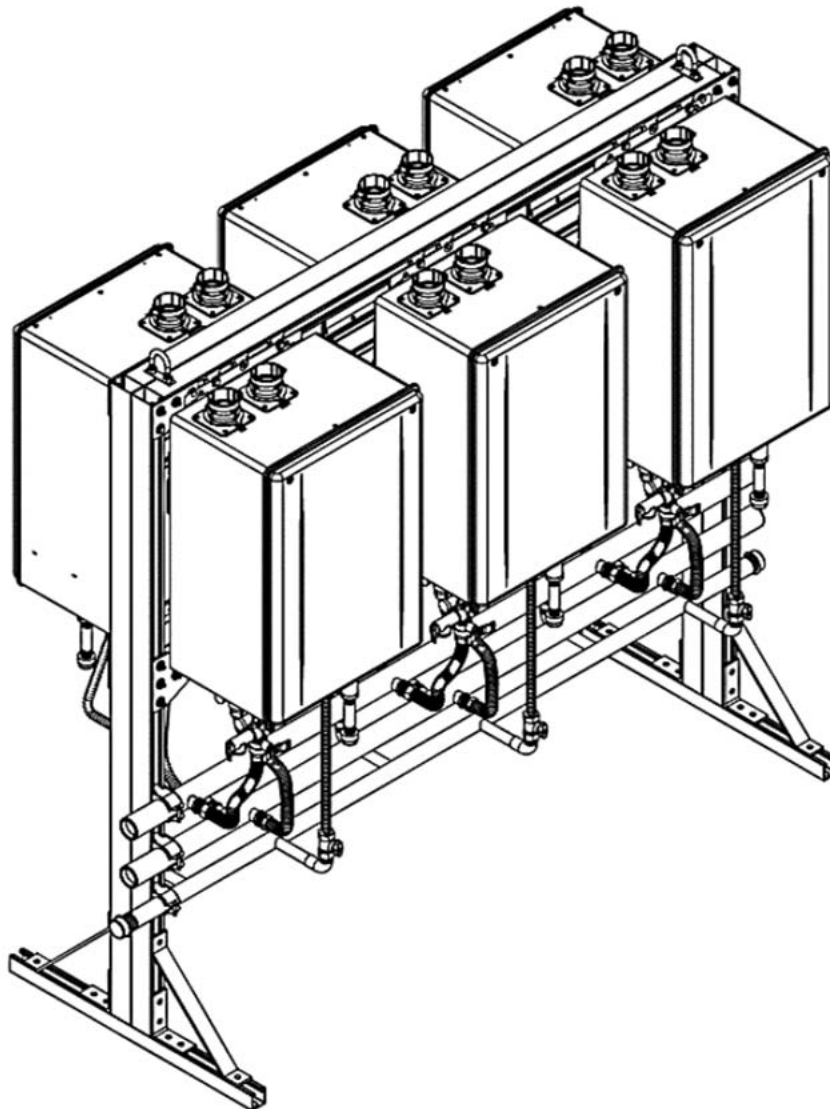

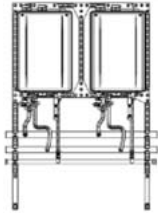

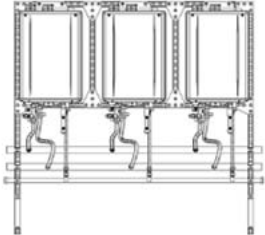




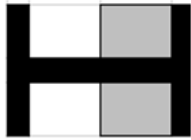



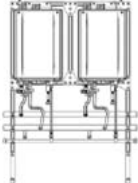

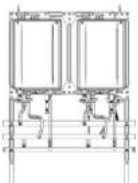
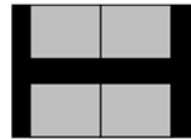
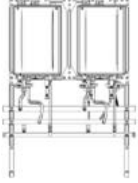
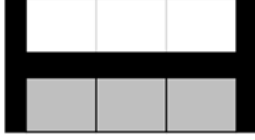
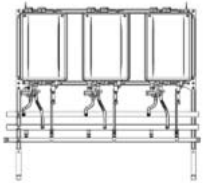
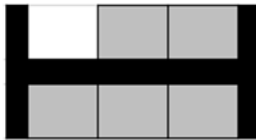
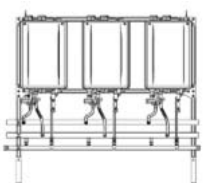
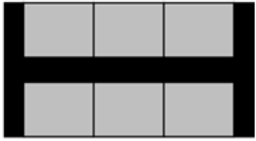
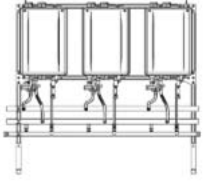
Commercial Water Heating System (CWHS)  
Rack Specifications with Water Heater Model NCC199CDV



## Commercial Water Heating System Wall Mount

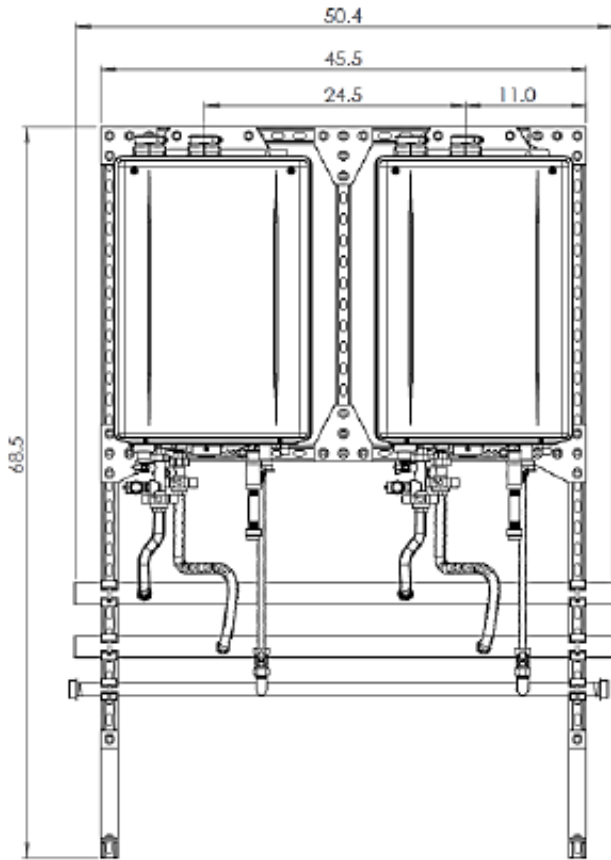
Model Number	Rack Type	Configuration	Illustration
CWHS501	2 Unit DV Wall Mount Rack, LP		
CWHS601	2 Unit DV Wall Mount Rack, NG		
CWHS502	3 Unit DV Wall Mount Rack, LP		
CWHS602	3 Unit DV Wall Mount Rack, NG		

## Commercial Water Heating System Floor Mount

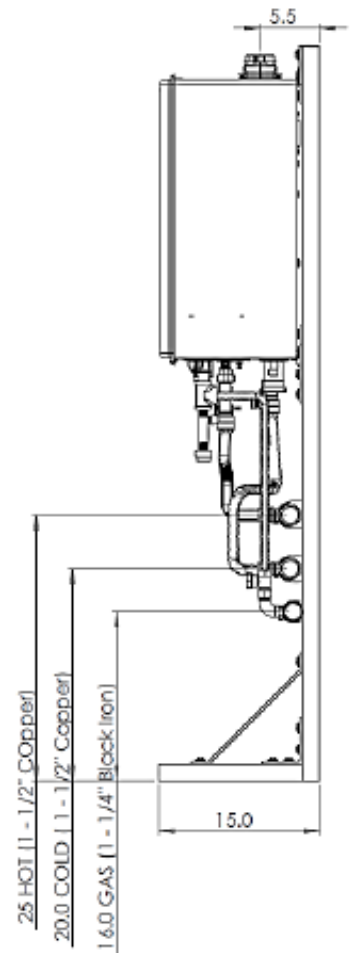
Model Number	Rack Type	Configuration	Illustration
CWHS503	2 Unit Back to Back DV Floor Mount, LP		
CWHS603	2 Unit Back to Back DV Floor Mount, NG		
CWHS504	2 Unit DV Floor Mount, LP		
CWHS604	2 Unit DV Floor Mount, NG		
CWHS505	3 Unit DV Floor Mount, LP		
CWHS605	3 Unit DV Floor Mount, NG		
CWHS506	4 Unit DV Floor Mount, LP		
CWHS606	4 Unit DV Floor Mount, NG		
CWHS507	3 Unit DV Floor Mount, LP		
CWHS607	3 Unit DV Floor Mount, NG		
CWHS508	5 Unit DV Floor Mount, LP		
CWHS608	5 Unit DV Floor Mount, NG		
CWHS509	6 Unit DV Floor Mount, LP		
CWHS609	6 Unit DV Floor Mount, NG		

2 Unit Commercial Water Heating Systems Wall Mount		
Model	CWHS501	CWHS601
Water Heater	NCC199CDV	
Gas Type	LP	NG
System Dimension (in.)	45.5 (L) x 15.0(D) x 68.5 (H)	
Fully Assembled Weight (lbs.)	TBD	
Shipping Weight (lbs.)	TBD	
<b>Frame Specifications</b>		
Frame Rail Type	1 5/8" Square Slot Metal	
Frame Material	14 gauge Aluminum	
Frame Finish	Aluminum	
Color	Aluminum	
<b>Water &amp; Gas Connections</b>		
Hot Water Trunk Line Diameter (in)	1 ½	
Cold Water Trunk Line Diameter (in)	1 ½	
Hot Water Trunk Line Material	Type L Copper (Rigid)	
Cold Water Trunk Line Material	Type L Copper (Rigid)	
Water Connection Type	Pipe	
Gas Trunk Line Diameter (in)	1 ¼	
Gas Trunk Line Material	Powder Coated Sch 40 Steel	
Gas Branch Line Material	PVC over CSST	
Gas Trunk Line Connection Type	Male NPT	
<b>Electrical Specifications</b>		
Voltage	120VAC (60 Hz)	
Max Current Draw (amp)	8	
<b>System Performance</b>		
Quantity of Units	2	
Hot Water Capacity @ 30°F rise (GPM)	22.2	
Hot Water Capacity @ 70°F rise (GPM)	11.2	
Hot Water Capacity @ 100°F rise (GPM)	8.0	
Minimum (Btuh)	18,000	
Maximum (Btuh)	399,800	

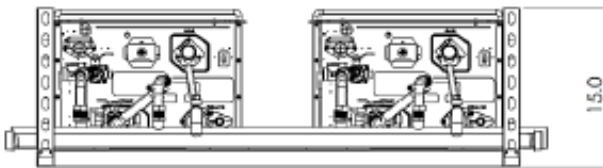
## 2 Unit Drawing Illustration / Dimensions



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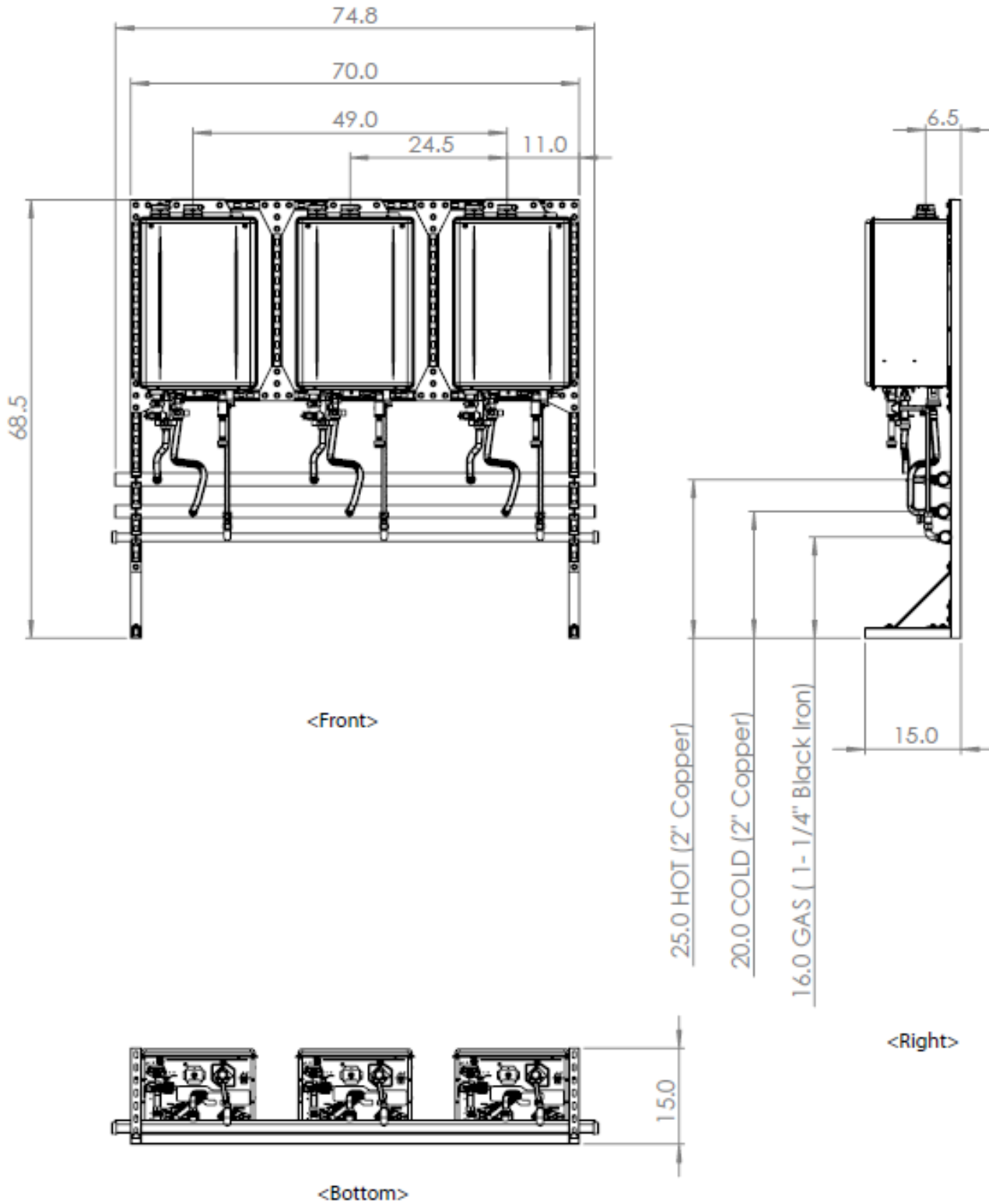


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*\*All Units are in inches*

3 Unit Commercial Water Heating Systems Wall Mount		
Model	CWHS302	CWHS402
Water Heater	NCC199CDV	
Gas Type	LP	NG
System Dimension (in.)	70.0 (L) x 15.0(D) x 68.5 (H)	
Fully Assembled Weight (lbs.)	TBD	
Shipping Weight (lbs.)	TBD	
<b>Frame Specifications</b>		
Frame Rail Type	1 5/8" Square Slot Metal	
Frame Material	14 gauge Aluminum	
Frame Finish	Aluminum	
Color	Aluminum	
<b>Water &amp; Gas Connections</b>		
Hot Water Trunk Line Diameter (in)	2	
Cold Water Trunk Line Diameter (in)	2	
Hot Water Trunk Line Material	Type L Copper (Rigid)	
Cold Water Trunk Line Material	Type L Copper (Rigid)	
Water Connection Type	Pipe	
Gas Trunk Line Diameter (in)	1 ¼	
Gas Trunk Line Material	Powder Coated Sch 40 Steel	
Gas Branch Line Material	PVC over CSST	
Gas Trunk Line Connection Type	Male NPT	
<b>Electrical Specifications</b>		
Voltage	120VAC (60 Hz)	
Max Current Draw (amp)	12	
<b>System Performance</b>		
Quantity of Units	3	
Hot Water Capacity @ 30°F rise (GPM)	33.3	
Hot Water Capacity @ 70°F rise (GPM)	16.8	
Hot Water Capacity @ 100°F rise (GPM)	12.0	
Minimum (Btuh)	18,000	
Maximum (Btuh)	599,700	

### 3 Unit Drawing Illustration / Dimensions

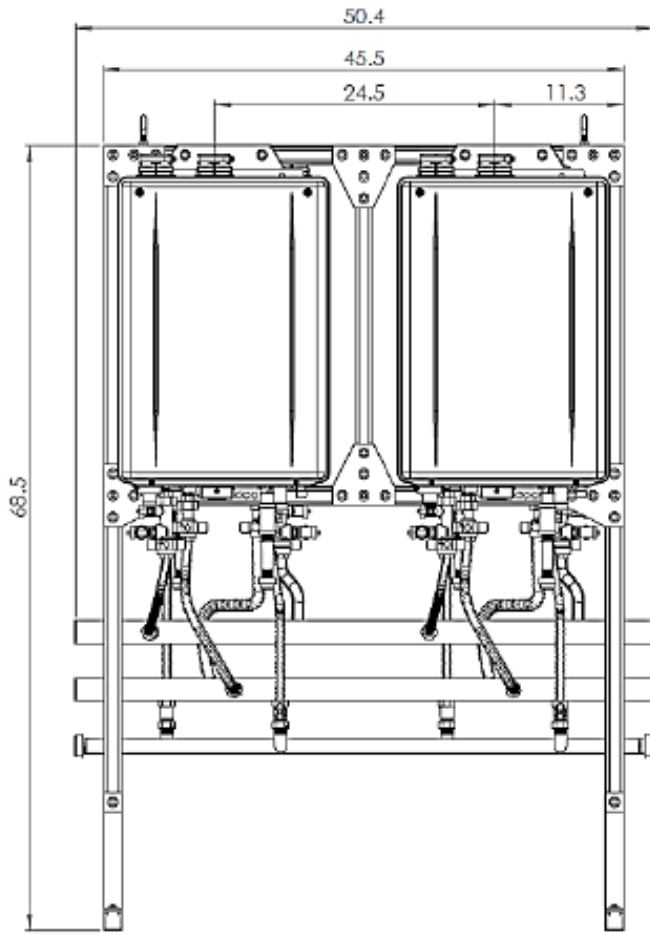


*\*All Units are in inches*

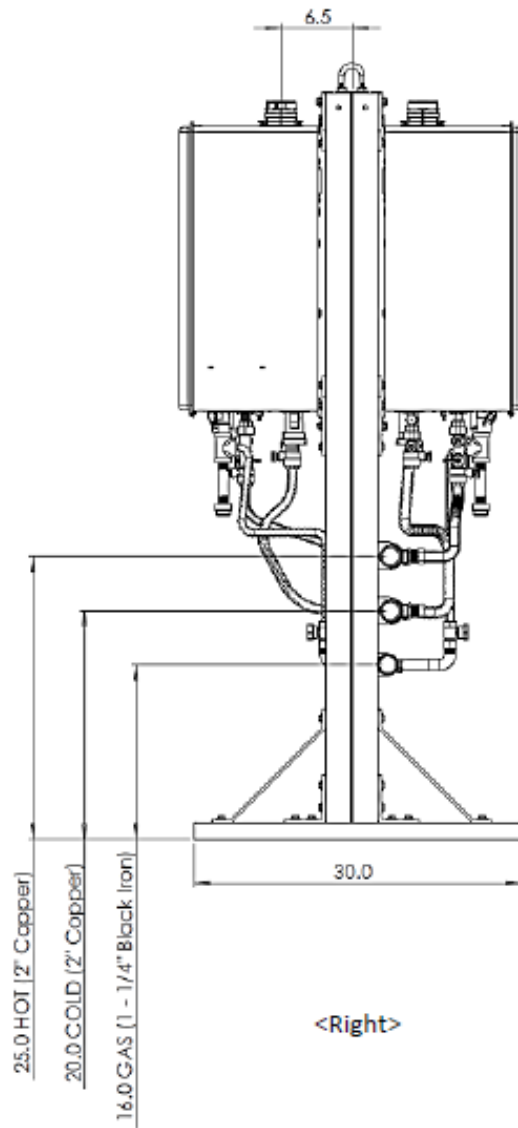
4 Unit Commercial Water Heating Systems Floor Mount			
Model	CWHS503 CWHS504 CWHS603 CWHS604	CWHS505 CWHS605	CWHS506 CWHS606
Water Heater	NCC199CDV		
Gas Type	CWHS503(LP) CWHS504(LP) CWHS603(NG) CWHS604(NG)	CWHS505 (LP) CWHS605 (NG)	CWHS506 (LP) CWHS606 (NG)
System Dimension (in.)	45.5 (L) x 15.0(D) x 68.5 (H)		
Fully Assembled Weight (lbs.)	TBD		
Shipping Weight (lbs.)	TBD		
<b>Frame Specifications</b>			
Frame Rail Type	1 5/8" x 4 7/8" Slot Metal		
Frame Material	14 gauge Aluminum		
Frame Finish	Aluminum		
Color	Aluminum		
<b>Water &amp; Gas Connections</b>			
Hot Water Trunk Line Diameter (in)	2		
Cold Water Trunk Line Diameter (in)	2		
Hot Water Trunk Line Material	Type L Copper (Rigid)		
Cold Water Trunk Line Material	Type L Copper (Rigid)		
Water Connection Type	Pipe		
Gas Trunk Line Diameter (in)	1 ¼		
Gas Trunk Line Material	Powder Coated Schedule 40 Steel		
Gas Branch Line Material	PVC over CSST		
Gas Trunk Line Connection Type	Male NPT		
<b>Electrical Specifications</b>			
Voltage	120VAC (60 Hz)		
Max Current Draw (amp)	8	12	16
<b>System Performance</b>			
Quantity of Units	2	3	4
Hot Water Capacity @ 30°F rise (GPM)	22.2	33.3	44.4
Hot Water Capacity @ 70°F rise (GPM)	11.2	16.8	22.4
Hot Water Capacity @ 100°F rise (GPM)	8.0	12.0	16.0
Minimum (Btuh)	18,000		
Maximum (Btuh)	399,800	599,700	799,600



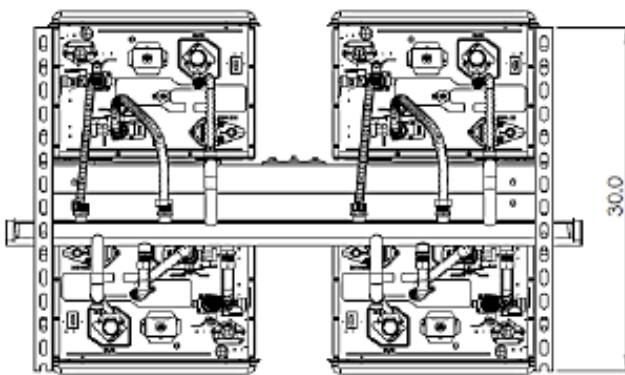
# 4 Unit Drawing Illustration / Dimensions



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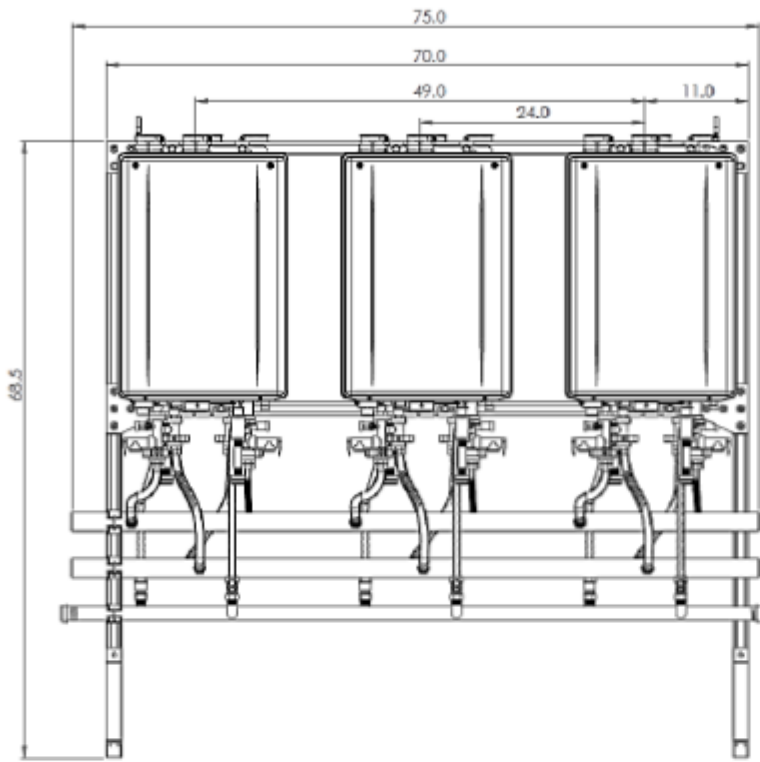


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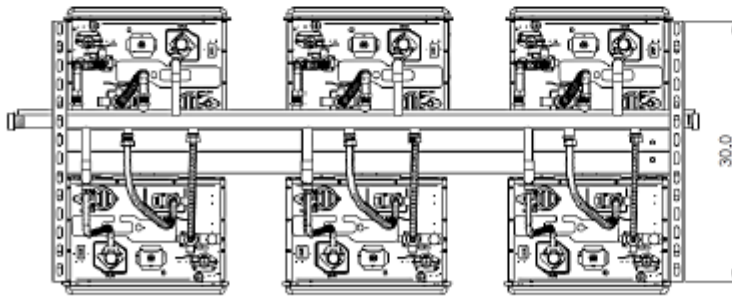
*\*All Units are in inches*

6 Unit Commercial Water Heating Systems Floor Mount			
Model	CWHS507 CWHS607	CWHS508 CWHS608	CWHS509 CWHS609
Water Heater	NCC199CDV		
Gas Type	CWHS507 (LP) CWHS607 (NG)	CWHS508 (LP) CWHS608 (NG)	CWHS509 (LP) CWHS609 (NG)
System Dimension (in.)	70 (L) x 30 (D) x 68.5 (H)		
Fully Assembled Weight (lbs.)	TBD	TBD	TBD
Shipping Weight (lbs.)	TBD	TBD	
<b>Frame Specifications</b>			
Frame Rail Type	1 5/8" x 4 7/8" Slot Metal		
Frame Material	14 gauge Aluminum		
Frame Finish	Aluminum		
Color	Aluminum		
<b>Water &amp; Gas Connections</b>			
Hot Water Trunk Line Diameter (in)	2 ½		
Cold Water Trunk Line Diameter (in)	2 ½		
Hot Water Trunk Line Material	Type L Copper (Rigid)		
Cold Water Trunk Line Material	Type L Copper (Rigid)		
Water Connection Type	Pipe		
Gas Trunk Line Diameter (in)	1 ½		
Gas Trunk Line Material	Powder Coated Schedule 40 Steel		
Gas Branch Line Material	PVC over CSST		
Gas Trunk Line Connection Type	Male NPT		
<b>Electrical Specifications</b>			
Voltage	120VAC (60 Hz)		
Max Current Draw (amp)	12	20	24
<b>System Performance</b>			
Quantity of Units	3	5	6
Hot Water Capacity @ 30°F rise (GPM)	33.3	55.5	66.6
Hot Water Capacity @ 70°F rise (GPM)	16.8	28.0	33.6
Hot Water Capacity @ 100°F rise (GPM)	12.0	20.0	24.0
Minimum (Btuh)	18,000		
Maximum (Btuh)	599,700	999,500	1,199,400

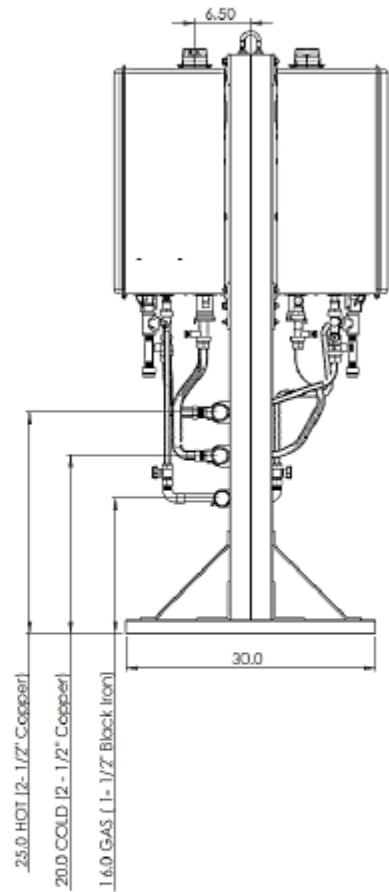
# 6 Unit Drawing Illustration / Dimensions



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*\*All Units are in inches*

# Multi-Unit System Controller

- Each CWHS includes a pre-installed system controller (SC-401-6M).
- Each CWHS includes a pre-wired remote controller (RC-9018). Remote can be extended up to 300’.
- User selectable temperature from 100-185°F
- Basic Operation:
 

The SC-401-6M system controller is used to combine 1-6 Noritz commercial heaters into a single “multi-unit system”. The system controller stages units on and off based on hot water demand and rotates their operation to ensure even usage. It also has two additional modes which optimize the system for operation with a recirculation line or storage tank.
- Unit Staging:
 

Staging allows the multi-unit system to track hot water demand from the minimum flow rate of a single unit up to the maximum output of several units. When the primary firing heater reaches approximately 50% of its maximum output, the system controller activates the next unit in the system. When both these units reach approximately 50% of their maximum output, a third unit is activated and so on. The SC-401-6M may also be configured to activate two heaters during primary firing to allow for rapid initial hot water demand.
- Unit Rotation:
 

The SC-401-6M system controller rotates water operation of the primary firing heater every 8 hours of combustion time or up to 24 hours of plug-in time. This helps to ensure even usage of all units.

UNIT1	UNIT2	UNIT3	UNIT4	UNIT5	UNIT6
1st	2nd	3rd	4th	5th	6th
↓ Rotation					
6th	1st	2nd	3rd	4th	5th
↓ Rotation					
5th	6th	1st	2nd	3rd	4th
↓ Rotation					
4th	5th	6th	1st	2nd	3rd

- The SC-401-6M allows the user to select two additional system types: “Recirc” and “Tank Recirc”. These settings optimize performance with recirculation and storage tank systems, and allow the system controller to operate one or two pumps.

