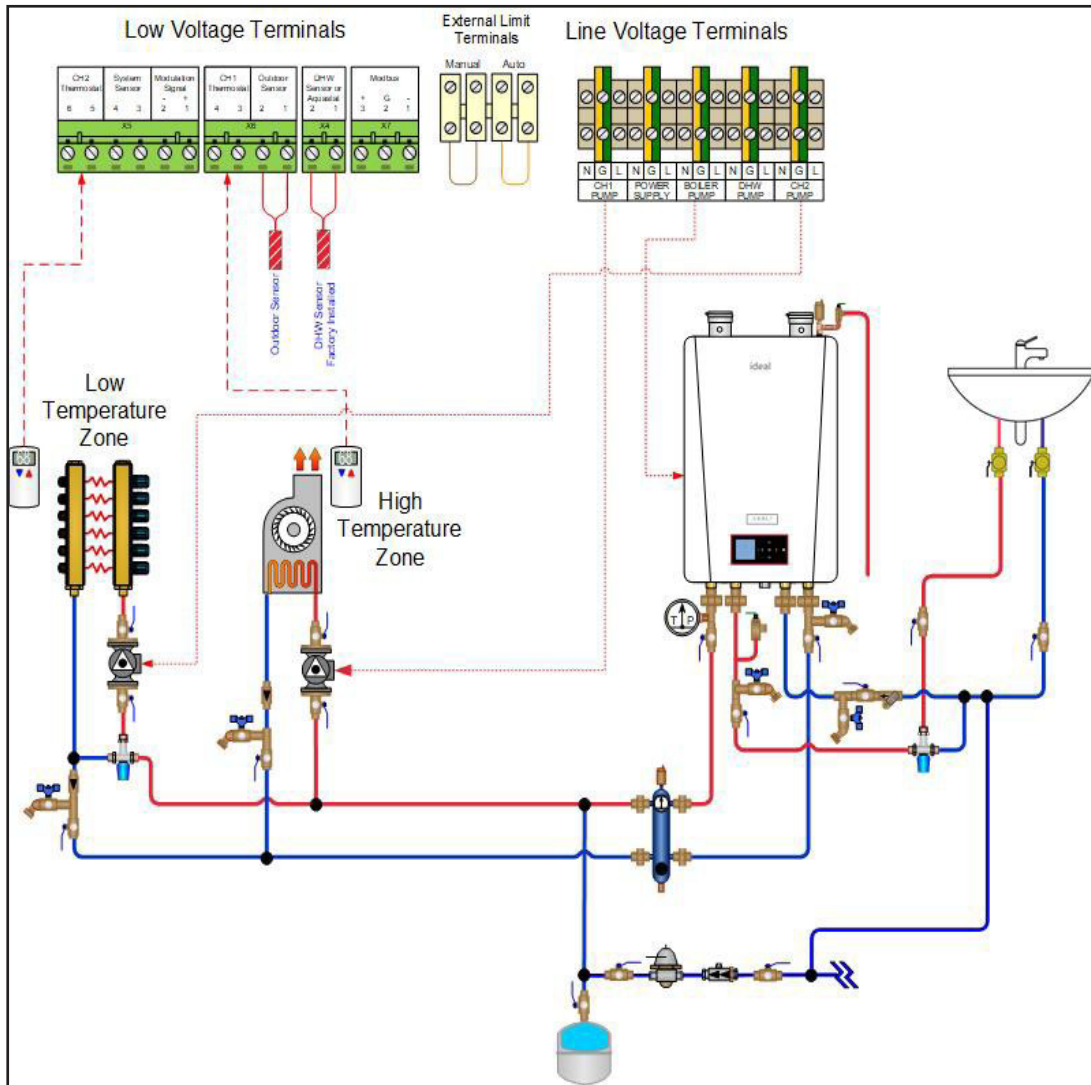


Fig. 30: Exalt Combi - Multiple Temperature Zones with Circulators

## NOTICE

Piping layout is shown with a Hydraulic Separator. The Timesaver manifold (EXRKIT84) and air separator can be used as shown in Fig. 25 on page 16.

Layout is shown with separate Circulator and check valve. If using a circulator with internal check valve, the corresponding check valve is unnecessary.

# Exalt Application Guide



Heat Call	Boiler Pump	CH1 Pump	CH2 Pump	DHW Pump
CH1	ON	ON	OFF	OFF
CH2	ON	OFF	ON	OFF
DHW	ON	OFF	OFF	ON

Note: the boiler is set up in this configuration out of the box

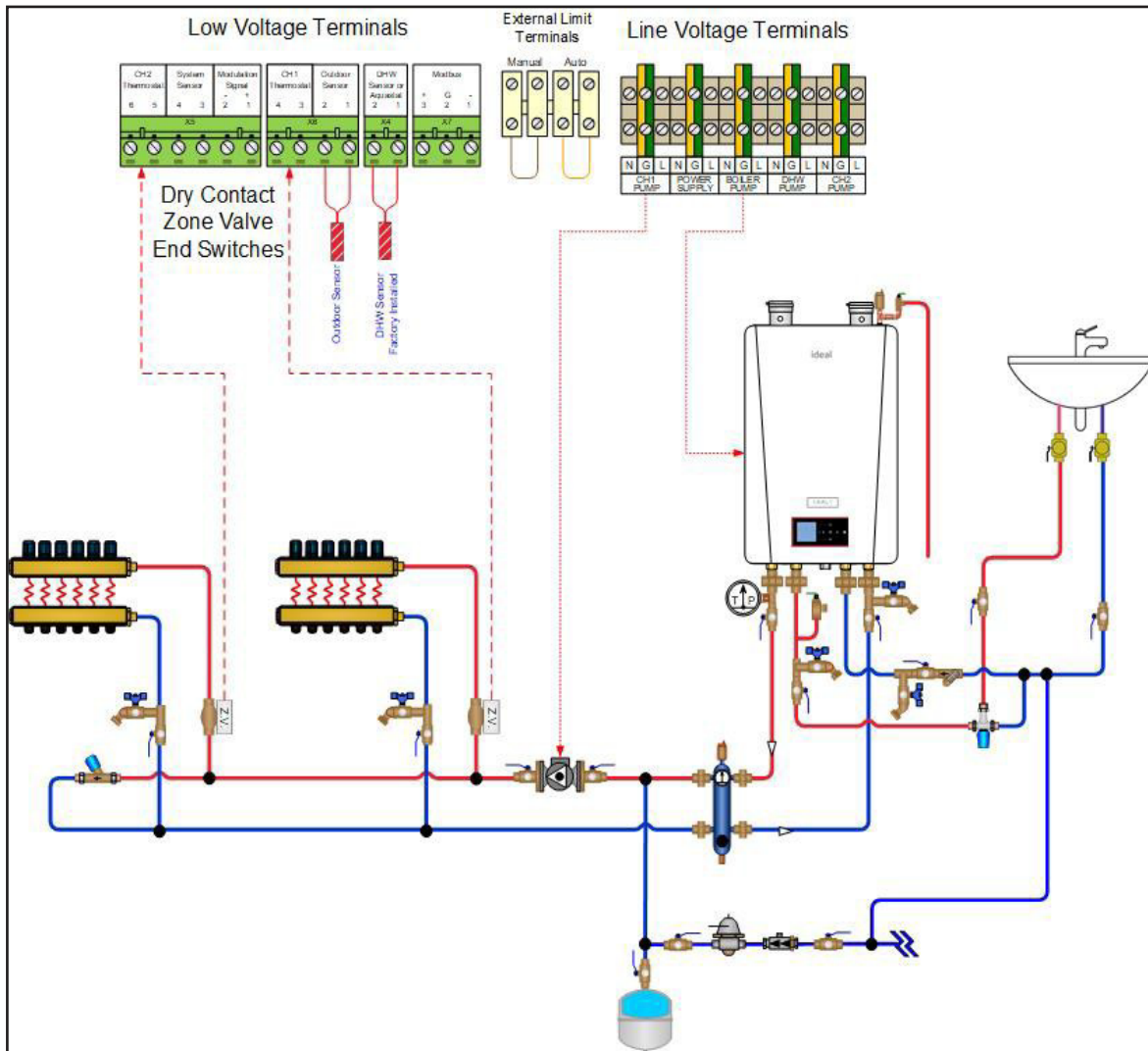


Fig. 31: Exalt Combi - Multiple Zones with Zone Valves

## NOTICE

Piping layout is shown with a Hydraulic Separator. The Timesaver manifold (EXRKIT84) and air separator can be used as shown in Fig. 25 on page 16.

# Exalt Application Guide



Heat Call	Boiler Pump	CH1 Pump	CH2 Pump	DHW Pump
CH1	ON	ON	OFF	OFF
CH2	ON	OFF	ON	OFF
DHW	ON	OFF	OFF	ON

Note: the boiler is set up in this configuration out of the box

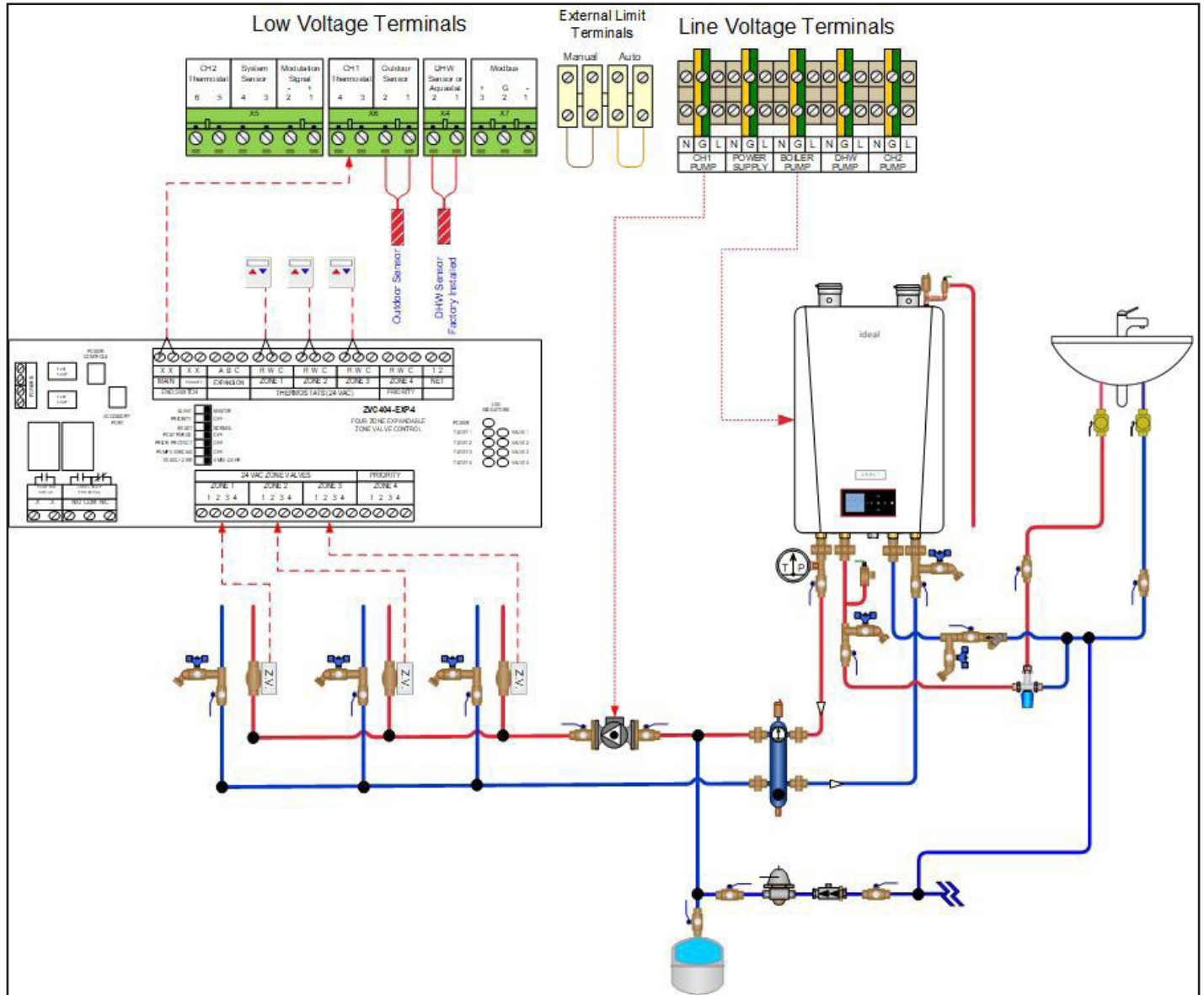


Fig. 32: Exalt Combi - Multiple Zones with Zone Valves and Zone Valve Control Panel

## NOTICE

Piping layout is shown with a Hydraulic Separator. The Timesaver manifold (EXRKIT84) and air separator can be used as shown in Fig. 25 on page 16.