



COMMON VENTING

NCC199CDV Next Gen TRUE Commercial Model



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TRAINING AGENDA



Trusted. Reliable. Unmatched. Efficient.

- ▶ NCC199CDV Features, Benefits & Vent Versatility
- ▶ Commercial Rack Features & Benefits
- ▶ CDV's Vent Design and Install Practices
- ▶ Common Vent Install Examples
- ▶ Case Studies, Technical Docs & Resources



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TECHNICAL SPECIFICATIONS



NORITZ
TANKLESS WATER HEATERS

		NCC199CDV
Min. / Max. BTU		18K - 199,900 BTUh
Capacity Range		0.5 - 11.1 GPM (30°F Rise)
Weight		70 lbs.
UEF		0.96
Thermal Efficiency		98%
Connection Sizes	Water Inlet	NPT 3/4"
	Hot Water Outlet	NPT 3/4"
	Gas Inlet	NPT 3/4"
	Condensate Drain	NPT 1/2"
Water Holding Capacity		0.82 Gallon (3.1 L)
Temperature Settings	°F Mode	100-150° (In 5° F Intervals) 160° F, 170° F, 185° F (14 Options)
	°C Mode	37-48° C (In 1°C Intervals), 50-85°C (In 5° Intervals) (20 options)
Operating Pressure		15-150 psi (Recommended 50 to 80 psi for maximum performance)
Included Accessories		Remote controller, remote controller cord, anchoring screws, wall mounting bracket



UPGRADED HEAT EXCHANGER

The right materials for the right situation. The NCC199CDV heat exchanger has been re-engineered with a new blend of stainless steel to maximize performance and reliability. These parts and materials have been specifically selected for their high temperature performance and maximum corrosion resistance, constructed as a single-body unit.

Along with a 0.96 UEF, the Noritz NCC199CDV Commercial Tankless is built ready to provide your business with years of hot water delivery.

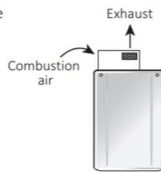
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NCC199CDV VENT VERSATILITY

NORITZ
TANKLESS WATER HEATERS

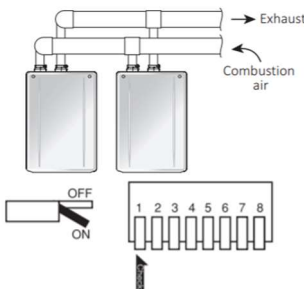
Outdoor (with Outdoor Vent Cap VC-6)

The Water Heater can be installed outside using the Outdoor Vent Cap (VC-6).



Common Vent

This Water Heater is suitable for Common Vent System. To make a Common Vent System, refer to the Common Vent installation manual or contact Noritz America at <http://support.noritz.com/> or 1-866-766-7489 for details.



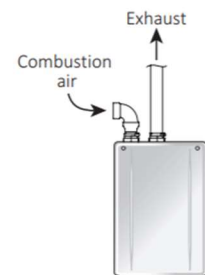
Direct Vent

Combustion air is supplied from the outdoors. Combustion air and exhaust are separate vent pipes.



Non-Direct Vent (with SV Conversion Kit SV-CK-2)

Combustion air is supplied from the surrounding indoor air.



NORITZ
The Simple Comforts of Life

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COMMERCIAL RACK SYSTEM



Upgraded for 2020, the Noritz CR Commercial Rack System (formerly CWHS) has been redesigned for maximum performance and ease of installation. 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.

NEW LOW PROFILE DESIGN

Lower profile design makes system less top heavy for safer transportation while also minimizing the rack system's footprint.

REDUCED INSTALL TIME

An added PVC manifold condensate drain cuts installation time for a quicker setup.

NEW WALL MOUNT OPTION

Removable end rail stands for flexible location of rack when faced with existing lines above or below the heaters.

NEW MODULAR OPTION

With 2" manifolds for water and gas, our new design allows for expanding hot water demand with multiple commercial hot water systems.

INSTALLATION VERSATILITY

The new CR is designed for both indoor or outdoor applications. (Requires outdoor vent cap, item# VC-6)



ULTRA DURABLE CONSTRUCTION

ALUMINUM FRAMES

Utilizing lightweight aluminum frames, our new CR system frame also features high corrosion resistance.

HARD PIPE MANIFOLDS

Featuring a hard pipe construction that increases reliability and is effective for leak prevention. This also allows for vibration resistance while shipping.

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COMMERCIAL RACK SERIES (CR)

HOT WATER SUPPLY CAPACITY



Item Number	Heater Quantity	Heater Configuration	Min BTU/hr Input	Max BTU Input	Hot Water Capacity (GPM)						
					50°	60°	70°	80°	90°	100°	110°
CR60-WH-2-LP	2	Wall Hanging In-Series	18,000	399,800	15.7	13.1	11.2	9.8	8.7	7.8	7.1
CR60-WH-2-NG											
CR60-WH-3-LP	3	Wall Hanging In-Series	18,000	599,700	23.5	19.6	16.8	14.7	13.1	11.8	10.7
CR60-WH-3-NG											
CR60-FS-4-LP	4	Free 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-4-NG											
CR60-FS-5-LP	5	Free 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-5-NG											
CR60-FS-6-LP	6	Free Standing 3x3 Back to Back	18,000	1,199,400	47.0	39.2	33.6	29.4	26.1	23.5	21.4
CR60-FS-6-NG											

INCLUDES:

- NCC199CDV w/ 0.96 UEF (GQ-C3260WZ-FF US)
- System Controller (SC-401-6M)
- Remote Control Cord (RC-CORD-10)
- 2" Copper Manifold for Hot & Cold Water
- 2" Black Iron Manifold for Gas
- 3/4" PVC Manifold Condensate Drain
- Aluminum Frames
- Isolation Valves w/ PRV for Water
- Gas Shut Offs
- Serial Number Barcode tags
- Individual Heater Number Label



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COMMON VENTING

TRUE INSTALLATION FLEXIBILITY

With Noritz Common Venting, up to 6 Noritz Water Heaters are able to share the same venting system. This means significantly reduced penetrations through the wall or roof resulting in less labor and a cleaner finished look. The use of a larger vent diameter system allows for longer vent runs for larger and taller building – up to 200 ft. of equivalent length. The system is independently tested and approved for use by CSA in both the US and Canada. With the new built-in exhaust non-return valve, scalability of up to 6 heaters in possible now without an external non-return valve.

OFFERS A CLEAN, LABOR SAVING INSTALL WHILE ENSURING THE UTMOST IN SAFETY AND PERFORMANCE

- Tested with safety in mind – each water heater uses a built-in non-return valve to prevent flue gas from entering idle units.
- Reduces wall or ceiling penetrations.
- Utilizes either ULCS-636 approved Polypropylene (PP) venting (capable of handling temperatures up to 230° F) or Schedule 40/80 PVC.



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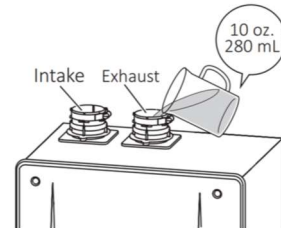
NCC199CDV VENT MATERIALS

[Exhaust Vent / Air Intake]

Material	United States		Canada	
	Exhaust	Air Intake	Exhaust	Air Intake
Schedule 40 PVC	ANSI/ASTM D1785		ULC S636 Certified Materials Only	CSA B137.3
PVC-DWV	ANSI/ASTM D2665			CSA B181.2
Schedule 40 CPVC	ANSI/ASTM F441			CSA B137.3
Polypropylene (PP)*	Centrotherm- InnoFlue® (certified ULC S636), DuraVent PolyPro® (certified ULC S636)			
System 1738™ PVC Fuel Gas Venting	IPEX Management Inc. (certified UL 1738)			

- **This is a Category IV appliance.** Only vent materials approved for use with Category IV appliances shall be used.
- Under normal conditions, this Water Heater will not produce an exhaust flue temperature in excess of 149°F (65°C) and schedule 40 PVC pipe may be used as the vent material. **If the Water Heater set temperature is 160°F (70°C) or higher and there is a return line to the Water Heater from either a recirculation pump or a combination space heating system, schedule 40/80 CPVC or PP must be used.**

Fill the condensate container by pouring approx. 10 oz. (280 mL) of water into the exhaust flue on the top of the Water Heater as illustrated below.



If the vent pipe has already been installed: After installing the condensate drain pipe, make sure that the area around the Water Heater is well ventilated; open a window or a door if necessary. Then, operate the Water Heater and verify that condensate is coming out of the condensate drain pipe. (During normal use of the Water Heater, condensate will begin to discharge from the condensate drain pipe within 15 minutes of use. However, depending on the season and/or installation site conditions, it may take longer.)

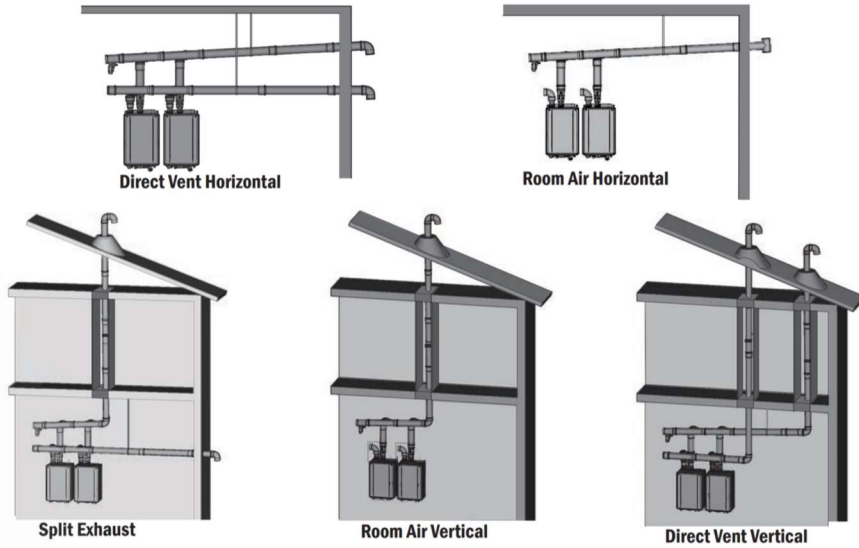


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COMMON VENT OPTIONS

ULTIMATE FLEXIBILITY

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.



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COMMON VENT LENGTHS

Table 1: Vent Diameter and Maximum Equivalent Vent Length

Model	Configuration	Number of Units	Vent Diameter (inch) 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	45*	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*		

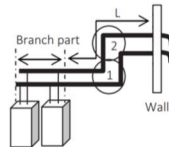
* The Btu/h input of the unit will be reduced by up to 9%.

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

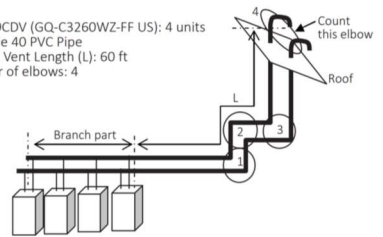
Diameter of Elbow	Equivalent Length of each Elbow (feet)			
	3"	4"	6"	8"
Length	5	12	18	20

- (e.g. 1)
- EZ98DV (GQ-C2860WX-FF US): 2 units
 - Schedule 40 PVC Pipe
 - Straight Vent Length (L): 35 ft
 - Number of elbows: 2



Total Equivalent length = 35 ft + 2 x 18 ft (6" Elbow) = 71 ft < 200 ft (Refer to Table 1)
6" vent system is suitable

- (e.g. 2)
- NCC199CDV (GQ-C3260WZ-FF US): 4 units
 - Schedule 40 PVC Pipe
 - Straight Vent Length (L): 60 ft
 - Number of elbows: 4



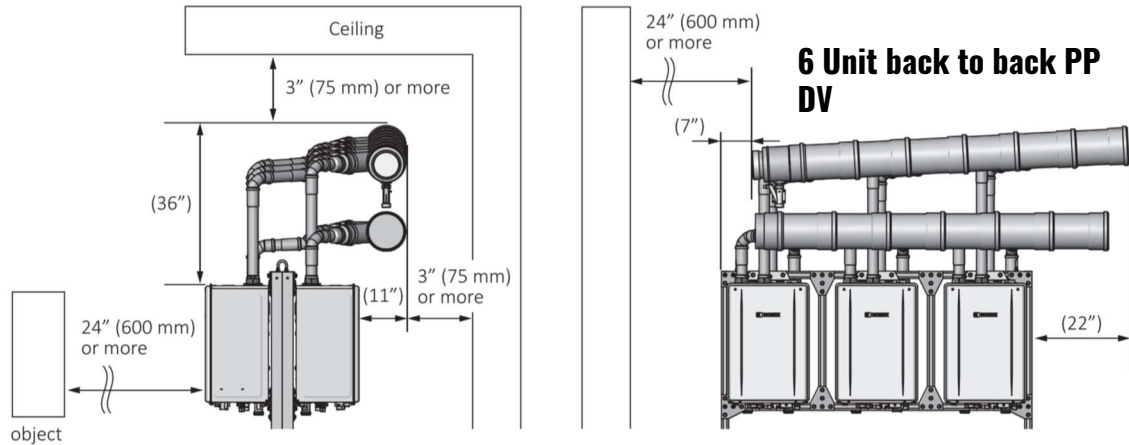
Total Equivalent length = 60 ft + 4 x 18 ft (6" Elbow) = 132 ft > 90 ft (Refer to Table 1)
6" vent system is NOT suitable

Total Equivalent length = 60 ft + 4 x 20 ft (8" Elbow) = 140 ft < 200 ft (Refer to Table 1)
8" vent system is suitable



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COMMON VENT EXAMPLES



e.g. Back to Back Configuration (e.g. 6 units)

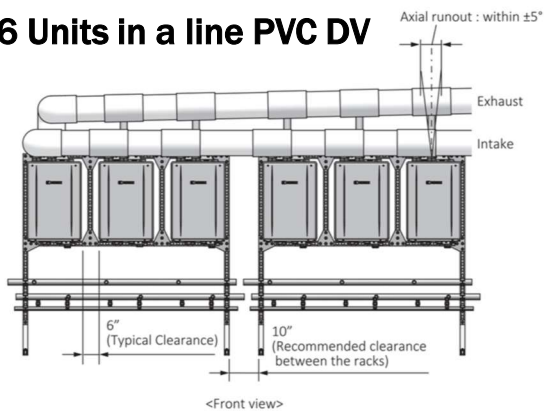
Allow appropriate space to maintain service clearances for equipment and vent system.



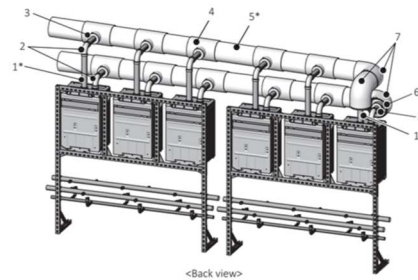
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COMMON VENT EXAMPLES

6 Units in a line PVC DV



- NCC199CDV (GQ-C3260WZ-FF US)
 - 6 units
 - In-Line Arrangement
 - 8" PVC Direct Vent
- *Adjust the pipe length appropriately



No.	Part	Part #	Q'ty
1	2" Pipe		23
2	2" 90° Elbow		11
3	2" x 4" Increaser		12
4	8" x 8" x 4" Reducing Tee		10

No.	Part	Part #	Q'ty
5	8" Pipe		11
6	4" x 8" Increaser		2
7	8" 90° Elbow		3



Exhaust & Intake branch / Manifold vent pieces itemized for easy reference.

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INSTALLATION EXAMPLES



Back to back config. 2x CR60-FS-6-NG
2.4 MBtuh input.



In line config. Field installed 6x
NCC199CDV
1.2 MBtuh input.



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INSTALLATION EXAMPLES



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INSTALLATION EXAMPLES

- 1x CR60-FS-6-NG & 1x CR60-FS-4-NG.
- Back to back configuration.
- Intake solid core Schedule 40 PVC.
Exhaust Centrotherm Polypropylene.



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COMMERCIAL CONSULTATION

Have a question on specs, sizing or how you can build Noritz into your next project? Talk to our commercial experts directly.

Commercial@Noritz.com

Case Studies, Resources, Technical Documents, Sizing Calculator:

www.noritz.com/commercial



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THANK YOU

