



Floor Standing Rack (CDV Units) 6 Water Heaters

COMMERCIAL WATER HEATING SYSTEM (CR60 - CA UPDATE)



RACK SPECIFICATIONS WITH WATER HEATER MODEL NCC199CDV

Project Name	_____	Prepared By	_____
Project #	_____	Rack Model	_____
Location	_____	Quantity (Racks)	_____
Wholesaler	_____	Gas Type	☐ NG
Contractor	_____		☐ LP
Bid Date	_____		

Notes /
Comments



ITEM #
CR60-CA

The CR system is a pre-fabricated racking system for use in flat rooftop or mechanical room applications for commercial multi-systems. A new low profile design and a variety of installation options make this new rack system ideal for business owners looking to replace outdated storage tanks.

2 UNIT WALL MOUNT	3 UNIT WALL MOUNT	4 UNIT FLOOR MOUNT	6 UNIT FLOOR MOUNT
MAX QTY OF RACKS	MAX QTY OF RACKS	MAX QTY OF RACKS	MAX QTY OF RACKS
5	3	3	2

DIMENSIONS

Item Number	Rack Type	UPC	Included Main Components		Cold / Hot Water & Gas Manifold				Rack Dimensions			Total Weight (lbs)
			GQ-C3260WZ-FF US	SC-401-6M	Cold	Hot	Condensate Drain Manifold	Gas Manifolds	L	D	H	
CR60-WH-2-LP-CA	2 Unit Wall Hanging, LP	860003319932	2	1	2"	2"	3/4"	2"	54 1/4"	17"	44"	259
CR60-WH-2-NG-CA	2 Unit Wall Hanging, NG	860003319949										
CR60-WH-3-LP-CA	3 Unit Wall Hanging, LP	860003319956	3	1	2"	2"	3/4"	2"	78"	17"	44"	386
CR60-WH-3-NG-CA	3 Unit Wall Hanging, NG	860003319963										
CR60-FS-4-LP-CA	4 Unit Free Standing, LP	860003319970	4	1	2"	2"	3/4"	2"	54 1/4"	30"	56 3/4"	444
CR60-FS-4-NG-CA	4 Unit Free Standing, NG	860003319987										
CR60-FS-5-LP-CA	5 Unit Floor Mount, LP	850018743099	5	1	2"	2"	3/4"	2"	78"	30"	56 3/4"	560
CR60-FS-5-NG-CA	5 Unit Floor Mount, NG	850018743082										
CR60-FS-6-LP-CA	6 Unit Free Standing, LP	817000013752	6	1	2"	2"	3/4"	2"	78"	30"	56 3/4"	641
CR60-FS-6-NG-CA	6 Unit Free Standing, NG	860003319994										

CA UPDATE

COMMERCIAL RACK SYSTEM

The new Noritz CR Commercial Rack System brings features designed to create a hassle free and easy installation. All CR systems now come with a redesigned gas header with built-in gas sediment traps and an additional shutoff valve, simplifying both installation and service.

RACK SYSTEM UPDATES

⇒ TEST PRESSURE

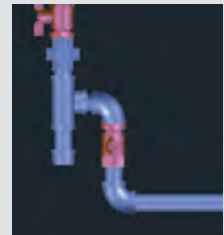
Factory testing of gas header at 60psi for 30 minutes. Field pressure testing at 60 psi compatible; Additional gas shutoff valves are also included to isolate gas header and protect tankless units during field test.



⇒ DRIPS AND SEDIMENT TRAPS

Gas Sediment traps now come built in.

⇒ MECHANICALLY FORMED TEE FITTINGS



NCC199CDV (GQ-C3260WZ-FF US)

COMMERCIAL CONDENSING WATER HEATER

Specification Sheet



Standard Input

18,000-199,900 BTU/h / 0.5 - 11.1gpm (NCC199CDV)

Uniform Energy Factor (UEF)

0.97 (NG) / 0.97 (LP)

Compact Design -

ANSI Z21.10.3/CSA 4.3 certified design that can be wall-mounted indoors or installed outdoors using the optional Vent Cap

Heat Exchanger -

Manufactured with high quality stainless steel

Venting Options -

Available in Direct Vent model that can use either 2" or 3" Schedule 40 PVC/CPVC or installed outdoors with Vent Cap.

Common Vent Compatible -

Vent up to 6 units on a single venting system with integrated backflow preventer.

Direct Electronic Ignition

Wifi Capable

Compatible with 1/2" gas pipe -

See installation manual

Multi-System Capability -

Units can be linked together by using either the optional 2-unit Quick Connect or multi-unit System Controller for up to 24 units

Fully Modulating -

BTU input range from 18,000 to 4.8 million BTU/h (with 24 unit System) with stable combustion provided by gas venturi and pre-mix burner. Each individual unit 11:1 Turndown Ratio

Temperature Controls -

Includes remote thermostat that can precisely adjust the output temperature from 100°F to 185°F

Safety Devices -

Flame Sensor, Overheat Prevention Device, Lightning Protection Device, Freeze Protection, Condensate Overflow

Safety Devices -

Flame Sensor, Overheat Prevention Device, Lightning Protection Device, Freeze Protection, Condensate Overflow

10 Year Limited Heat Exchanger Warranty for Commercial Use

5 Year Limited Parts Warranty & 1 Year Reasonable Labor

Approvals -

CSA, UPC, NSF, Low NOx Approved By SCAQMD (Rule 1146.2)



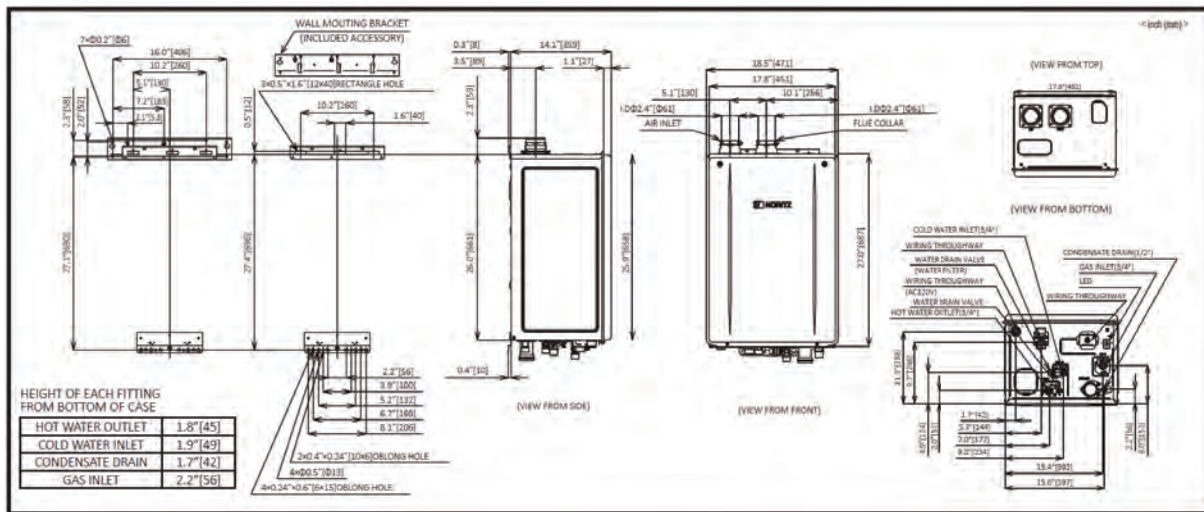
Accessories

- ☐ Universal Concentric Vent Kit (#PVC-UCVK)
- ☐ Low Profile Termination Kit (#PVC-LPT)
- ☐ PVC Concentric Termination (#PVC-CT)
- ☐ 3" Horizontal Hood Termination (#PVT-HL)
- ☐ SV Conversion (#SV-CK-2)
- ☐ Birdscreen (#VT-PVCS)
- ☐ Outdoor Vent Cap (#VC-6)
- ☐ Isolator Valves (#IK-WV-200)
- ☐ Pipe Cover (#PC-10S)
- ☐ Commercial Wireless Monitor (#NWCC-ADAPTER)
- ☐ Quick Connect Cord (#QC-2)
- System Controller**
 - ☐ 6-Unit (#SC-401-6M)
 - ☐ 12-unit (#SCU-401-12M)
 - ☐ 24-unit (#SC-401-24M)
- ☐ Neutralizer for 1-unit (#NC-1S)
- ☐ Neutralizer for up to 16 unit (#NT-20A)

* Refer to the Noritz Limited Warranty for complete coverage details at Noritz.com

** This product complies with California AB 1953 Low Lead Law and section 1417(d) of the Safe Drinking Water Act

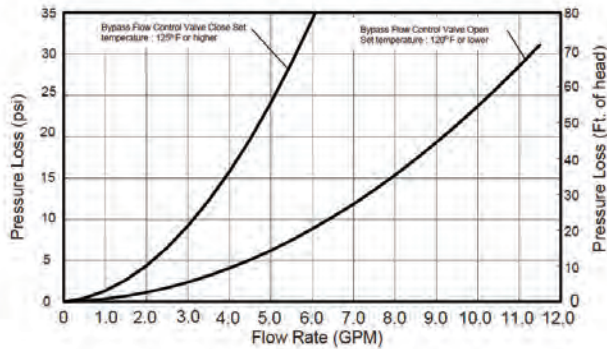
Dimensions



Flow Rate

Temperature Rise (°F)	30	40	45	50	60	70	80	90	100	110	120	130	140
NCC199CDV (GPM)	11.1	9.7	8.7	7.8	6.5	5.5	4.8	4.3	3.9	3.5	3.2	3.0	2.8

Pressure Drop



Specifications

Model Name		NCC199CDV (GQ-C3260WZ-FF US)
Weight		70 pounds
Operating Pressure		15 - 150 psi
Gas Supply Pressure		NG: 3.5" - 10.5" LP: 8.0" - 14.0"
Water Holding Capacity		0.80 Gallon (3.2L)
Connection Sizes	Water Inlet	3/4" NPT
	Hot Water Outlet	3/4" NPT
	Gas Inlet	3/4" NPT
	Condensate Drain	1/2" NPT
Power	Supply	120VAC (60Hz), less than 4 amperes
	Consumption	NG : 96W LP: 80W Freeze Protection: 114W
Freeze Protection		Outdoor: -4°F / Indoor: -30°F
Temperature Settings	°F Mode	100-150°F (In 5 °F in tervals), 160°F , 170°F, 185°F (14 Options)
	°C mode	37-48°C (In 1°C intervals), 50-85°C (In 5°C intervals) (20 Options)
Materials	Front Cover	37-48°C (In 1°C intervals), 50-85°C (In 5°C intervals) (20 Options)
	Casing	Zincified Steel Plate / Polyester Coating

COMMERCIAL WATER HEATING SYSTEM

The Noritz Commercial Water Heating System (CR60) is a pre-fabricated racking solution that can be used in flat rooftop, mechanical room, or outdoor applications. For the wall mounted configurations, Commercial Water Heating Systems are available in 2 or 3 Noritz tankless water heater configurations. The floor standing Commercial Water Heating Systems are available with 4, 5 or 6 unit Noritz tankless water heater configurations. For outdoor installation, vent caps (VC-6-1) must be ordered for each individual unit.

The CR60 provides a time and labor saving solution when installing multiple Noritz tankless water heaters.

CR60-CA ADDED FEATURES AND BENEFITS

- Integrated gas sediment traps on each unit
- Fuel gas manifold factory pressure tested at normal (0.5 psi) and high pressure (60 psi)
- Secondary gas shut-off to facilitate gas sediment trap servicing and field pressure testing



COMMERCIAL WATER HEATING SYSTEM

Parts Number & Main Components

Commercial Water Heating System - Floor Mounted									
Model Number	Rack Type	Configuration	Illustration						
CR60-FS-6-LP-CA	6 Unit Floor Mount, LP	<table><tr><td>4</td><td>5</td><td>6</td></tr><tr><td>3</td><td>2</td><td>1</td></tr></table>	4	5	6	3	2	1	
4	5		6						
3	2	1							
CR60-FS-6-NG-CA	6 Unit Floor Mount, NG								

System Shown:
CR60-FS-6-CA



CR60-FS-6 CA

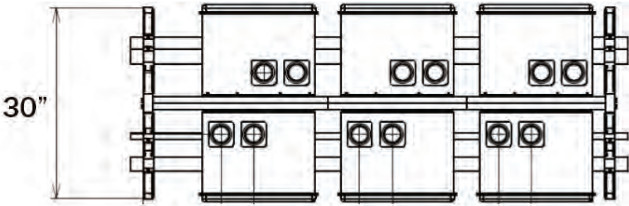
SPECIFICATIONS

BTU and Flow Rates for NCC199CDV (GQ-C3260WZ-FF-US)	
Number of Tankless Water Heaters	6
Max. Hot Water Capacity @ 30°F Rise (GPM)	66.6
Max. Hot Water Capacity @ 70° Rise (GPM)	33.6
Minimum (Btuh)	18,000
Maximum (Btuh)	1,199,400

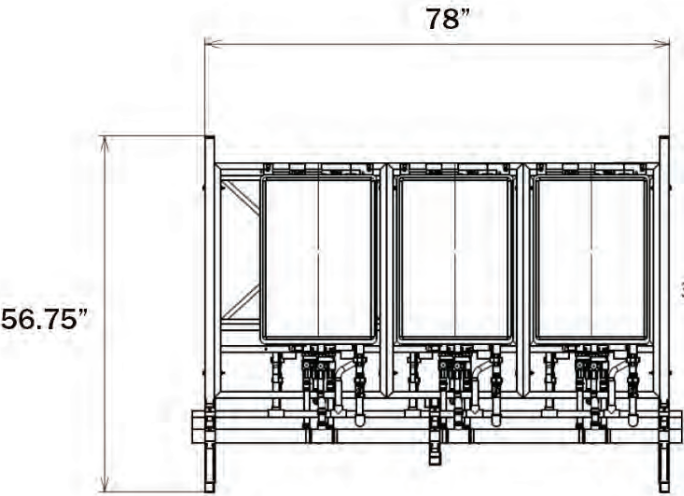
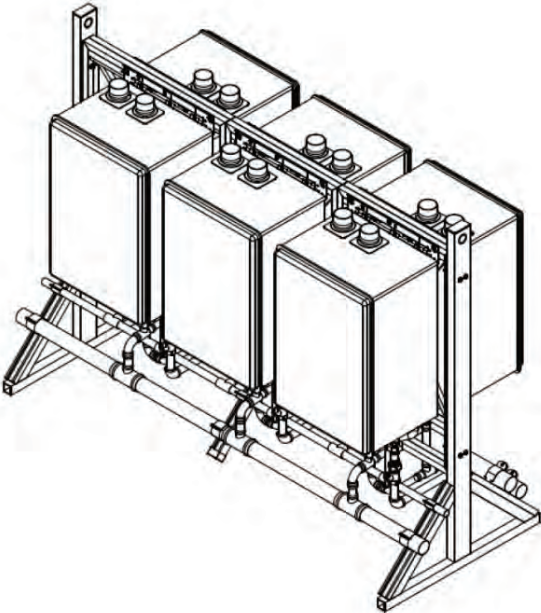
Model and Rack Specifications	
Model Number	CR60-FS-6-CA
Tankless Water Heater Model	NCC199CDV
Frame Dimensions (in.)	78" (L) x 30"(D) x 56.75"(H)
Weight - Fully Assembled (lbs.)	641
Shipping Weight - Fully Assembled (lbs.)	1,241
Frame Material	Aluminum
Frame Color	Aluminum
Water & Gas Pipe Connections	
Hot Water Manifold Pipe Material	Copper
Cold Water Manifold Pipe Material	Copper
Gas Manifold Pipe Material	Black Iron
Condensate Drain Manifold Pipe Material	Schedule 40 PVC
Hot Water Manifold Pipe Diameter (in.)	2"
Cold Water Manifold Pipe Diameter (in.)	2"
Gas Manifold Pipe Diameter (in.)	2"
Condensate Drain Manifold Pipe Diameter (in.)	3/4"
Electrical Requirements	
Voltage	120VAC (60hz)
Maximum Current (Amps)	24

CR60-FS-6-CA

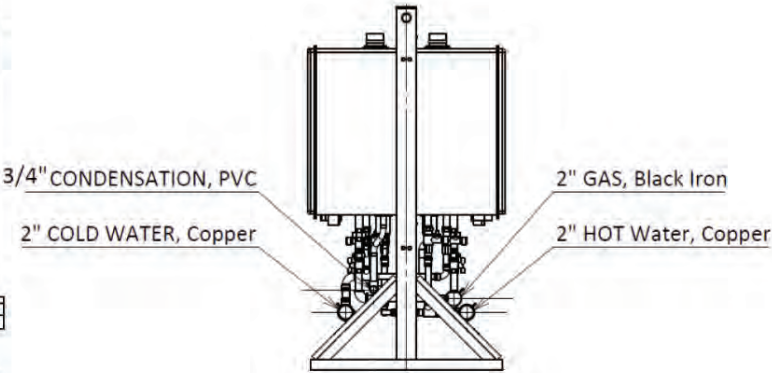
6 Unit Illustration / Dimensions



TOP



FRONT

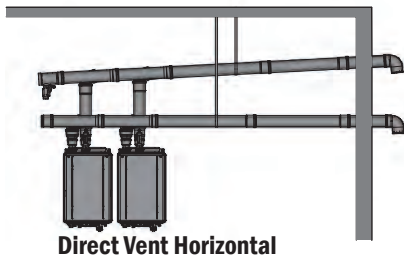


RIGHT

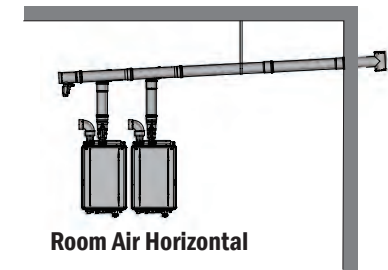
COMMON VENTING

ULTIMATE FLEXIBILITY FOR VENT CONFIGURATION

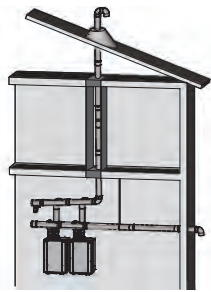
Figuring out where to safely and efficiently route the exhaust system is one of the biggest hurdles for any HVAC system designer. Noritz Common Venting offers designers the most flexibility to decide how to safely and efficiently route the vent. For room air installations, the combustion air can be drawn from the room environment, further reducing the installation complexity, by requiring only a single penetration for the exhaust.



Direct Vent Horizontal



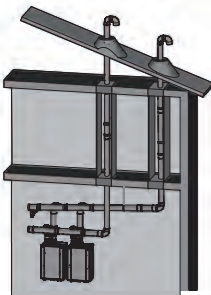
Room Air Horizontal



Split Exhaust



Room Air Vertical



Direct Vent Vertical



Table 1: Vent Diameter and Maximum Equivalent Vent Length

Model	Configuration	Number Of Units	Vent Diameter (in.) and Maximum Equivalent Vent Length (feet)							
			PVC or CPVC Schedule 40 Pipe				PP Vent			
			3"	4"	6"	8"	3"	4"	6"	8"
EZ98DV (GQ-C2860WX-FF US) NRCR92DV (GQ-C2660WXQ-FF US)	Both Direct Vent (DV) and Non-Direct Vent (SV)	2	28'	130'	200		28'	150'	200	
EZ111DV (GQ-C3260WX-FF US) NRCR111DV (GQ-C3260WXQ-FF US)		2	18'	95'	200		18'	110'	200	
NCC199CDV (GQ-C3260WZ-FF US)		2	18'	95'	200		18'	110'	200	
		3	N/A	39'	155'	200	N/A		155'	200
		4	N/A	N/A	90'	200	N/A	N/A	90'	200
		5	N/A	N/A	50'	150'	N/A	N/A	50'	150'
		6	N/A	N/A	35'	130'	N/A	N/A	35'	130'

The Btu/h input of the unit will be reduced by up to 9%

Note: The sizing method shown in Table 1 is provided for the convenience of the installer. Maximum acceptable vent system static pressure drop is 0.6" W.C.

Table 2:
Equivalent Length
of Each Elbow

Diameter of Elbow	Equivalent Length of Each Elbow (feet)			
	3"	4"	6"	8"
Length	5	12	18	20

MULTI-UNIT SYSTEM CONTROLLER

- Each CR60 includes a pre-installed system controller (SC-401-6M).
- Each CR60 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

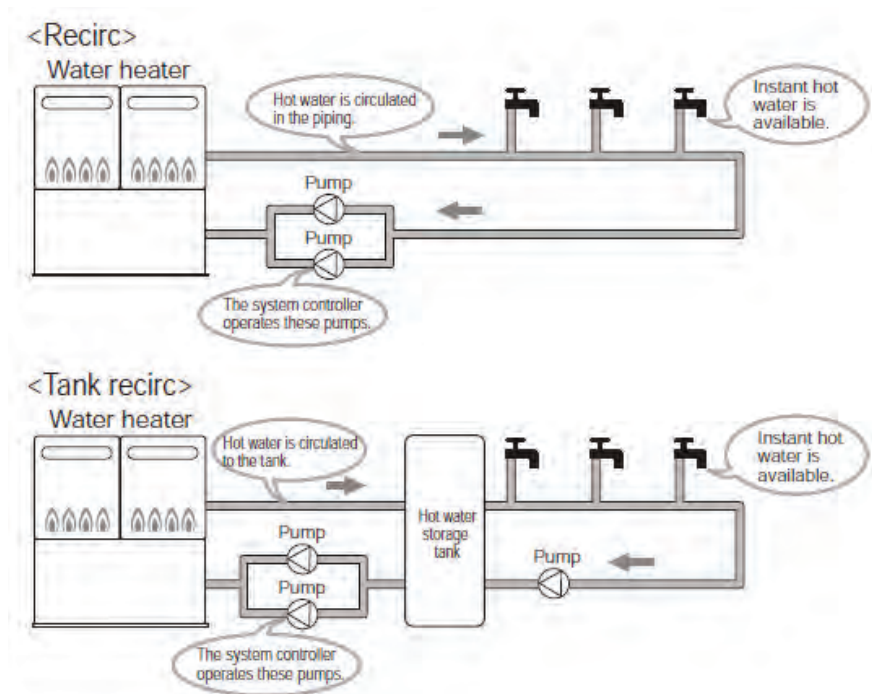
Staging allows the multi-unit system to track hot water demand from the minimum flow rate of a single unit up to the maximum output of several units. When the primary firing heater reaches approximately 50% of its maximum output, the system controller activates the next unit in the system. When both 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 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.

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
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.



Included Accessories

IK-WV

Isolator Valve Kit

- ☐ **IK-WV-200-1-TH-LF**
Lead Free 3/4" threaded iso valve kit with male 500K Btuh Pressure Relief Valve

SC-#

System Controller

- ☐ **SC-401-6M**
System controller for up to 6 units for the NCC199, NCC300 & NC380 series.

Optional Accessories

NT20A

Condensate Neutralizer Kit (External)

- ☐ **NT20A¹**
Commercial condensate neutralizer kit for NC199, NCC199CDV, and NCC300 series
¹NT20A for commercial only

SC-#

System Controller

- ☐ **SCU-401-12M-WIFI**
System controller bundle w/ NWCC adapter and System controller for NCC199CDV and NCC300 (12 units)
- ☐ **SCU-401-24M-WIFI**
System controller bundle w/ NWCC Adapter and System Controller for NCC199CDV (24 units)

VC-6-1

Outdoor Vent Cap

- ☐ **VC-6-1**
Outdoor vent cap for EZ, NRCR, and CDV models.

SV-CK-#

DV to SV Conversion Kit

- ☐ **SV-CK-2**
2" PVC (EZ / CDV)
- ☐ **SV-CKM-23**
2" or 3" (Screen Only)

PVC-#CT

PVC Concentric Horizontal Termination Kit

- ☐ **PVC-2CT**
2" PVC Concentric Termination
- ☐ **PVC-3CT**
3" PVC Concentric Termination

PRC-1

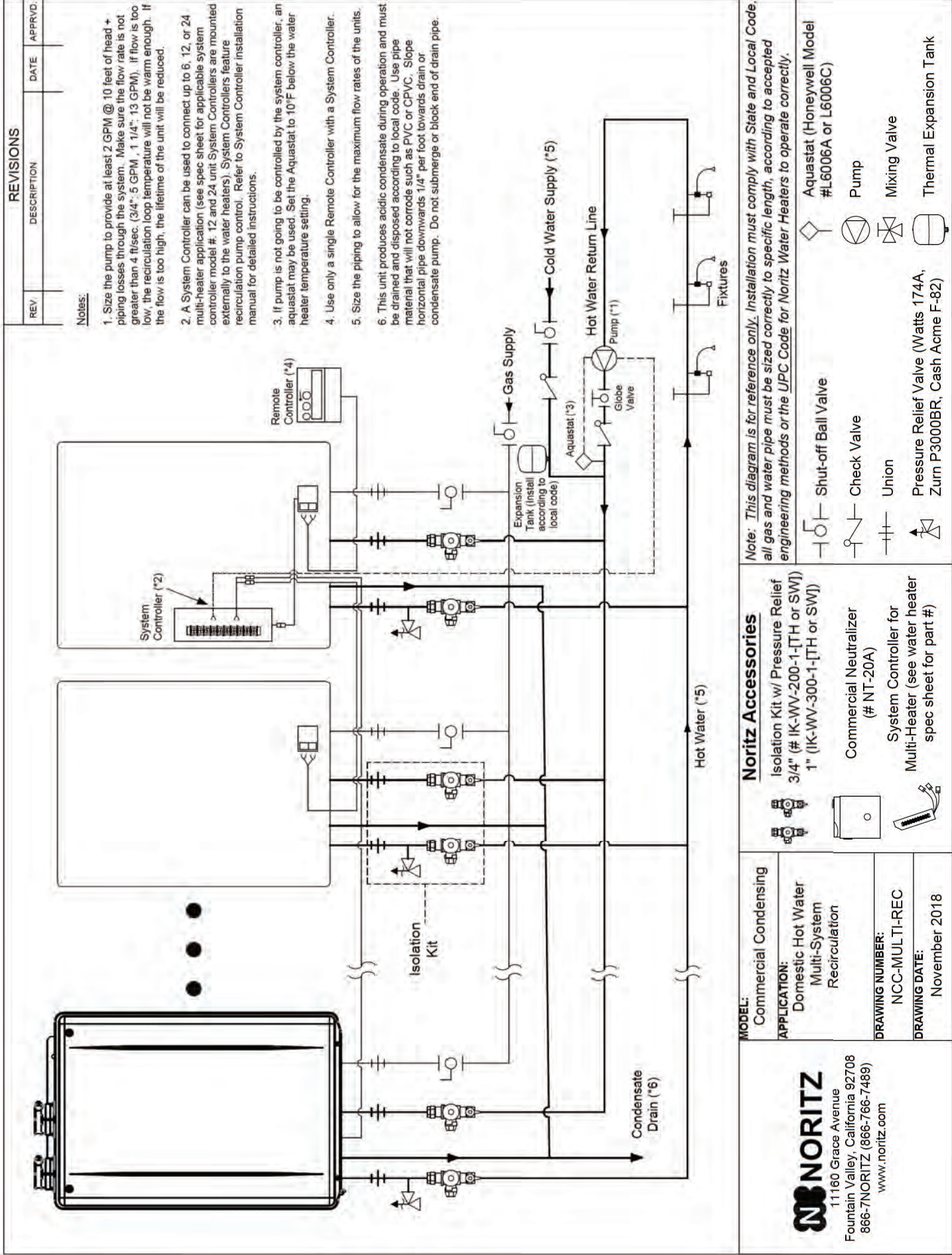
Plastic Rain Cap

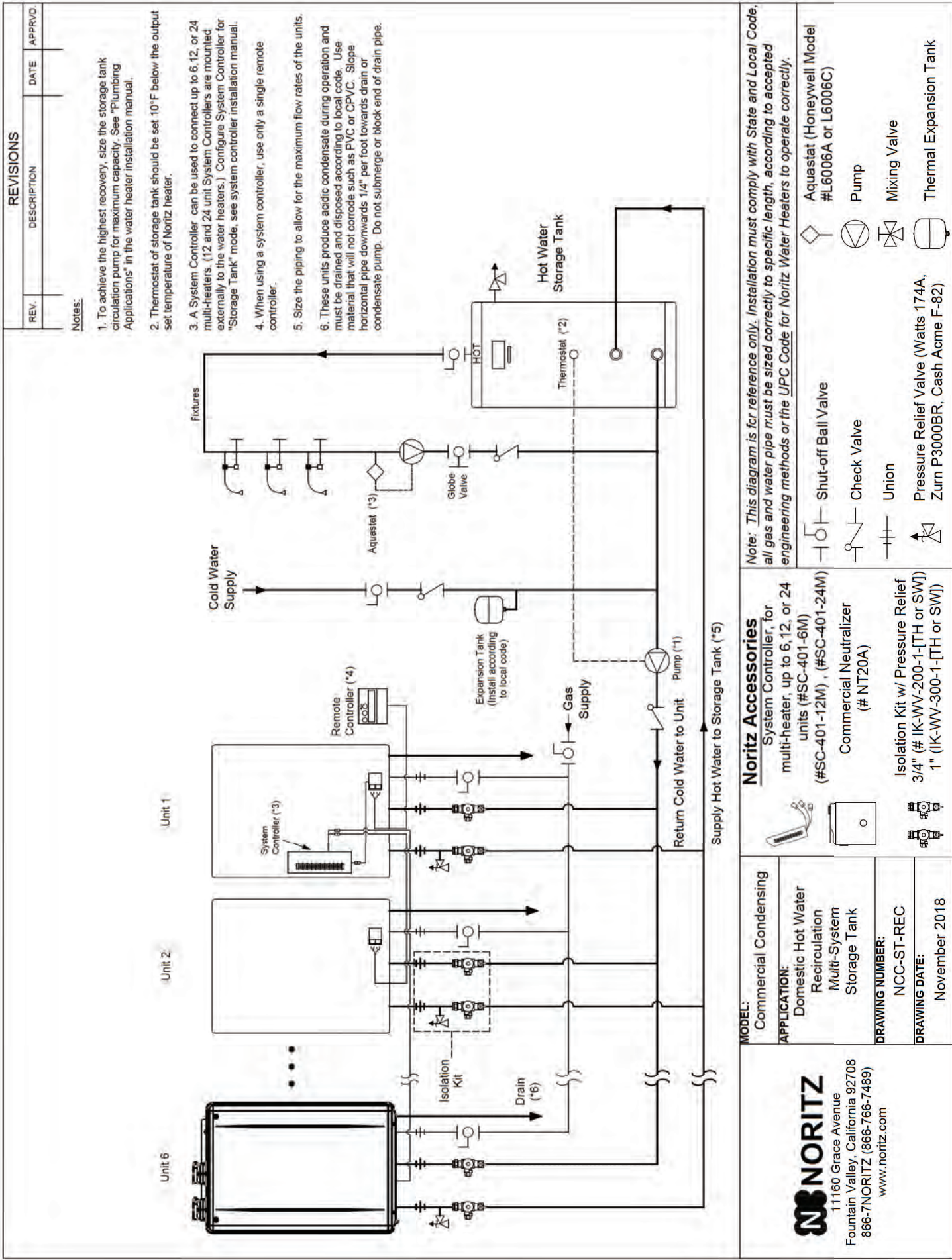
- ☐ **PRC-1**
- 2" (EZ98, EZ111, NCC199CDV)
- ☐ - 3" (For NRC111, NCC199, NRC98, NRC71, NRC66, NRCB, & NCC199CDV)
- ☐ - 4" (For NRC111, NCC199, NRC98, NCC300)



Tankless With Storage Hot Water Supply Capacity																					
Model	Qty Heaters	Max Input (BTU / HR)	Tank Volume (Gall)	Tank Recovery Pump Size		UEF / TE	Temp Rise (Deg F)														
							60			70			80			90			100		
				GPM	Head (PSI)		Recovery (GPM)	Recovery (GPH)	1st Hr. Delivery (GPH)	Recovery (GPM)	Recovery (GPH)	1st Hr. Delivery (GPH)	Recovery (GPM)	Recovery (GPH)	1st Hr. Delivery (GPH)	Recovery (GPM)	Recovery (GPH)	1st Hr. Delivery (GPH)	Recovery (GPM)	Recovery (GPH)	1st Hr. Delivery (GPH)
CR60-WH-2-NG CR60-WH-2-LP	2	399,800	100	12	8.9	97% / 98%	13.1	784	854	11.2	672	742	9.8	588	658	8.7	522	592	7.8	470	540
			200						924			812			728			662			610
			300						994			882			798			732			680
CR60-WH-3-NG CR60-WH-3-LP	3	599,700	150	18	8.9	97% / 98%	19.6	1,175	1,280	16.8	1,007	1,112	14.7	882	987	13.1	784	889	11.8	705	810
			200						1,315			1,147			1,022			924			845
			300						1,385			1,217			1,092			994			915
			400						1,455			1,287			1,162			1,064			985
CR60-FS-4-NG CR60-FS-4-LP	4	799,600	200	24	8.9	97% / 98%	26.1	1,567	1,707	22.4	1,343	1,483	19.6	1,175	1,315	17.4	1,045	1,185	15.7	940	1,080
			300						1,777			1,553			1,385			1,255			1,150
			400						1,847			1,623			1,455			1,325			1,220
			500						1,917			1,693			1,525			1,395			1,290
CR60-FS-5-NG CR60-FS-5-LP	5	999,500	250	30	8.9	97% / 98%	32.7	1,959	2,134	28.0	1,679	1,854	24.5	1,469	1,644	21.8	1,306	1,481	19.6	1,175	1,350
			300						2,169			1,889			1,679			1,516			1,385
			400						2,239			1,959			1,749			1,586			1,455
			500						2,309			2,029			1,819			1,656			1,525
CR60-FS-6-NG CR60-FS-6-LP	6	1,999,400	300	36	8.9	97% / 98%	39.2	2,351	2,561	33.6	2,015	2,225	29.4	1,763	1,973	26.1	1,567	1,777	23.5	1,410	1,620
			400						2,631			2,295			2,043			1,847			1,690
			500						2,701			2,365			2,113			1,917			1,760

Tankless Without Storage Hot Water Supply Capacity										
Rack Model	Qty Heaters	Heater Configuration	Min - Max Input (BTU / HR)	Flowrate (GPM) @ Temp Rise						
				50	60	70	80	90	100	110
CR60-WH-2-NG CR60-WH-2-LP	2	Wall Hung In-Series	18,000 - 399,800	15.7	13.1	11.2	9.8	8.7	7.8	7.1
CR60-WH-3-NG CR60-WH-3-LP	3	Wall Hung In-Series	18,000 - 599,700	23.5	19.6	16.8	14.7	13.1	11.8	10.7
CR60-FS-4-NG CR60-FS-4-LP	4	Floor Standing, 2x2 Back to Back	18,000 - 799,600	31.3	26.1	22.4	19.6	17.4	15.7	14.2
CR60-FS-5-NG CR60-FS-5-LP	5	Floor Standing, 3x2 Back to Back	18,000 - 999,500	39.2	32.7	28.0	24.5	21.8	19.6	17.8
CR60-FS-6-NG CR60-FS-6-LP	6	Floor Standing, 3x3 Back to Back	18,000 - 1,999,400	47.0	39.2	33.6	29.4	26.1	23.5	21.4





11160 Grace Avenue
Fountain Valley, California 92708
866-7NORITZ (866-766-7489)
www.noritz.com

MODEL:
Commercial Condensing

APPLICATION:
Domestic Hot Water
Recirculation
Multi-System
Storage Tank

DRAWING NUMBER:
NCC-ST-REC

DRAWING DATE:
November 2018