Installation Manual NORITZ AMERICA CORPORATION

Model: CDVNRVK (Non-Return Valve Kit)

[Applicable Model] • EZ98DV (GQ-C2859WX-FF US)

- EZ111DV (GQ-C3259WX-FF UŚ)
- NCC199CDV (GQ-C3259WZ-FF US)



Refer to the unit Installation Manual for information regarding proper installation of the units.



This System has been Independently Tested and Approved by CSA.



1. Table of Contents

1. Table of Contents	2
2. General Information	3
3. Included Accessories	5
4. Optional Accessories	5
5. Common Venting Guidelines	7
6. Installation Clearances	9
7. Unit Installation and Settings	13
8. Vent Pipe Installation	14
8.1 Determining the Vent Diameter of Common Vent	14
8.2 Assembling Polypropylene Vent Pipe	15
8.3 Air Intake Piping With PVC or CPVC	16
8.4 Names of each vent parts	17
8.5 Vent Installation for Direct Vent configuration	18
8.6 Vent Installation for Non-Direct Vent configuration	29
9. Maintenance	37
10. Parts Order List	38
11. Final Installation Check List	40

2.General Information

Potential dangers from accidents during installation and use are divided into the following three categories. Closely observe these warnings, they are critical to your safety.

DANGER indicates an imminently hazardous situation which, if not ANGER avoided, will result in death or serious injury. WARNING indicates a potentially hazardous situation which, if not WARNING avoided, could result in death or serious injury. CAUTION indicates a potentially hazardous situation which, if not CAUTION avoided, may result in minor or moderate injury.

WARNING: If the information in this manual is not followed exactly, a fire, explosion or carbon monoxide poisoning may result causing property damage, personal injury or death.





Ground





Requests to Installers

Licensed Professional Installers Only

Only licensed professionals may install Noritz tankless water heaters ("unit" or "water heater"), the Non-Return Valve and the Common Vent System. The licensed professional installer must have the following skills, knowledge and experience:

- · Connecting water lines, gas lines, electricity and valves;
- Knowledge of applicable local, state and national codes.

Important Information for Installers

- . Ensure that the unit is properly installed according to the Installation Manual and Owner's Guide for the unit, as well as applicable codes.
- Read this Installation Manual completely prior to installation of the Non-Return Valve and Common Vent System and carefully follow the instructions.
- Upon completion of installation, check and confirm that installation of the Non-Return Valve and Common Vent System was done properly in accordance with this Installation Manual. A Final Installation Checklist at the end of this Installation Manual is provided.
- Noritz does not manufacture or provide any warranty for the Common Vent System and Noritz assumes no liability or obligation for warranty or other claims for personal injury or death, damage or destruction of the Common Vent System, property damage or loss, or claims for any other damages, losses, contribution, or indemnification whatsoever with respect to the Common Vent System.
- Further, Noritz assumes no liability or obligation for warranty or other claims for personal injury or death, damage or destruction of the Noritz unit, the Non-Return Valve or the Common Vent System, property damage or loss, or claims for any other damages, losses, contribution, or indemnification whatsoever, all of which are excluded if the instructions in this Installation Manual are not completely and carefully followed.
- After completing installation, please either place this Installation Manual in a plastic pouch and attach it to the side of the unit (or the inside of the pipe cover if applicable), or hand it to the customer to retain for future reference. Also be sure to fill in all of the required items on the Warranty Registration and hand the Warranty and Warranty Registration to the customer, along with the Owner's Guide.

Installation must conform with local codes, or in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1/NFPA 54 - latest edition and/or the Natural Gas and Propane Installation Code CSA B149.1 - latest edition.

Noritz America reserves the right to discontinue, or change at any time, the designs and/or specifications of its products without notice.

2.1 Warranty and Liability Exclusions

- Noritz does not manufacture or provide any warranty for the Common Vent System and Noritz assumes no liability or obligation for warranty or other claims for personal injury or death, damage or destruction of the Common Vent System, property damage or loss, or claims for any other damages, losses, contribution, or indemnification whatsoever with respect to the Common Vent System.
- Noritz provides a Limited Warranty for the unit as included with the unit's packaging or as available on-line at www.noritz. com/about-noritz/warranty. Noritz assumes no liability or obligation for warranty or other claims for personal injury or death, damage or destruction of the Noritz unit or the Non-Return Valve, property damage or loss, or claims for any other damages, losses, contribution, or indemnification whatsoever, all of which are excluded if such claims are due to any of the following:
- Failure to comply with the instructions contained in this Installation Manual.
- · Failure to install to applicable code regulations.
- Modifications to any portion of the unit, Non-Return Valve or Common Vent System not expressly provided for in this Installation Manual.
- Failure to use approved materials as specified in this Installation Manual.
- Use or installation of components other than those expressly specified in this Installation Manual.
- Improper operation or maintenance.
- Deliberate damage.
- Damage occurring subsequent to becoming aware of defects in the unit, Non-Return Valve or Common Vent System due to continued use of the defective unit, Non-Return Valve or Common Vent System.
- Force Majeure or acts of God, including but not limited to, earthquake, flood, energy failure or utility spikes, war, acts of terrorism, etc.

THE LIMITED WARRANTY TO THE PURCHASER FOR THE NORITZ TANKLESS WATER HEATER UNIT IS AS PROVIDED IN THE NORITZ AMERICA CORPORATION LIMITED WARRANTY FOR TANKLESS HOT WATER HEATERS. THIS INSTALLATION MANUAL DOES NOT EXTEND, ENLARGE OR OTHERWISE MODIFY SUCH LIMITED WARRANTY.

NOTWITHSTANDING ANYTHING TO THE CONTRARY, NORITZ DISCLAIMS ANY AND ALL REPRESENTATIONS AND WARRANTIES REGARDING THE COMMON VENT SYSTEM, ANY COMPONENT THEREOF, OR ADDITIONAL PARTS THERETO (TOGETHER, THE "**SYSTEM**"), ITS FUNCTIONALITY, PERFORMANCE, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS OF A THIRD PARTY; WHETHER EXPRESS OR IMPLIED BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE. NORITZ DISCLAIMS ALL OTHER OBLIGATIONS OR LIABILITIES ON ITS PART AND NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON OR ENTITY TO AGREE TO OR ASSUME FOR NORITZ ANY OTHER OBLIGATIONS OR LIABILITIES IN CONNECTION WITH THE SYSTEM.

NORITZ SHALL NOT BE LIABLE FOR ANY CLAIM OR DEMAND BY ANY PERSON OR ENTITY FOR DAMAGES OF ANY KIND, INCLUDING, BUT NOT LIMITED TO SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES, ARISING OUT OF THE SYSTEM, INCLUDING BUT NOT LIMITED TO THE INSTALLATION OR OPERATION OF THE SYSTEM.

2.2 Noritz Common Vent Specifications

Applicable Model		NCC199CDV (GQ-C3259WZ-FF US)
		EZ111DV (GQ-C3259WX-FF US)
		EZ98DV (GQ-C2859WX-FF US)
Venting		Direct vent / Non-Direct Vent (SV)
Termination		Horizontal / Vertical / Horizontal and Vertical
Vent Material	Exhaust	Polypropylene manufactured by Centrotherm Eco System
	Intake	 Polypropylene manufactured by Centrotherm Eco System
		• Schedule 40 PVC pipe (See in 8.3 Air Intake Piping With PVC or CPVC)
Maximum allowable number of units for 1 Commor	Vent System	NCC199CDV (GQ-C3259WZ-FF US)6 units
		EZ111DV (GQ-C3259WX-FF US)2 units
		EZ98DV (GQ-C2859WX-FF US)2 units
		"All Common Vent System units must be same model"

3. Included Accessories

Part	Part #	Shape	Q'ty	Part	Part #	Shape	Q'ty
Non-Return Valve	CDVNRV		1	Centrocerin (Lubricant)	IACE50		1
4" Connector Ring	IANS04	ð	1	Installation Manual (this document)	SBB80W8		1

Non-Return Valve Kit includes the following items.

4. Optional Accessories

Centrotherm Eco System products

∨ent parts (only indoor use)									
Part		Part #	Shape	Q'ty	Part		Part #	Shape	Q'ty
30° Elbow	IS	EL0430			45° Elbow	IS	EL0445		
	3"	ISEL0387				3"	IANS03		1
87° Elbow	4"	ISEL0487			Connector	4"	IANS04	(\mathbf{D})	each
	6"	ISEL0687			Ring	6"	IANS06		Junction
	8"	ISEL0887)			8"	IANS08		
4" x 12" Vent Length	15	SVL041			4" x 24" Vent Length	15	SVL042		
	3"	ISVL033				3"	ISBT030336		
36"	4"	ISVL043		Branch Tee 6	4"	ISBT040436	Au		
Vent Length	6"	ISVL063			Dranch Tee	6"	ISBT060436		
	8"	ISVL083				8"	ISBT080436		
	4"	ISHDF04				4"	ISTC04		
Drain Fitting	6"	ISHDF06			Tee Cap	6"	ISTC06		
	8"	ISHDF08	- T			8"	ISTC08		
Ball-Check Siphon	IA	SJBVS			4" to 3" Reducer	IS	RD0403	8	
8" Branch Tee for Back to Back arrangement	ISB	T080412N							

Vent parts for outdoor terminasion									
Part		Part #	Shape	Q'ty	Part		Part #	Shape	Q'ty
	3"	ISEP0339				3"	ISELL0387UV		
End Pipe	4"	ISEP0439			87° Elbow	4"	ISEL0487UV		
PPS-UV	6"	ISEP0639			PPS-UV	6"	ISEL0687UV		
	8"	ISEP086				8"	ISEL0887		
	3"	ISTT0320				3"	IASPP03		
Termination	4"	ISTT0420			Bird Screen	4"	IASPP04		
Тее	6"	ISTT0620				6"	IASPP06		
	8"	ISTT0820				8"	IASSS08		

Other parts								
Part		Part #	Shape	Q'ty	Part	Part #	Shape	Q'ty
	3"	IASCM03						
Support	4"	IASCM04			Centrocerin			
Clamp*	6"	IASCM06			(Lubricant)	IACE50		
	8"	IASCM08						

*3/8" Threaded rod is field supplied.

4.2 Noritz products

Part	Part #	Shape	Q'ty	Part	Part #	Shape	Q'ty
Air Intake 2" to 4" Increaser	CDV2X4 -ADAPT		1 each (PP vent)	2" SV Conversion Kit	SV-CK-2		1 each (SV vent)
Quick Connect Cord	QC-2	\$ 0 *	1	System Controller	SC-401-6M		1

5. Common Venting Guidelines

To ensure the safe and correct installation of the Common Vent System, carefully follow the instructions and guidelines.

DANGER

Checkup

Check the vent pipe yearly for damage or wear. Replace if necessary.



- Do not use PVC, CPVC, ABS or galvanized material for the exhaust vent.
- For Common Vent System use only approved Centrotherm vent parts on the exhaust side.
- Do not connect the Common Vent System to existing vent (e.g. B-vent or chimney)



 Make sure the vent system is gas-tight and will not leak. Be sure to do





CARBON MONOXIDE POISONING

Follow all vent system requirements in accordance with relevant local or state regulation, or, in the absence of local or state code, in the U.S. to the National Fuel Gas Code ANSI Z223.1/NFPA 54 - latest edition, and in Be sure to do Canada, in accordance with the Natural Gas and Propane Installation Code CSA B149.1 – latest edition.

Preventing Damage from Freezing

Do not install the unit in a place where the inside temperature is below 32°F (0°C). The Non-Return Valve or Ball-Check Siphon will be frozen and broken. Exhaust may leak into the room.

Snow Precaution

If this product will be installed in an area where snow is known to accumulate, protect the vent termination from blockage by snow drifts or damage from snow falling off of roofs.

Vent Material

- Centrotherm PP Vent parts must be used on exhaust. DO NOT use PVC material.
- Centrotherm PP Vent parts or PVC material can be used on Air Intake.
- For Canadian installation, all materials must be ULC-S636 approved.



- Do not connect vent components to other manufacturer's unit.
- Do not use vent parts if there are signs of damage or dents.



 Do not store hazardous or flammable substances near the vent termination and check that the air intake and termination is not blocked in any way.



- · You must use vent components that are certified and listed in this Installation Manual.
- Install a Connector Ring to every 3" and 4" joint connection.
- The exhaust vent system must vent directly to the outside of the building.
- Avoid places in the room where sunlight is directed to the Common Vent System. The Non-Return Valve and Ball-Check Siphon may be damaged by UV light.
- Vent connections must be firmly pressed together so that the gaskets form an air tight seal.
- Avoid places where fires are common, such as those where gasoline, benzene and adhesives are handled,
 - or places in which corrosive gases (ammonia, chlorine, sulfur, ethylene compounds, acids) are present.

Using the incorrect voltage may result in fire or cracking.





For NCC199CDV (GQ-C3259WZ-FF US)> Do not connect separate water distribution systems to 1 Common Vent System. All units must be in the same cold and hot water distribution system and must not exceed 6 units. If you need 7 units or more, divide the Common Vent Systems within maximum allowable number of units (page 4).

- <For EZ111DV (GQ-C3259WX-FF US), EZ98DV (GQ-C2859WX-FF US)> Do not connect separate water distribution systems to 1 Common Vent System. All units must be in the same cold and hot water distribution system and must not exceed 2 units. If you need 3 units or more, divide the Common Vent Systems within maximum allowable number of units(page 4).
 - <For NCC199CDV (GQ-C3259WZ-FF US)> Do not connect over 6 units to the same Common Vent System. If you need 7 units or more, use 2 Common Vent Systems.
 - <For EZ111DV (GQ-C3259WX-FF US), EZ98DV (GQ-C2859WX-FF US)> Do not connect over 2 units to the same Common Vent System.
 - Vent diameter must not be reduced except for Branch Parts of 3" Diameter Common Vent System.
 - All Common Vent System units must be same model (e.g. NCC199CDV (GQ-C3259WZ-FF US) and EZ98DV(GQ-C2859WX-FF US) installed with same vent system)



- The unit dip switch setting must always be set to Common Vent setting (SW1 in dip switches should be set to ON position).
- Steam or condensed water may come out from the vent termination.
- Be sure to do Select the location for the termination so as to prevent injury or property damage.
 - When using a horizontal section, slope the horizontal exhaust vent 5/8" upwards for every 12" (300mm) toward the termination to drain condensate by installing supports.
 - Support all horizontal and vertical vent runs a minimum of 1 every 3 feet. Support the vent pipe with hangers at regular intervals or as required by local codes.
 - Position the units as close as possible to the vent termination.
 - Install a 2" SV Conversion Kit (SV-CK-2) onto each unit in Non-Direct Vent configuration.
 - Check and clean the Non-Return Valve every 12 months according to the Maintenance instructions in this manual.
 - Quick Connect Cord(QC-2) or System Controller (SC-401-6M) must be installed per 1 Common Vent System.
 - Install a new Common Vent System with unit. If an existing Common Vent System is reused, thoroughly inspect it for punctures, cracks, or blockages prior to connecting it to the unit.
 - To avoid significant rain into the unit, place the 87°Elbow or Termination Tee on the end of the termination vent pipe.
 - Insert Bird Screen in the end of termination.
 - Ensure that the vent termination is at least 12" (305mm) above ground, 12" (305mm) above the highest anticipated snow level, or as required by local codes, whichever is greater.

Recommendation

- Noritz recommends replacing the Non-Return Valve when replacing the unit.
- Install the Common Vent System length as short as possible.

6. Installation Clearances

Before installing, check for the following:

Install in accordance with relevant building and mechanical codes, as well as any local, state or national regulations, or in the absence of local and state codes, to the National Fuel Gas Code ANSI Z223.1/NFPA 54 – latest edition. In Canada,see the Natural Gas and Propane Installation Code CSA B149.1 - latest edition for detailed requirements.

Water Heater Clearances

Item	Check	Illustration
Distance from combustibles	Maintain the following clearances from both combustible and non-combustible materials.	12" (300mm) or more 4" (100mm) or more 3" (75mm) or more Distance from the side
Cooking Equipment	<when air="" indoor="" supply="" the=""> If the unit will be installed in the vicinity of a permanent kitchen range or stove that has the possibility of generating steam that contains fats or oils, use a dividing plate or other measure to ensure that the unit is not exposed to air containing such impurities. * The dividing plate should be of non-combustible material of a width greater than the water heater. </when>	Exhaust hood Dividing plate Range

Clearances for repair / inspection

Centrotherm PP vent parts can be installed at zero clearance to combustible materials. In order to facilitate inspection and repair it is recommended to leave minimum clearances as below:



Clearance Requirements from Vent Terminations to Building Openings <When supplying combustion air from the outdoors (Direct Vent)>

* All clearance requirements are in accordance with ANSI Z21.10.3 and the National Fuel Gas Code, ANSI Z223.1 and in Canada, in accordance with the Natural Gas and Propane Installation Code CSA B149.1.



Ref	Description	Canadian Direct Vent Installations 1	US Direct Vent Installations ²
A=	Clearance above grade, veranda, porch, deck, or balcony	12 in (30 cm)	12 in (30 cm)
B=	Clearance to window or door that may be opened	6 in (15 cm) for appliances ≤ 10,000 Btuh (3kW), 12 in (30 cm) for appliances > 10,000 Btuh (3kW) and ≤ 100,000 Btuh (30 kW), 36 in (91 cm) for appliances > 100,000 Btuh (30 kW)	6 in (15 cm) for appliances \leq 10,000 Btuh (3kW), 9 in (23 cm) for appliances > 10,000 Btuh (3kW) and \leq 50,000 Btuh (15 kW), 12 in (30 cm) for appliances > 50,000 Btuh (15 kW)
C=	Clearance to permanently closed window	*	*
D=	Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet (61 cm) from the center line of the terminal	*	*
E=	Clearance to unventilated soffit	*	*
F=	Clearance to outside corner	*	*
G=	Clearance to inside corner	*	*
H=	Clearance to each side of center line extended above meter/regulator assembly	*	*
=	Clearance to service regulator vent outlet	Above a regulator within 3 ft (91 cm) horizontally of the vertical center line of the regulator vent outlet to a maximum vertical distance of 15 ft (4.5 m)	*
J=	Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliance	6 in (15 cm) for appliances ≤ 10,000 Btuh (3kW), 12 in (30 cm) for appliances > 10,000 Btuh (3kW) and ≤ 100,000 Btuh (30 kW), 36 in (91 cm) for appliances > 100,000 Btuh (30 kW)	6 in (15 cm) for appliances ≤ 10,000 Btuh (3kW), 9 in (23 cm) for appliances > 10,000 Btuh (3kW) and ≤ 50,000 Btuh (15 kW), 12 in (30 cm) for appliances > 50,000 Btuh (15 kW)
K=	Clearance to a mechanical air supply inlet	6 ft (1.83 m)	3 ft (91 cm) above if within 10 ft (3 m) horizontally
L=	Clearance above paved sidewalk or paved driveway located on public property	7 ft (2.13 m)†	*
M=	Clearance under veranda, porch, deck, or balcony	12 in (30 cm)‡	*

¹ In accordance with the current CSA B149.1 Natural Gas and Propane Installation Code

² In accordance with the current ANSI Z223.1 / NFPA 54 National Fuel Gas Code

† A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single family dwellings and serves both dwellings.

‡ Permitted only if veranda, porch, deck, or balcony is fully open on a minimum of two sides beneath the floor.

* Clearance in accordance with local installation codes and the requirements of the gas supplier. Clearance to opposite wall is 24 inches (60 cm). * All clearance requirements are in accordance with ANSI Z21.10.3 and the National Fuel Gas Code, ANSI Z223.1 and in Canada, in accordance with the Natural Gas and Propane Installation Code CSA B149.1.



_	of 2 feet (61 cm) from the center line of the terminal	<u>^</u>	2
E=	Clearance to unventilated soffit	*	*
F=	Clearance to outside corner	*	*
G=	Clearance to inside corner	*	*
H=	Clearance to each side of center line extended above meter/regulator assembly	*	*
=	Clearance to service regulator vent outlet	Above a regulator within 3 ft (91 cm) horizontally of the vertical center line of the regulator vent outlet to a maximum vertical distance of 15 ft (4.5 m)	*
J=	Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliance	6 in (15 cm) for appliances ≤ 10,000 Btuh (3kW), 12 in (30 cm) for appliances > 10,000 Btuh (3kW) and ≤ 100,000 Btuh (30 kW), 36 in (91 cm) for appliances > 100,000 Btuh (30 kW)	4 ft (1.2 m) below or to side of opening; 1 ft (300 mm) above opening
K=	Clearance to a mechanical air supply inlet	6 ft (1.83 m)	3 ft (91 cm) above if within 10 ft (3 m) horizontally
L=	Clearance above paved sidewalk or paved driveway located on public property	7 ft (2.13 m)†	*
M=	Clearance under veranda, porch, deck, or balcony	12 in (30 cm)‡	*

¹ In accordance with the current CSA B149.1 Natural Gas and Propane Installation Code

² In accordance with the current ANSI Z223.1 / NFPA 54 National Fuel Gas Code

Ref

A=

B=

C=

D=

† A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single family dwellings and serves both dwellings.

‡ Permitted only if veranda, porch, deck, or balcony is fully open on a minimum of two sides beneath the floor.

* Clearance in accordance with local installation codes and the requirements of the gas supplier. Clearance to opposite wall is 24 inches (60 cm).

7. Unit Installation and Settings

7.1 Unit Installation

- Install the units in accordance with unit's installation manual.
- If the units will be installed in a "Back to Back" arrangement, it is highly recommended to use the Noritz Commercial Water Heating System (CWHS) to secure the units.
- Distance between units is restricted when using the "Back to Back" arrangement. Details are described in 8.5.3.

7.2 Unit Settings

Adjust the dip switches as follows. These dip switches settings must be done on <u>all units</u>. Disconnect power to the unit before changing the dip switches.

Failure to perform this step will result in a "73" code displayed on the remote controller and a cease in operation.

If this occurs, disconnect, then reconnect power to the unit to reset the system.



Elevation Adjustment Above 2,000ft

Adjust the dip switches in accordance with the unit's installation manual if units are installed at an altitude of 2000 ft. (610m) or higher.

8. Vent Pipe Installation

8.1 Determining the Vent Diameter of Common Vent

				-			
Та	able 1. Vent Diamete	r and Maximum Ec	quivalent Ve	nt Length			
Model	Con	figuration	Number	Vent Dia Equi	ameter(inc valent Ven	h) and Ma t Lenath (aximum (feet)
			ot Units	3"	4"	6"	8"
EZ98DV (GQ-C2859WX-FF US))		2	28*	150*	20	00
EZ111DV (GQ-C3259WX-FF US)) Both Dir	ect Vent (DV)	2	18*	110*	20	00
		and	2	18*	110*	20	00
	Non-Dir	ect Vent (SV)	3	N/A	45*	155*	200
(GQ-C3259WZ-FF US))		4	N/A	N/A	90*	200
,			5	N/A	N/A	50* 25*	150*
	 *The RTI IH in	put of the unit will h		N/A	N/A %	35″	130
	Table 2 Fou	ivalent Length of	each Elbow	v v	/0.		
Г	iable 2. Equ						
l l	Diamator of Elbau			(π) would "0			
- -		<u> </u>	18	<u>8</u> 20			
	oto:Tho sizing mot	1 U IZ		20 vided for	the conve	nionaa a	f the instal
IN M	ote. The Sizing meth aximum accentable	IOU SHUWH III IOD	ic nressure	dron ie (i the install
 Count the number of elbows A termination elbow has alres Branch part has already been 	s and multiply equiva eady been counted a en counted and does	lent length of each ind does not need is not need to be ad	elbow in ac to be addec ded.	ccordance I.	with Table	e 2.	
Calculation example]						1 ^{Co}	unt this elbow
<example. 1=""></example.>	<	Example. 2>				4	
• EZ98DV(GQ-C2859WX-FF	US):2 units	NCC199CDV(GC	-C3259WZ	-FF US):4	units -		`
 Straight Vent Length (L):35f 	t •	Straight Vent Lend	oth (L):60ft				
• Number of elbows:2	•	Number of elbows	s:4				Roof
Branch part	ר ר		Branch part	->¦<		2 3)
	L] Vall						
Total Equivalent length		Total Equivalen	t length				
= 35ft + 2 x 18ft (6" Elbow)		= 60ft + 4 x 18ft	(6" Elbow) =	= 132ft > 90	Oft (Refer to	o table.1)	
= 71ft < 200ft (Refer to table 1)	> 6" vent svst	em is NOT	suitable <			
> 6" vent svetem is suitable	, . <	$= 60ff + 4 \times 20ff$	(8" Flbo(w) = 1	140ft < 201	Oft (Refer to	table 1)	
- O Von System is Suldble		> 8" vent evet	o Libow) -				
			SIII IS <u>SUIIdi</u>				
		- 14 -					

8.2 Assembling Polypropylene vent pipe

8.2.1 Field Cutting Polypropylene vent pipe

- Measure the length from edge of female-end and mark the vent pipe.
- Use trade tools (e.g. hacksaw) to create a perpendicular, clean cut.
- Deburr cut end so that damage to the gasket is avoided.
- Remove debris from inside the pipe prior to assembly.
- Only Rigid Vent Length, Branch Tees, End Pipes and Termination Tee can be cut. Do not cut elbows or other fittings.

🔨 WARNING

Damaged gaskets can cause leakage of dangerous levels of carbon monoxide or property damage due to condensate leaks!

8.2.2 Joint Connections

· Each female-end of every Centrotherm Vent Length or component features a factory installed gasket.

Before assembly, make sure gaskets are in place correctly.

- Measure the depth of the female socket. Mark the male-end of each component just shy of the depth of the female socket from its end.
- Place a thin layer of Centrocerin, a water based lubricant onto the male-end of component 2 for ease of assembly.
- Slip a Connector Ring over the male-end of component 2 so that it can grip the gasket bead of component 1.
- Push and twist male-end until properly seated in component 1, aligning the mark with the top of the female-end.
- · Clip the Connector Ring onto the gasket bead to secure the two components to each other.

8.2.3 Gasket Placement

- Gaskets are factory installed in Centrotherm components.
- If a gasket is missing or damaged, it must be replaced by a correctly sized, Centrotherm supplied gasket.
- Make sure gasket bead and gasket itself is clean, then insert the new gasket as per drawing.
- · Gasket must fit evenly within the gasket bead.
- · Spare gaskets are available for 3" to 8" (ISGE0X). X indicates vent diameter.

8.2.4 Installing Ball-Check Siphon to Horizontal Drain Fitting

- Install the Horizontal Drain Fitting with Ball-Check Siphon to the end of the last Branch Tee in the exhaust vent pipe. The Horizontal Drain Fitting removes condensate from the system and allows for inspections and system clean out.
- · Condensation drain tubes and hose clamps are connected to a drain and must be disposed of in compliance with local code.













(EPDM / Silicon / PP / PE) and hose clamp to drain condensate.

This unit can use plastic pipe materials as specified in the below table for Air Intake Piping.

Item	Material
Air Intoko	Schedule 40 PVC
	PVC-DWV
Dina Comont/Drimor	PVC
Pipe Cement/Phimer	CPVC

PVC/CPVC Installation Instructions

- Use only solid PVC or CPVC schedule 40 pipe.
- Covering non-metallic vent pipe and fittings with thermal insulation is prohibited.
- PVC or CPVC pipe has been approved for use on this appliance with zero clearance to combustibles.
- The pipe shall be installed so that the first 3 ft (0.9m) of pipe from the appliance flue outlet is readily accessible for visual inspection.
- When preparing and assembling the pipe, follow instructions as provided by the pipe manufacturer. In general, the following practices must be observed:
 - Squarely cut all pieces of pipe.
 - Remove all burrs and debris from joints and fittings.
 - All joints must be properly cleaned, primed, and cemented. Use only cement and primer approved for use with the pipe material as outlined in the above table.
- All piping must be fully supported. Use pipe hangers at a maximum of 3 ft (0.9m) intervals.
- Do not use the unit to support the Air Intake Piping.
- When attaching the piping to the unit, use the appropriate primer and cement to ensure a proper seal.
- A bird screen must be installed on the terminations to prevent debris or animals from entering the piping. These screens are not supplied with the unit or vent system and must be purchased separately.

8.4 Names of each vent parts



8.5 Vent Installation for Direct Vent Configuration



If 2 ft (0.6m) distance between Intake and Exhaust cannot be ensured, the installation can be carried out only in the installation method shown in illustrations below.

- Terminate at least 12" (300mm) above grade or above snow line.
- Slope the horizontal vent 5/8" upwards for every 12" (300mm) toward the termination.
- In the Commonwealth of Massachusetts a carbon monoxide detector is required for all side wall horizontally vented gas fuel equipment. Please refer to Technical Bulletin TB 010606 for full installation instructions.
- Use PPS-UV vent parts to terminate the vent outside except for 8" Common Vent System. (Use 87° Elbow (ISEL0887) when install 8" Common Vent System.) Polypropylene vent can be damaged by UV light.
- Intake and exhaust should face the same direction. Intake and exhaust should keep the same pressure zone.
- Ensure at least 3ft (0.9m) or more distance between the near edge of the air intake pipe or exhaust pipe to the inside corner of a wall.
- Install the Horizontal Drain Fitting with Ball-Check Siphon to the end of the last Branch Tee in the exhaust vent pipe. For 3" vent system, refer to DV Case.3 in Chapter 8.5.3 (page 24).



- Upper side is exhaust, lower side is intake. The reverse orientation is not allowed.
- Ensure at least 1ft (0.3m) or more distance between intake pipe and exhaust pipe. The distance is measured at the outlets of intake port (terminal) and exhaust port (terminal).

(2) Vertical Vent Termination

- As illustrated on the right, make sure to keep a distance of 3 ft (0.9m) or wider between the intake and exhaust when installing the vent piping.
- Terminate at least 3 ft (0.9m) from the combustion air intake of any appliance and any other building opening.
- Enclose exterior vent systems below the roof line to limit condensation and protect against mechanical failure.
- When the vent penetrates a floor or ceiling and is not running in a fire rated shaft, a firestop and support is required.
- When the vent termination is located not less than 8 ft (2.4m) from a vertical wall or similar obstruction, terminate above the roof at least 2 ft (0.6m), but not more than 6 ft (1.87m), in accordance with the National Fuel Gas Code ANSI Z223.1/NFPA 54 or Natural Gas and Propane Installation Code CSA B149.1.
- Provide vertical support every 3 ft (0.9m) or as required by the vent pipe manufacturer's instructions.
- A short horizontal section is recommended to prevent debris from falling into the unit.
- When using a horizontal section, slope the horizontal exhaust vent 5/8" upwards for every 12" (300mm) toward the termination to drain condensate.
- Use PPS-UV vent parts to terminate the vent outside except for 8" Common Vent System. (Use 87° Elbow (ISEL0887) when install 8" Common Vent System.)
 Polypropylene vent can be damaged by UV light.
- Install the Horizontal Drain Fitting with Ball-Check Siphon to the end of the last Branch Tee in the exhaust vent pipe. For 3" vent system, refer to DV Case.3 in Chapter 8.5.3 (page 24).



• The side distant from wall is intake, the side near the wall is exhaust.

The reverse orientation is not allowed.

• Ensure at least 1ft (0.3m) or more distance between intake pipe and exhaust pipe.

The distance is measured at inside of pipe to inner dimension.



- (3) Vertical Exhaust Vent Termination and Horizontal Air Intake Termination
- Terminate at least 12" (300mm) above grade or above snow line.
- Install the Horizontal Drain Fitting with Ball-Check Siphon to the end of the last Branch Tee in the exhaust vent pipe. For 3" vent system, refer to DV Case.3 in Chapter 8.5.3 (page 24).
- In the Commonwealth of Massachusetts a carbon monoxide detector is required for all side wall horizontally vented gas fuel equipment. Please refer to Technical Bulletin TB 010606 for full installation instructions.
- Terminate at least 3 ft (0.9m) from the combustion air intake of any appliance and any other building opening.
- Enclose exterior vent systems below the roof line to limit condensation and protect against mechanical failure.
- When the vent penetrates a floor or ceiling and is not running in a fire rated shaft, a firestop and support is required.
- When the vent termination is located not less than 8 ft (2.4m) from a vertical wall or similar obstruction, terminate above the roof at least 2 ft (0.6m), but not more than 6 ft (1.87m), in accordance with the National Fuel Gas CodeANSI Z223.1/NFPA 54 or Natural Gas and Propane Installation Code CSA B149.1.
- Provide vertical support every 3 ft (0.9m) or as required by the vent pipe manufacturer's instructions.
- A short horizontal section is recommended to prevent debris from falling into the unit.
- When using a horizontal section at exhaust line, slope the horizontal exhaust vent 5/8" upwards for every 12" (300mm) toward the termination to drain condensate.
- Use PPS-UV vent parts to terminate the vent outside except for 8" Common Vent System. (Use 87° Elbow (ISEL0887) when install 8" Common Vent System.)
 Polypropylene vent can be damaged by UV light.



8.5.2 Assembling the Common Vent around the units <Common items>







Continue to insert the Vent Pipe until it reaches to the base of the unit Intake and Exhaust Flue.

(The vent pipe will be inserted approximately 2.3" (60mm))

Ball-Check Siphon of Non-Return Valve SET should be within $\pm 15^{\circ}$.

Secure the Vent Pipe by tightening the band using a screwdriver. (The tightening torque shall be between 16 and 20 in lb.)

<Required vent parts>

No.	Part	Part #	Q'ty	No.	Part	Part #	Q'ty
1	Non-Return Valve Kit	CDVNRVK	1 each unit	2	Air Intake 2" to 4" Increaser	CDV2X4-ADAPT	1 each unit (PP Vent)

8.5.3 Contents of Sample Installation Case (for Direct Vent)

Case	Case Model 1 EZ111DV (GQ-C3259WX-FF US) EZ98DV (GQ-C2859WX-FF US) 2 NCC199CDV (GQ-C3259WZ-FF US)		Diameter	Unit Arrangement	Intake Material	Intake/ Exhaust Direction	Page
1			4"	In-line	PP	Right	22
2			4"	In-line	PP	Right	23
3	EZ111DV(GQ-C3259WX-FF US) EZ98DV(GQ-C2859WX-FF US)	2	3"	In-line	PVC	Right	24
4	NCC199CDV (GQ-C3259WZ-FF US)	6	6"	In-line	PP	Right	25
5	NCC199CDV (GQ-C3259WZ-FF US)	6	6"	Back to Back	PP	Left	26
6	6 NCC199CDV (GQ-C3259WZ-FF US)		6"	Back to Back	PP	Right	27
7	NCC199CDV (GQ-C3259WZ-FF US)	6	6"	Back to Back	PVC	Left	28

(DV Case.1) Quick Connect (2 units) system, PP Intake line

Below is a typical installation case. It's possible to shorten the overall length of No. 3, 4 and 5 in accordance with job site ceiling height.



No.	Part	Part Part #		No.	Part	Part #	Q'ty
1	Non-Return Valve Kit	CDVNRVK	2	7	4" x 45° Elbow	ISEL0445	2
2	Air Intake 2" to 4" Increaser	CDV2X4-ADAPT	2	8	4" Branch Tee	ISBT040436	4
3	4" x 12" Vent Length	ISVL041	2	9	4" Horizontal Drain Fitting	ISHDF04	1
4	4" x 24" Vent Length	ISVL042	1	10	Ball-Check Siphon	IASJBVS	1
5	4" x 36" Vent Length	ISVL043	1	11	4" Tee Cap	ISTC04	1
6	4" x 87° Elbow ISEL0487		4	12	4" Connector Ring	IANS04	16

(DV Case.2) Quick Connect (2 units) system, PP Intake line

Below is a typical installation case. It's possible to shorten the overall length of No. 3, and 4 in accordance with job site ceiling height.



No.	Part	Part Part #		No.	Part	Part #	Q'ty
1	Non-Return Valve Kit	CDVNRVK	2	7	4" Branch Tee	ISBT040436	4
2	Air Intake 2" to 4" Increaser	CDV2X4-ADAPT	2	8	4" Horizontal Drain Fitting	ISHDF04	1
3	4" x 12" Vent Length	ISVL041	1	9	Ball-Check Siphon	IASJBVS	1
4	4" x 24" Vent Length	ISVL042	1	10	4" Tee Cap	ISTC04	1
5	4" x 87° Elbow	ISEL0487	4	11	4" Connector Ring	IANS04	14
6	4" x 45° Elbow	ISEL0445	2				

(DV Case.3) Quick Connect (2 units) system, PVC Intake line

Below is a typical installation case. It's possible to shorten the overall length of No. 2 and 3 in accordance with job site ceiling height.



** If the clearance between units is needed 12.9 - 18", add one 4" x 12" Vent Length and one 4" Connector Ring to (A) for extension.

((note)	Left side	exhaust	and intake	configuration	can he	assembled	ny using	n the	narts h	helow
1	(IIULE)	Leit side	CALIAUSI	and make	connyuration	Call DE	assembleu	Jy using	Juic	μαπο ι	JEIOW

No.	Part	Part #	Q'ty	No.	Part	Part #	Q'ty
1	Non-Return Valve Kit	CDVNRVK 2		6	4" x 12" Vent Length	ISVL041	1
2	4" x 24" Vent Length	ISVL042	1	7	4" to 3" Reducer	ISRD0403	2
3	4" x 36" Vent Length	ISVL043	2	8	3" Branch Tee	ISBT030336	1
4	4" x 87° Elbow	ISEL0487	3	9	3" Connector Ring	IANS03	3
5	4" x 45° Elbow	ISEL0445	1	10	4" Connector Ring	IANS04	7

(DV Case.4) 6units Multi system, In-line Arrangement, PP Intake line

Below is a typical installation case. It's possible to shorten the overall length of No. 3 and 4 in accordance with job site ceiling height.

The length of 4(c), 4(d), 4(e) and 7(c) (right side in this illustration) should be adjusted based on the actual rack clearance.



(note) Left side exhaust and intake configuration can be assembled by using the parts below

No.	Part	Part #		No.	Part	Part #	Q'ty
1	Non-Return Valve Kit	CDVNRVK	6	7	6" Branch Tee	ISBT060436	12
2	Air Intake 2" to 4" Increaser	CDV2X4-ADAPT	6	8	6" Horizontal Drain Fitting	ISHDF06	1
3	4" x 12" Vent Length	ISVL041	1	9	Ball-Check Siphon	IASJBVS	1
4	4" x 24" Vent Length	ISVL042	5	10	6" Tee Cap	ISTC06	1
5	4" x 87° Elbow	ISEL0487	12	11	4" Connector Ring	IANS04	24
6	6 4" x 45° Elbow ISEL0445		6	12**	6" Connector Ring	IANS06	14
	^ ^				~ · · · · · · · · · · · · · · · · · · ·	**Ontion	al narts

(DV Case.5) 6units Multi system, Back to Back Arrangement, Left Side

Below is a typical installation case. It's possible to shorten the overall length of No. 3 and 4 in accordance with job site ceiling height.



No.	Part	Part #	Q'ty	No.	Part	Part #	Q'ty					
1	Non-Return Valve Kit	CDVNRVK	6	7	6" Branch Tee	ISBT060436	12					
2	Air Intake 2" to 4" Increaser	CDV2X4-ADAPT	6	8	6" Horizontal Drain Fitting	ISHDF06	1					
3	4" x 12" Vent Length	ISVL041	5	9	Ball-Check Siphon	IASJBVS	1					
4	4" x 24" Vent Length	ISVL042	7	10	6" Tee Cap	ISTC06	1					
5	4" x 87° Elbow	ISEL0487	12	11	4" Connector Ring	IANS04	30					
6	6 4" x 45° Elbow ISEL0445		6	12**	6" Connector Ring	IANS06	14					
	**Optional parts											

(DV Case.6) 6units Multi system, Back to Back Arrangement, Right Side

Below is a typical installation case. It's possible to shorten the overall length of No. 3 and 4 in accordance with job site ceiling height.



((note)	When	installing	a left	side	exhaust	and	intake	config	juration,	refer to	previous	pag	ge
	· /													_

No.	Part	Part #	Q'ty	No.	Part	Part #	Q'ty				
1	Non-Return Valve Kit	CDVNRVK	6	8	6" Branch Tee	ISBT060436	12				
2	Air Intake 2" to 4" Increaser	CDV2X4-ADAPT	4-ADAPT 6 9 6" Horizontal Drain Fitting		6" Horizontal Drain Fitting	ISHDF06	1				
3	4" x 12" Vent Length	ISVL041	7	10	Ball-Check Siphon	IASJBVS	1				
4	4" x 24" Vent Length	ISVL042	5	11	6" Tee Cap	ISTC06	1				
5	4" x 87° Elbow	ISEL0487	12	12	4" Connector Ring	IANS04	33				
6	4" x 45° Elbow	ISEL0445	6	13***	6" Connector Ring	IANS06	14				
7	4" x 30° Elbow	ISEL0430	3								
	***Optional parts										

(DV Case.7) 6units Multi system, Back to Back Arrangement, PVC Intake line

Below is a typical installation case. It's possible to shorten the overall length of No. 2 and 3 in accordance with job site ceiling height.



No.	Part	Part #	Q'ty	No.	Part	Part #	Q'ty
1	Non-Return Valve Kit	CDVNRVK	6	6	6" Horizontal Drain Fitting	ISHDF06	1
2	4" x 12" Vent Length	ISVL041	2	7	Ball-Check Siphon	IASJBVS	1
3	4" x 24" Vent Length	ISVL042	7	8	4" Connector Ring	IANS04	15
4	4" x 87° Elbow	ISEL0487	6	9**	6" Connector Ring	IANS06	7
5	6" Branch Tee	ISBT060436	6				
						**Option	al parts

8.6 Vent Installation for Non-Direct Vent configuration

When installing this unit in an area with a large amount of lint such as a commercial Laundromat, direct-vent ("-DV") system must be used. The "-SV" configuration (using an SV conversion kit) is prohibited.

- Adjust the dip switches to Non-Direct Vent (SV) setting. Refer to unit's installation manual.
- SV Conversion kit #SV-CK-2 is required for the air intake.

Failure to perform the above 2 steps could result in a fire or explosion causing property damage, personal injury or death. Refer to the instructions provided with the conversion kit for additional details.

• Noritz recommends to install a Carbon Monoxide Alarm in installation site of the unit when supplying combustion air from the indoors.

8.6.1 Vent termination

(1) Horizontal Vent Termination

- A Termination Tee may be used for the vent termination.
- Terminate at least 12" (300mm) above grade or above snow line.
- Slope the horizontal vent 5/8" upwards for every 12" (300mm) toward the termination.
- Install the Horizontal Drain Fitting with Ball-Check Siphon to the end of the last Branch Tee in the exhaust vent pipe. For 3" vent system, refer to DV Case.3 in Chapter 8.5.3 (page 24).
- In the Commonwealth of Massachusetts a carbon monoxide detector is required for all side wall horizontally vented gas fuel equipment. Please refer to Technical Bulletin TB 010606 for full installation instructions.



(2) Vertical Vent Termination

- Terminate at least 3 ft (0.9m) from the combustion air intake of any appliance and any other building opening.
- · Enclose exterior vent systems below the roof line to limit condensation and protect against mechanical failure.
- When the vent penetrates a floor or ceiling and is not running in a fire rated shaft, a firestop and support is required.
- When the vent termination is located not less than 8 ft (2.4m) from a vertical wall or similar obstruction, terminate above the roof at least 2 ft (0.6m), but not more than 6 ft (1.87m), in accordance with the National Fuel Gas Code ANSI Z223.1/NFPA 54 or Natural Gas and Propane Installation Code CSA B149.1.
- Provide vertical support every 3 ft (0.9m) or as required by the vent pipe manufacturer's instructions.
- A short horizontal section is recommended to prevent debris from falling into the unit.
- · Install the Horizontal Drain Fitting with Ball-Check Siphon to the end of the last Branch Tee in the exhaust vent pipe. For 3" vent system, refer to DV Case.3 in Chapter 8.5.3 (page 24).
- · When using a horizontal section, slope the horizontal exhaust vent 5/8" upwards for every 12" (300mm) toward the termination to drain condensate.
- Use PPS-UV vent parts to terminate the vent outside except for 8" Common Vent System. (Use 87° Elbow (ISEL0887) when install 8" Common Vent System.) Polypropylene vent can be damaged by UV light.

8.6.2 Combustion Air Supply

Supply combustion air to the units as per the National Fuel Gas Code, ANSI Z223.1- latest edition and in Canada, in accordance with the Natural Gas and Propane Installation Code CSA B149.1-latest edition.

Provide adequate combustion air so as to not create negative pressure within the building. _ _ _ _ _ _ _ _ _ _

- Provide two permanent openings to allow circulation of combustion air.
- A minimum free area of each openings per unit.

		Indoor make up	Outdoor make up air is provided			
Installation Unit	BTUH	air* is provided	Direct or Vertical ducts	Horizontal ducts		
NCC199CDV(GQ-C3259WZ-FF US) EZ111DV(GQ-C3259WX-FF US)	199.9 kbtuh	200 in ² 20" (W) x 10" (H)	50 in² 10" (W) x 5" (H)	100 in ² 20" (W) x 5" (H)		
EZ98DV(GQ-C2859WX-FF US)	180 kbtuh	180 in ² 20" (W) x 9" (H)	45 in² 10" (W) x 4 1/2" (H)	90 in ² 20" (W) x 4 1/2" (H)		

*e.g. 6 units of NCC199CDV(GQ-C3259WZ-FF US) : 6 units x 200 in² = 1200 in² make up air

- If the unit is installed in a mechanical closet, a minimum of permanent clearance of 4" or more in front of the unit is required. A 24" or more clearance is recommended in order to facilitate maintenance and repair.
- If combustion air will be provided through a duct, size the duct to provide as below.
 - NCC199CDV(GQ-C3259WZ-FF US):

70 cubic feet of fresh air per minute per unit.

EZ111DV(GQ-C3259WX-FF US) :

70 cubic feet of fresh air per minute per unit.

EZ98DV(GQ-C2859WX-FF US):

63 cubic feet of fresh air per minute per unit.





Use PPS-UV

Openings supplying indoor air per 1 unit

8.6.3 Assembling the Common Vent around the units (for Non-Direct Vent) <Common items>



Continue to insert the Vent Pipe until it

reaches to the base of the unit Intake

(The vent pipe will be inserted approximately

and Exhaust Flue.

2.3" (60mm).)



within ±15°

Ball-Check Siphon of Non-Return Valve should be within ±15°.



Secure the Vent Pipe by tightening the band using a screwdriver. (The tightening torque shall be between 16 and 20 in lb.)

<Required vent parts>

No.	Part	Part #	Q'ty	No.	Part	Part #	Q'ty
1	Non-Return Valve Kit	CDVNRVK	1 each unit	2	2" SV Conversion Kit	SV-CK-2	1 each unit

8.6.4 Contents of Sample Installation Case (for Non-Direct Vent)

Case	Model	Number of Units	Diameter	Unit Arrangement	Exhaust Direction	Page
1	EZ111DV(GQ-C3259WX-FF US) EZ98DV(GQ-C2859WX-FF US)	2	4"	In-line	Right	32
2	NCC199CDV (GQ-C3259WZ-FF US)	2	4"	In-line	Right	33
3	NCC199CDV (GQ-C3259WZ-FF US)	6	6"	In-line	Right	34
4	NCC199CDV (GQ-C3259WZ-FF US)	6	6"	Back to Back	Left	35
5	NCC199CDV (GQ-C3259WZ-FF US)	6	6"	Back to Back	Right	36

(SV Case.1) Quick Connect (2 units) system, In-line Arrangement

Below is a typical installation case. It's possible to shorten the overall length of No. 3 and 4 in accordance with job site ceiling height.



(note) Left side exhaust and intake	configuration can be assembled	by using the parts below
-------------------------------------	--------------------------------	--------------------------

No.	Part	Part #	Q'ty	No.	Part	Part #	Q'ty
1	Non-Return Valve Kit	CDVNRVK	2	6	4" Branch Tee	ISBT040436	2
2	2" SV Conversion Kit	SV-CK-2	2	7	4" Horizontal Drain Fitting	ISHDF04	1
3	4" x 24" Vent Length	ISVL042	1	8	Ball-Check Siphon	IASJBVS	1
4	4" x 36" Vent Length	ISVL043	1	9	4" Connector Ring	IANS04	7
5	4" x 87° Elbow	ISEL0487	2				

(SV Case.2) Quick Connect (2 units) system, In-line Arrangement

Below is a typical installation case. It's possible to shorten the overall length of No. 3 and 4 in accordance with job site ceiling height.



(note) Left side exhaust and intake configuration ca	an be assembled by using the parts below
--	--

No.	Part	Part #	Q'ty	No.	Part	Part #	Q'ty
1	Non-Return Valve Kit	CDVNRVK	2	6	4" Branch Tee	ISBT040436	2
2	2" SV Conversion Kit	SV-CK-2	2	7	4" Horizontal Drain Fitting	ISHDF04	1
3	4" x 12" Vent Length	ISVL041	1	8	Ball-Check Siphon	IASJBVS	1
4	4" x 24" Vent Length	ISVL042	1	9	4" Connector Ring	IANS04	7
5	4" x 87° Elbow	ISEL0487	4				

(SV Case.3) 6units Multi system, In-line Arrangement

Below is a typical installation case. It's possible to shorten the overall length of No. 3 and 4 in accordance with job site ceiling height.

The length of 4(c), 4(d), 4(e) and 6(c) (right side in this illustration) should be adjusted based on the actual rack clearance.



No.	Part	Part #	Q'ty	No.	Part	Part #	Q'ty
1	Non-Return Valve Kit	CDVNRVK	6	6	6" Branch Tee	ISBT060436	6
2	2" SV Conversion Kit	SV-CK-2	6	7	6" Horizontal Drain Fitting	ISHDF06	1
3	4" x 12" Vent Length	ISVL041	1	8	Ball-Check Siphon	IASJBVS	1
4	4" x 24" Vent Length	ISVL042	5	9	4" Connector Ring	IANS04	12
5	4" x 87° Elbow	ISEL0487	6	10**	6" Connector Ring	IANS06	7
						**Option	al parts

(SV Case.4) 6units Multi system, Back to Back Arrangement, Left Side

Below is a typical installation case. It's possible to shorten the overall length of No. 3 and 4 in accordance with job site ceiling height.



()	10/1	the set of the life of the set of the	and so he does	1 al a	and the second	and the set	the first second	C	and for the second second	. .	
nota		netallina a	right c		avhauet.	and	INTOKO	continuiration	rotor to	novt	nana
		nsiaiiii iu a	I I U I I I 3	- סנוופ	CALIQUAL	anu		connouranon		1100	Daue
(. p . g .

No.	Part	Part #	Q'ty	No. Part		Part #	Q'ty
1	Non-Return Valve Kit	CDVNRVK	6	6	6" Branch Tee	ISBT060436	6
2	2" SV Conversion Kit	SV-CK-2	6	7	6" Horizontal Drain Fitting	ISHDF06	1
3	4" x 12" Vent Length	ISVL041	2	8	Ball-Check Siphon	IASJBVS	1
4	4" x 24" Vent Length	ISVL042	7	9	4" Connector Ring	IANS04	15
5	4" x 87° Elbow	ISEL0487	6	10**	6" Connector Ring	IANS06	7
						**Option	al parts

(SV Case.5) 6units Multi system, Back to Back Arrangement, Right Side

Below is a typical installation case. It's possible to shorten the overall length of No. 3 and 4 in accordance with job site ceiling height.



INU.	Fait	Fait#				Fait#	
1	Non-Return Valve Kit	CDVNRVK	6	7 6" Branch Tee		ISBT060436	6
2	2" SV Conversion Kit	SV-CK-2	6	8	6" Horizontal Drain Fitting	ISHDF06	1
3	4" x 12" Vent Length	ISVL041	4	9	Ball-Check Siphon	IASJBVS	1
4	4" x 24" Vent Length	ISVL042	5	10	4" Connector Ring	IANS04	18
5	4" x 87° Elbow	ISEL0487	6	11***	6" Connector Ring	IANS06	7
6	4" x 30° Elbow	ISEL0430	3				
						***Optior	al parts

9. Maintenance

- The venting system must be examined annually by a qualified service technician to check for any leaks or corrosion.
- When changing the unit, replace Non-Return Valve Kit with a new one.

Annual check of Non-Return Valve and Ball-Check Siphon

How to check

Visually inspect the Non-Return Valve to verify that:

- There are no signs of debris(looks like a dark color band) around location (a) when looking from the outside.
- None of the units are out of operation by faults EC 11 or EC 12. If the valve is adhered to the seat, the units can't fire and will send these faults to the remote.
- The ball is floating when the siphon is filled with condensate.

How to clean

- 1. Press the POWER button on the Remote to shut off the units.
- 2. Disconnect power to all units.
- 3. Remove the Non-Return Valve from the vent system carefully.
- 4. (Ball-Check Siphon only) Loosen (b), and pull the Ball-Check Siphon carefully.
- Flush the Non-Return Valve assembly with warm water and a small amount of liquid dish soap.
 Do not use strong detergents or solvents. Rinse with clean, luke warm water until all soap is removed. Some water may remain in the siphon.
- 6. Confirm both valves in the Non-Return Valve and the ball in the siphon move smoothly.
- 7. Re-assemble the components after the cleaning procedure in reverse order.
- 8. Connect power to all units and let them run for 15 minutes minimum. Check for any leaks.



If you break the Check Valve or Ball-Check Siphon during maintenance, you must replace with a new Non-Return Valve Kit. Otherwise exhaust will leak into the room.



Non-Return Valve

10. Parts Order List

(1) Termination Parts

Select the vent diameter and select the termination type.



						DV		S	V
	3"	4"	6"	8"	Horizontal	Vertical	Horizontal and Vertical	Horizontal	Vertical
87°Elbow PPS-UV	ISELL0387UV	ISEL0487UV	ISEL0687UV	ISEL0887	2	4	3	0	2
End Pipe PPS-UV	ISEP0339	ISEP0439	ISEP0639	ISEP086	2	2	2	0	1
Termination Tee	ISTT0320	ISTT0420	ISTT0620	ISTT0820	0	0	0	1	0
Bird Screen	IASPP03	IASPP04	IASPP06	IASSS08	2	2	2	2	1
Connector Ring	IANS03	IANS04	IANS06	IANS08	2	4	3	0	2

(2) Extension Parts

Select the vent diameter and count the extension parts as needed.



					Intake /
	3"	4"	6"	8"	Exhaust
120" Vent Length	ISVL310	ISVL410			
72" Vent Length	ISVL036	ISVL046	ISVL066	ISVL086	
36" Vent Length	ISVL033	ISVL043	ISVL063	ISVL083	
24" Vent Length	ISVL032	ISVL042	ISVL062	ISVL082	
12" Vent Length	ISVL031	ISVL041	ISVL061	ISVL081	As needed
87° Elbow	ISEL0387	ISEL0487	ISEL0687	ISEL0887	
45° Elbow	ISEL0345	ISEL0445	ISEL0645	ISEL0845	
Connector Ring	IANS03	IANS04	IANS06*	IANS08*	
Support Clamp	IASCM03	IASCM04	IASCM06	IASCM08	

*Optional parts

(3) Branch Parts

Select the vent diameter and count the Exhaust and Intake parts.



Arrangement Parts Number ** In line ISBT080436 Back to Back ISBT080412N

					Exhaust side		Intake side	
	3"	4"	6"	8"	Direct / Non-Direct Vent	Direct Vent (PP)	Direct Vent (PVC)	Non-Direct Vent
Branch Tee	ISBT030336	ISBT040436	ISBT060436	A**	N*	N*		0
Connector Ring	IANS03	IANS04	IANS06***	IANS08***	N*+1	N*+1		0
Тее Сар		ISTC04	ISTC06	ISTC08	0	1		0
Horizontal Drain Fitting		ISHDF04	ISHDF06	ISHDF08	1	0	0	0
Ball-Check Siphon			IASJBVS		1	0	0	0
N* : Number of units	***Optional	parts						









(1) DV PP Intake (2) DV PVC Intake

(3) SV Conversion Kit

			(1)	(2)	(3)
	Part Name	Parts Number	PP	PVC	SV
(a)	Non-Return Valve Kit	CDVNRVK	N*	N*	N*
(b)	Air Intake 2" to 4" Increaser	CDV2X4-ADAPT	N*	0	0
(C)	2" SV Conversion Kit	SV-CK-2	0	0	N*
	(d) field aupply item		NI* • NI	umbor	funito

(d) field supply item

N* : Number of units

	Unit Arrangement			In	line arr	angeme	ent			
	Model Number		NCC EZ							
	Number of units	:	2		- 6			2		
	Common Vent Diameter	3	3"	4 -	8"	3	3"	4 -	8"	
	Intake type	PP	PVC /SV	PP	PVC /SV	PP	PVC /SV	PP	PVC /SV	
	Intake / Exhaust Direction			Both Right and Left						
Part Name	Parts Number									
4" x 12" Vent Length	ISVL041	2	1	1		4	1	2	0	
4" x 24" Vent Length	ISVL042		1	N*-1			1		1	
4" x 36" Vent Length	ISVL043		1	(C	1			1	
4" x 45° Elbow	ISEL0445	2	1	N*	0	2	1	2	0	
4" x 87° Elbow	ISEL0487	6	3	2N*	N*	6	3	4	2	
4" to 3" Reducer	ISRD0403	4	2	(C	4	2	0		
4" Connector Ring	IANS04	14	7	4N*	2N*	14	7	10	7	

	Unit Arrangement					В	ack	to B	ack	arra	ange	eme	nt				
	Model Number		NCC														
	Number of units	3	4	5	6	3	4	5	6	3	4	5	6	3	4	5	6
	Common Vent Diameter		4 - 8"														
	Intake type				Р	Ρ						F	PVC	;/SV			
	Intake / Exhaust Direction	Left Right					Left				Right						
Part Name	Parts Number																
4" x 12" Vent Length	ISVL041	3	4	4	5	3	5	5	7		2	2		2	3	3	4
4" x 24" Vent Length	ISVL042	2	4	5	7	2	3	4	5	2	4	5	7	2	3	4	5
4" x 30° Elbow	ISEL0430		0		0 1 2 2 3		3		0			1	2	2	3		
4" x 45° Elbow	ISEL0445		N* 0														
4" x 87° Elbow	ISEL0487	2N* N*															
4" Connector Ring	IANS04	14	20	24	30	15	22	26	33	7	10	12	15	8	12	14	18

EZ : EZ111DV(GQ-C3259WX-FF US), EZ98DV(GQ-C2859WX-FF US) NCC : NCC199CDV (GQ-C3259WZ-FF US) Intake type PP : Direct Vent (PP), PVC : Direct Vent (PVC), SV : Non-Direct Vent N* : Number of units

11. Final Installation Check List

After Common Vent System installation, confirm the following checklist and confirming proper installation of the units. If you have any additional questions or need assistance with installation, contact Noritz at 1-866-766-7489, or refer to our support website (http://support.noritz.com/).

Install a Non-Return Valve (check valve) onto each unit.	
Install the Connector Ring to every 3" and 4" joint connection.	
Carry out trial operation for at least 15 minutes. Confirm each unit operate correctly in accordance with unit's Installation Manual.	
No exhaust or condensate leakage from any joint connection.	
Verify that dip switches have been adjusted to "Common Vent" setting in each unit.	
Verify the appropriate dip switch settings are selected for the DV/SV configuration, Elevation.	
Clearances from the Exhaust termination and the Intake termination are suitable.	
No blockages in either the Intake or Exhaust pipe.	
Confirm the vent system is within allowable maximum equivalent length.	
Ensure you have completely followed this Installation Manual and unit Installation Manual, and that you have used the correct venting products described in this manual.	
Verify that units connected with Common Vent System consist of only the same model as follows : NCC199CDV(GQ-C3259WZ-FF US), EZ111DV(GQ-C3259WX-FF US), and EZ98DV(GQ-C2859WX-FF US)	
Verify that Quick Connect Cord or System Controller is installed correctly.	
Confirm that an adequate amount of combustion air has been provided.	
Explain to the customer that the vent termination or air intake must never be blocked.	
Explain to the customer the operation of the unit, safety guidelines, maintenance, and warranty.	
Installation must conform with local codes, or in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1/NFPA 54 - latest edition and/or the Natural Gas and Propane Installation Code CSA B149.1 - latest edition.	
All horizontal Exhaust vent pipes are sloped 5/8" upwards for every 12" (300mm) toward the termination.	
Condensation drain tubes and hose clamps are connected to a drain and must be disposed of in compliance with local code.	
After completing installation, please either place this Installation Manual in plastic pouch and attach it to the side of the unit or hand it to the customer to retain for future reference.	

Application jobsite's Information

Please fill in and submit following information to customer.

Installation date of the system

Model number of units

Number of units and Serial number

Unit #	Serial number on the unit (YYYY.MM-*****)
1	
2	
3	
4	
5	
6	

Diameter of the Common Vent System

Air Intake Piping material

3" • 4" • 6" • 8"

PP / PVC

Exhaust Vent Length and Number of elbow in extension parts.

Installer information

′our Name)	
company Name)	
Street address)	
Email)	
elephone)	