

# Installation Manual

NORITZ AMERICA  
CORPORATION

## Vent Kit for Condensing Tankless Gas Water Heater

Model: N-FlexKit2"-35

[Applicable Model]  
· NRC663-FSV

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

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



### WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



### CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

#### DANGER :

- Never use this Vent Kit other than for the Applicable Model (including the model manufactured by others) designated in this manual.

#### WARNING :

- If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.
- Do not install only with the Start-up Guide. Read this manual also before installation.



Prohibited



Be sure to do



### CAUTION

## Requests to Installers

- This manual is for the vent components for the designated tankless water heater. For the installation of the Tankless Water Heater itself, read the installation manual packed with it.
- In order to install this vent kit correctly, read this installation manual carefully, and follow the installation instructions.
- Failures and damage caused by erroneous work or work not as instructed in this manual are not covered by the warranty.
- Check that the installation was done properly in accordance with this installation manual upon completion.
- After completing installation, please either place this installation manual in a plastic pouch and attach it to the side of the water heater, or hand it to the customer to retain for future reference.

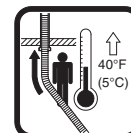
Installation must conform with local codes, or in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1 /NFPA54-latest edition.

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

# 1.General Information

Property damage, personal injury or death can result if these instructions are not followed. They are a guide for professional installers generally familiar with the installation and maintenance of heating equipment and related vent systems.


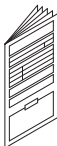
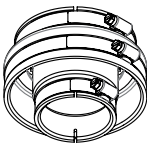

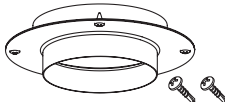

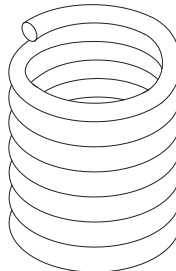
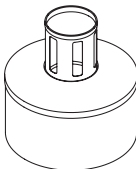
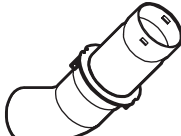
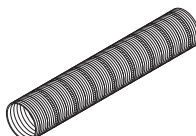


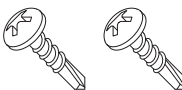
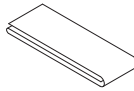
- N-FlexKit is designed only for the installation inside of B-Vent as sleeve. Do not use it for other installation method. Also do not use it outdoor.
- Do not use for anything other than designated Tankless Water Heater (including the model manufactured by others).
- N-FlexKit can be installed at zero clearance to combustible materials.
- Appliances can be started up immediately after N-FlexKit is installed and inspected.
- N-Flex vent systems expand and contract slightly during heating cycles and must be installed following included instructions.
- Keep N-Flex vent greater than 40°F(5°C) during installation. Damage will occur if handled or installed at lower temperatures.
- Information regarding certification of "Flexible vent pipe and connections".



Standard(s)	UL-1738 Dated 10/4/210 Standard for Venting Systems ULC-S636-08 Standards for type BH Gas Venting Systems
Product	PP Flexible 2", PP Single Wall Pipe 2"
Brand name	InnoFlue Flex - Centrotherm
Models	IFVL, IFSF, IANS, ISEL, IACE

## 2. Included Accessories

The following accessories are included.  
Check for any missing items before starting installation.

	Part	Shape	Q'ty		Part	Shape	Q'ty
Bag "Step-1"	Flex Feeder		1	EZTR40 Start Up Guide	Installation Manual (This document)		1
	Base Junction Support • Clamp x3		1			1	
	Base Junction Adapter Set		1				
Bag "Step-2"	Top Flex support for 3" Top Flex support for 4"		1 each	Flex Pipe2" approximately 25 feet		1	
	Universal Rain Cap		1				
Bag "Step-3"	Coupler Set • Coupler Fitting • Connector Ring • 45 degree PP elbow		1	Flex Sleeve		1	
	Coupler O-Ring Coupler Retainer		1				
	O-ring lubricant		1				
	Screws		2				
	Aluminum tape		1				

## 3.General Safety



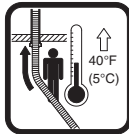


### DANGER

#### Checkup

- If similar flexible vent has already been installed, it must be replaced with this designated new Flex Vent Kit.



### WARNING

- N-FlexKit is designed only for installation inside of B-Vent wall. Do not use it for other installation method. Also do not use it outdoor.
  - Only approved for use with the designated B-Vent manufactures.
  - If the Rain Cap and B-Vent itself are damaged by corrosion, it must be replaced with new ones.
  - Before installation, make sure no nails or screws have penetrated the inner B-Vent wall where the flexible vent will be installed. Those obstructions may damage the flexible vent and may result in fires, property damage or exposure to Carbon Monoxide.
  - Do not reuse the flexible vent once it has been installed, removal of the vent may have caused damage to the flexible vent.
  - Keep N-Flex vent at a temperature greater than 40°F(5°C).  
Material temperature is not less than 40°F(5°C) during installation.  
Damage will occur if handled or installed at lower temperatures.
- 
- If the temperature is below 40°F(5°C) it's recommended that you store the N-flex in a warm room or car for 30 minutes. If you find that the N-flex is still stiff, you may need to use a hair dryer and warm both ends of the vent to prevent breakage.
  - Make sure components are kept under these following conditions.
    - ※ Clean and dry place.
    - ※ Above 40°F(5°C)
    - ※ Keep out of direct sunlight.
- 
- 
- Minimum bend radius should be more than 7 inch.
  - Handle the flexible vent carefully.  
Dropping, Crushing and Stacking may cause damage, and may result in fires, property damage or exposure to Carbon Monoxide.
  - N-FlexKit cannot be painted.
  - Avoid places where open flame 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.
  - Avoid installation in places where dust or debris will accumulate.  
Dust may block the air-supply opening, causing the performance of the device fan to drop and incomplete combustion may occur as a result.
  - Avoid installation in places where special chemical agents (e.g., hair spray or spray detergent) are used.
  - For your safety, do not attempt to work on a rooftop until safety precautions have been identified and proper fall safety measures have been taken, including the use of ladders or stairways, and personal protective equipment (PPE).
  - Installation in windy or wet conditions require additional precautions. Please follow local safety regulations.



## CAUTION

- Check for any damage to components that may have occurred during transportation before installation.
- Consult with the customer regarding the location of installation.
- Do not install this N-FlexKit in a place where it may be subject to falling objects, such as under shelves.
- N-Flex vent systems expand and contract slightly during heating cycles and must be installed according to supplied instructions.

## 4.Before Installation (Check the condition of installation site)

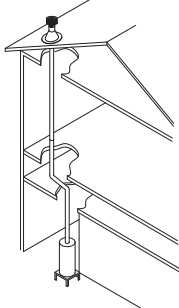
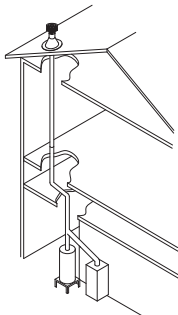
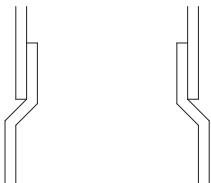
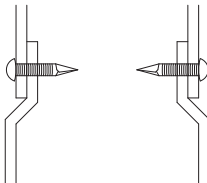
Check that the following items are "(OK) Can be installed" before installation.

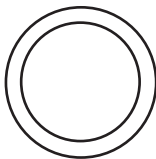
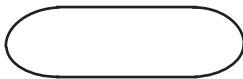
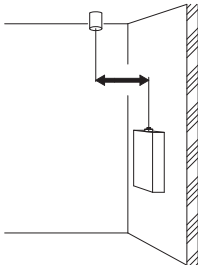
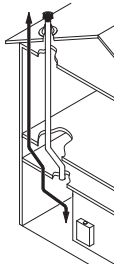
If all items are "(OK) Can be installed", proceed to the next step, "6. Installation".

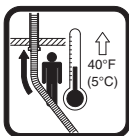
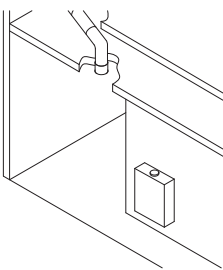

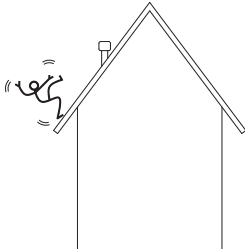
### PLEASE PAUSE FOR A MOMENT

Please verify if the installation of a rain cap of different appearance will conflict with Home Owners Associations rules to prevent future issues.

If NOT, please contact customer service at 1-866-766-7489 to purchase optional installation kit for the existing Rain Cap.

Check point	Can be installed(OK)	Cannot be installed(NG)	Mark "✓" if each condition is matched.
1. Vent system.	Vent system is used by 1 appliance only	Common vent	
			
2. No Screws or nails protruding within the B-Vent	No	Yes (If Yes to protruding screws or nails, flex vent cannot be installed.)	
			

Check point	Can be installed(OK)	Cannot be installed(NG)	Mark "✓" if each condition is matched.
3.B-Vent shape	Round	Oval	
			
4.B-Vent diameter	3" or 4"	5" or larger	
5.Horizontal distance between B-Vent connection from the ceiling and the unit is no more than 5ft.	5ft or less	More than 5 ft	
			
6.Vent length from the top of unit to the rain cap.	25 feet or less	More than 25 feet	
	 <p>If you need more than 25 feet of Flex pipe contact Noritz America 1-866-766-7489</p>		

Check point	Can be installed(OK)	Cannot be installed(NG)	Mark " ✓ " if each condition is matched.
7.Ambient temperature where unit is installed.	More than 40°F (5°C)	40°F (5°C) or less *Refer to page 4	
	<div></div> <div></div>		
8. Accessibility to Rain Cap	Can access Rain Cap	Cannot access Rain Cap(High pitch etc.)	
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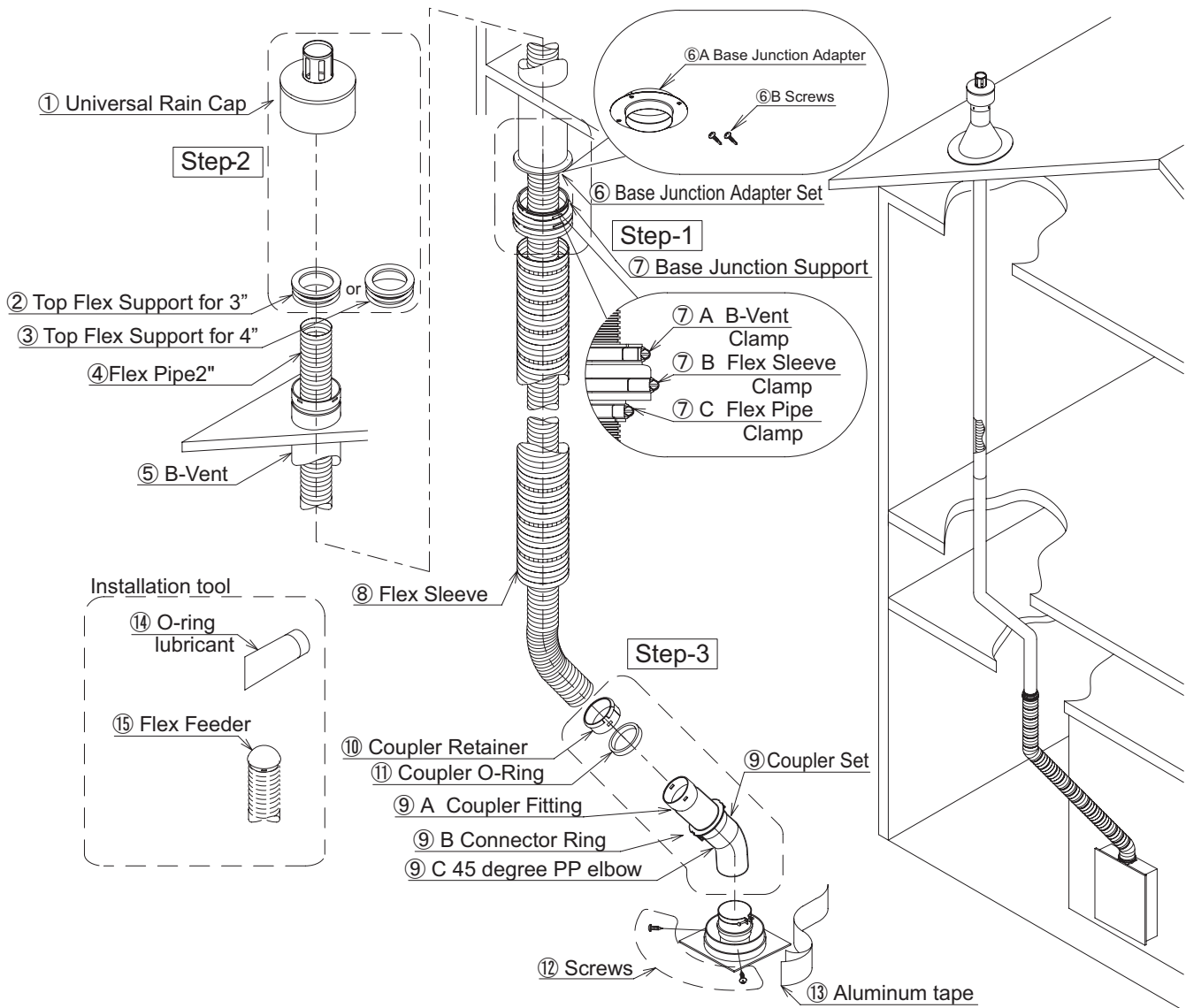
## 5. Sample of the Venting system

- The pictured image of the system consisted of this Vent Kit and the explanation of the name of the components

The image of the Flex Kit system is as listed below.

Only when the venting components and the water heater are installed correctly, the customer can use the hot water correctly and safely.

The numbers before the names of the components are corresponding to the same component names as in step "6. Installation".





# 6.Installation

In the installation, some work will be done above the roof, extra care and fall protection may be required. Take extra care and responsibility to do the installation as safely as possible.

## WARNING :

- For your safety, do not attempt to work on a rooftop until safety precautions have been identified and taken including without limitation fall protection measures, ladders or stairways, and personal protective equipment(PPE).
- Installation in windy or wet conditions require additional precautions. Please follow local safety regulations.



Be sure to do

### 【Maximum Vent lengths for NRC663-FSV】

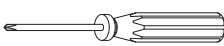



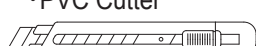
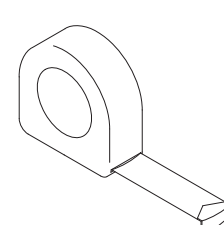
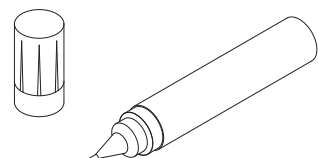
- Max. Straight Vent Length: 35'(10.5m). Please note that the kit comes with approximately 25' of venting. If you need more than 25 feet of Flex pipe contact Noritz America 1-866-766-7489.
- Max. allowable 45 degree elbows(B-Vent) are 2 elbows.
  - \* Not including "⑨ C 45 degree PP elbow"
  - \* No 90° elbows(B-Vent)



Be sure to do

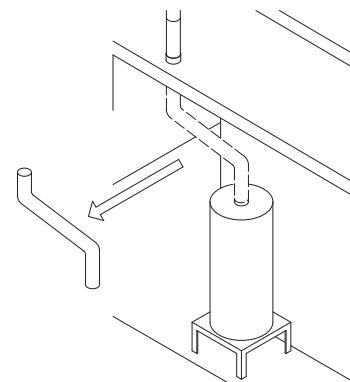
- Only when the all conditions of "4. Before Installation (Check the condition of installation)" are satisfied, proceed with the installation, following the below mentioned installation procedure.

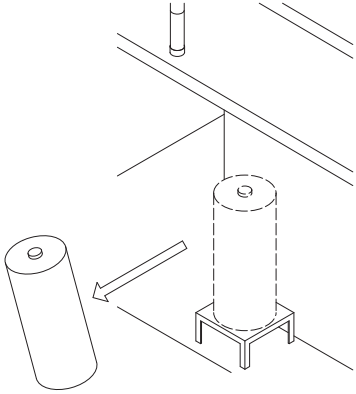
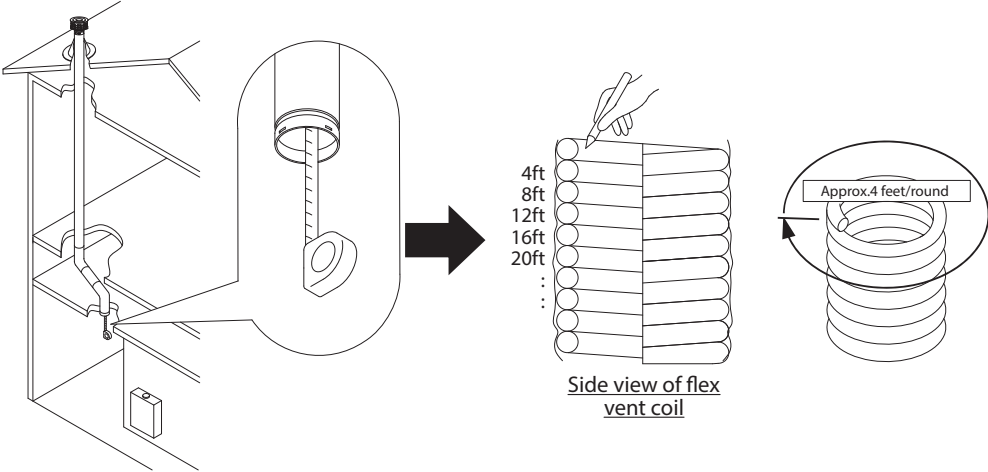

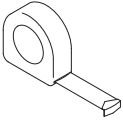
## 2.Tools necessary for the installation

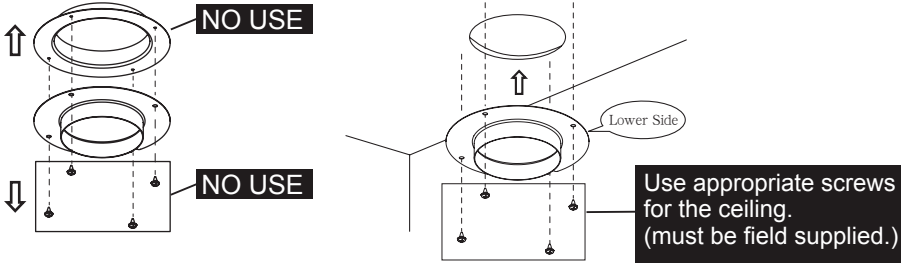

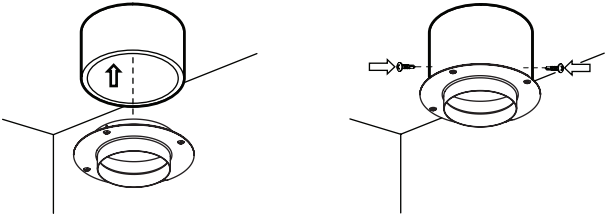
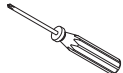
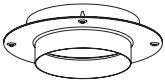

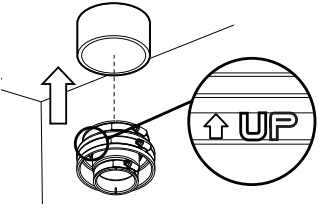
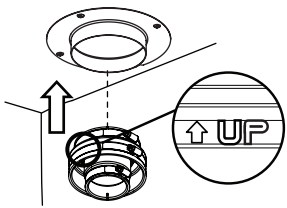
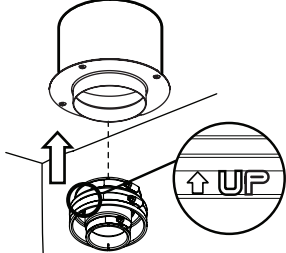
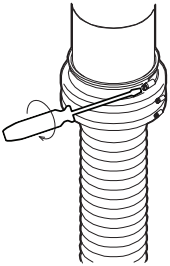
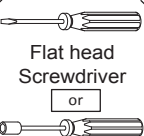

①Screwdriver	②Cutting tool	③Tape Measure	④Marker
 <ul style="list-style-type: none"> <li>•Phillips head</li> </ul> <div style="border: 1px dashed black; padding: 5px; margin-top: 10px;">  <ul style="list-style-type: none"> <li>•Flat head</li> </ul> <p style="text-align: center;">or</p>  <ul style="list-style-type: none"> <li>•Box wrench(5/16")</li> </ul> </div>	<ul style="list-style-type: none"> <li>•For cutting the flexible vent.</li> </ul>  <ul style="list-style-type: none"> <li>•PVC Cutter</li> </ul>  <ul style="list-style-type: none"> <li>•Box Cutter etc.</li> </ul> <p>※ Hand saws are not approved for cutting.</p>		

## 3.Installation Procedure

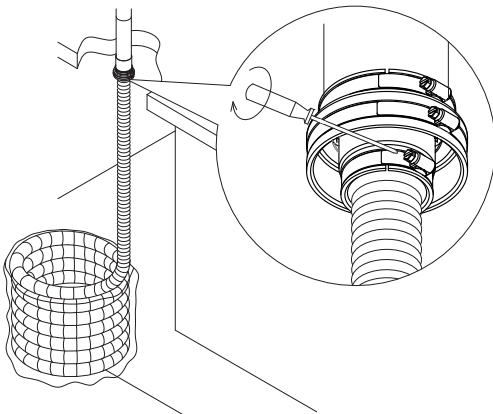

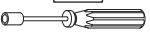
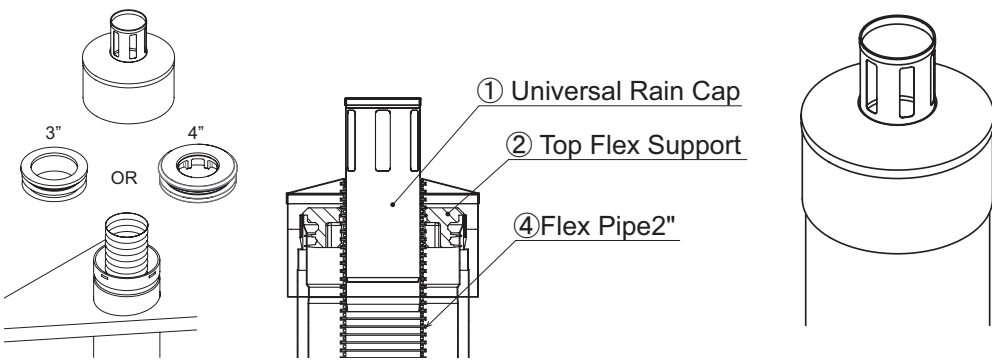
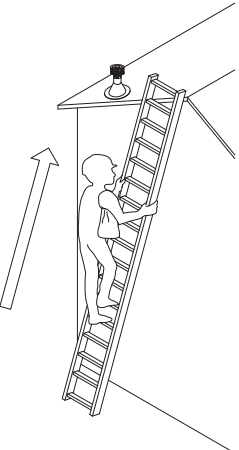
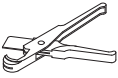



Follow the below motioned procedure and install correctly. Specially, be sure to check each 【Point】 carefully. If not installed correctly, the water heater will not function properly.

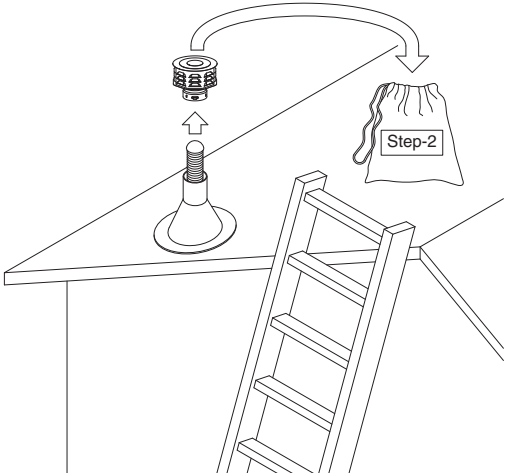
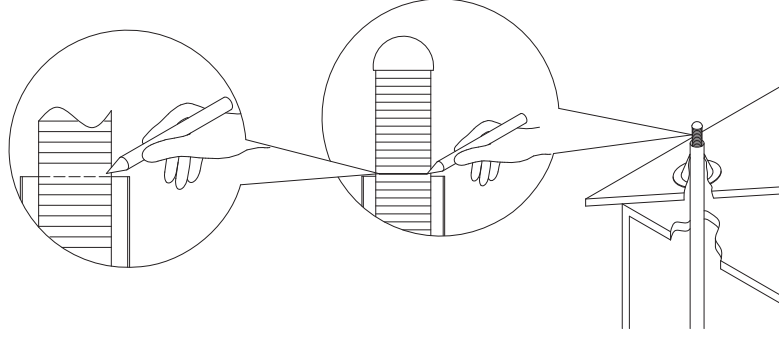


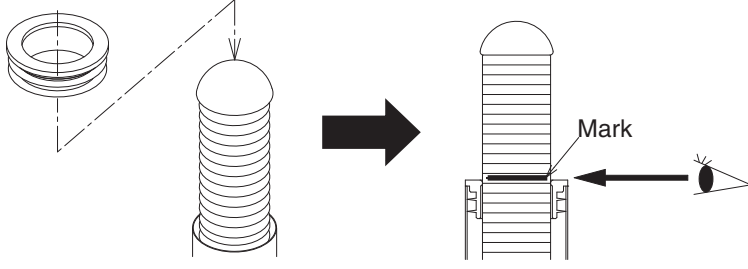



Step	Installation Procedure(ex. @Garage)	Necessary Tool
Step-1 (Work where equipment is installed)	1 Remove the B-Vent between bottom of ceiling and tank type water heater. 	

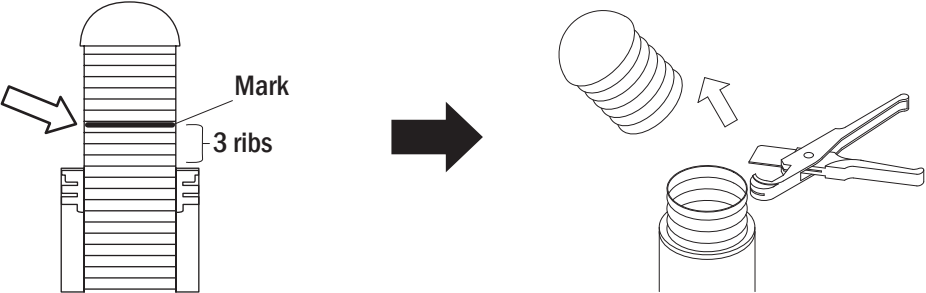
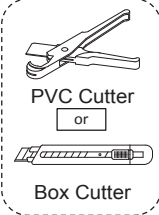
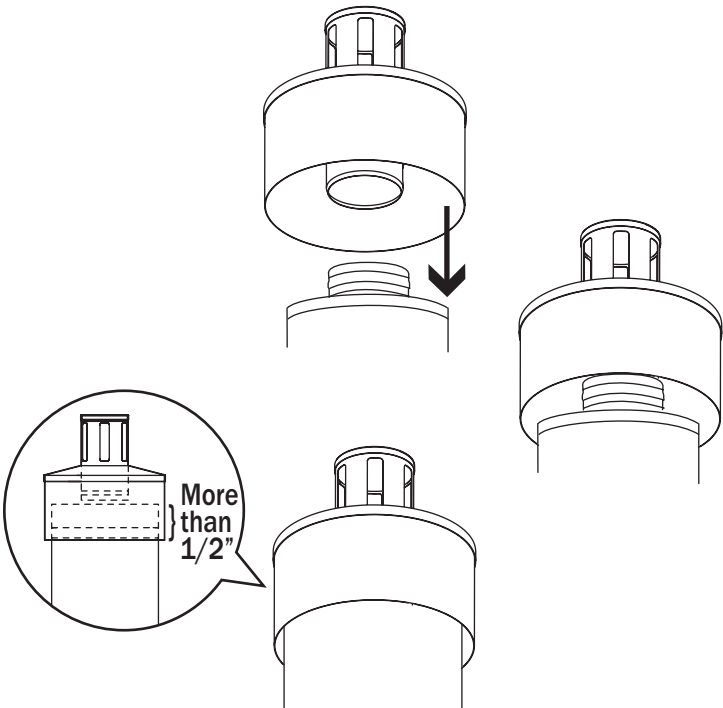

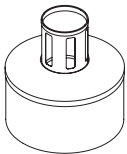
Step	Installation Procedure(ex. @Garage)	Necessary Tool
Step-1 (Work where equipment is installed)	2 Drain and remove the tank type water heater. 	
	3 Use a measuring tape to measure from the bottom of the " <b>⑤B-Vent</b> " to the roof termination to get the total length of the vent run. Transfer that measurement to the " <b>⑤Flex Pipe</b> " by making a mark from inner side to help you know when you have reached the roof termination. ※The Measured vent run length will be used in procedure No. 23 later. Make a note of the Vent Run Length. 	 Marker   Tape Measure

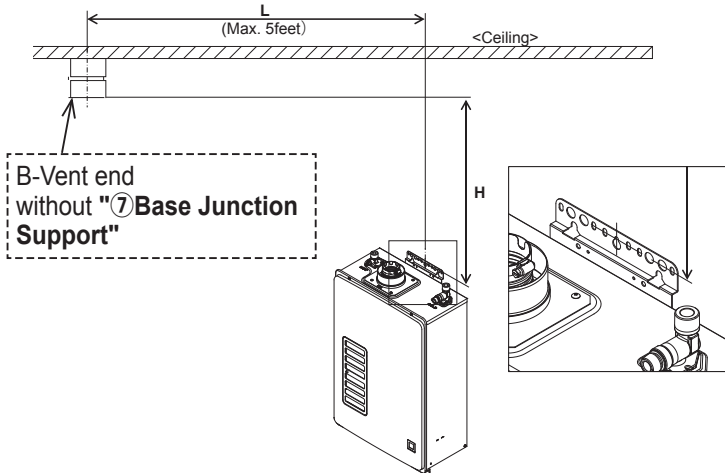
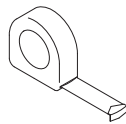
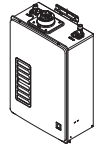
Step	Installation Procedure(ex. @Garage)	Necessary Tool
4	<p><b>Grab Bag Labeled "Step-1"</b> for this step of the installation.</p> <p>Measure "<b>⑤B-Vent</b>" Diameter</p> <p>※Installation for 3" or 4" where "<b>⑤B-Vent</b>" does not come down through the ceiling.  Remove the four screws from "<b>⑥A Base Junction Adapter</b>"  Place and center "<b>⑥A Base Junction Adapter</b>" (Lower side) over the opening of ceiling.</p> <p>Attach "<b>⑥A Base Junction Adapter</b>" with four screws (must be field supplied) to the ceiling.</p> <div data-bbox="363 421 1268 683">  </div> <div data-bbox="240 701 1252 795"> <div>  <p>Be sure to do</p> </div> <p>If strength of the ceiling is not sufficient (i.e. plasterboard), take appropriate measures to ensure safe installation.</p> </div> <p>※Installation for 4" "<b>⑤B-Vent</b>"  Insert "<b>⑥A Base Junction Adapter</b>" onto the 4" "<b>⑤B-Vent</b>"  Attach "<b>⑥A. Base Junction Adapter</b>" with two "<b>⑥B Screws</b>" from outer pipe of "<b>⑤B-Vent</b>".</p> <div data-bbox="491 907 1098 1120">  </div>	 <p>Phillips Head Screwdriver</p>  <p><b>⑥A</b> Base Junction Adapter</p>  <p><b>⑥B</b> Screws</p>
5	<p>Insert "<b>⑦Base Junction Support</b>" to the bottom of "<b>⑤B-Vent</b>" that is sticking out from the ceiling or "<b>⑥A. Base Junction Adapter</b>". Firmly tighten "<b>⑦Base Junction Support</b>" with "<b>⑦A. B-Vent Clamp</b>", be careful not to over tighten, this may distort the rubber. Check to see if it secure by pulling by hand.</p> <p>※The tightening torque should be between 7" to 10" lbs.</p> <p>※Do not apply "<b>⑭O-ring lubricant</b>" to "<b>⑦Base Junction Support</b>"</p> <div data-bbox="236 1350 1284 1944"> <div> <p>Installation for 3" B-Vent</p>  </div> <div> <p>Installation for no B-Vent Protruding</p>  </div> <div> <p>Installation for 4" B-Vent</p>  </div> <div>  </div> </div>	<div data-bbox="1321 1265 1481 1478">  <p>Flat head Screwdriver or Box wrench (5/16")</p> </div>  <p><b>⑦</b>Base Junction Support</p>

Step	Installation Procedure(ex. @Garage)	Necessary Tool
Step-1 (Work where equipment is installed)	<p>6 Push the "<b>⑮Flex Feeder</b>" into the tip of the "<b>④Flex Pipe</b>".</p> <div data-bbox="331 248 571 528"> </div> <div data-bbox="261 611 1273 707"> <div>            Be sure to do         </div> <div>           Install the "<b>⑮Flex Feeder</b>" always, even in the case of straight B-Vent runs. ("<b>⑮Flex Feeder</b>" prevents debris from falling into the "<b>④Flex Pipe</b>".)         </div> </div>	<div data-bbox="1350 197 1453 349"> </div> <div>④Flex Pipe2"</div> <div data-bbox="1362 465 1442 528"> </div> <div>⑮Flex Feeder</div>
	<p>7 Insert the Flex pipe into the "<b>⑦Base Junction Support</b>" until you touch the inside of the rain cap on the roof.          With the "<b>④Flex Pipe</b>" fully inserted into the vent, make a mark at the "<b>⑦Base Junction Support</b>" so you can check for movement during the rest of installation.</p> <div data-bbox="269 882 1267 1312"> </div> <div data-bbox="261 1431 1273 1724"> <div> <b>【Point】</b>            Before inserting, try to straighten curl of the tip of ④Flex Pipe as much as possible.  <u>However, when doing so, bending radius should be more than 7 inch.</u> </div> <div data-bbox="322 1563 451 1697"> </div> </div> <div data-bbox="261 1740 1273 1852"> <div> <b>【Point】</b>            Continue to push "<b>④Flex Pipe</b>" strongly until the end and make sure that it does not stop in the middle.         </div> </div> <div data-bbox="261 1868 1273 1962"> <div>            Prohibited         </div> <div>           Do not use the Flex Vent at any jobsite with vent runs longer than 35'. do not join two shorter flex pipes together even if the run is less than 35'.         </div> </div> <div data-bbox="261 1977 1273 2065"> <div>            Be sure to do         </div> <div>           When pushing "<b>④Flex Pipe</b>" through the B-Vent, if there is unusual feeling (touching the bump of screw, etc.), do not continue to push in and stop the installation.         </div> </div>	<div data-bbox="1342 790 1465 853"> </div> <div>Marker</div>

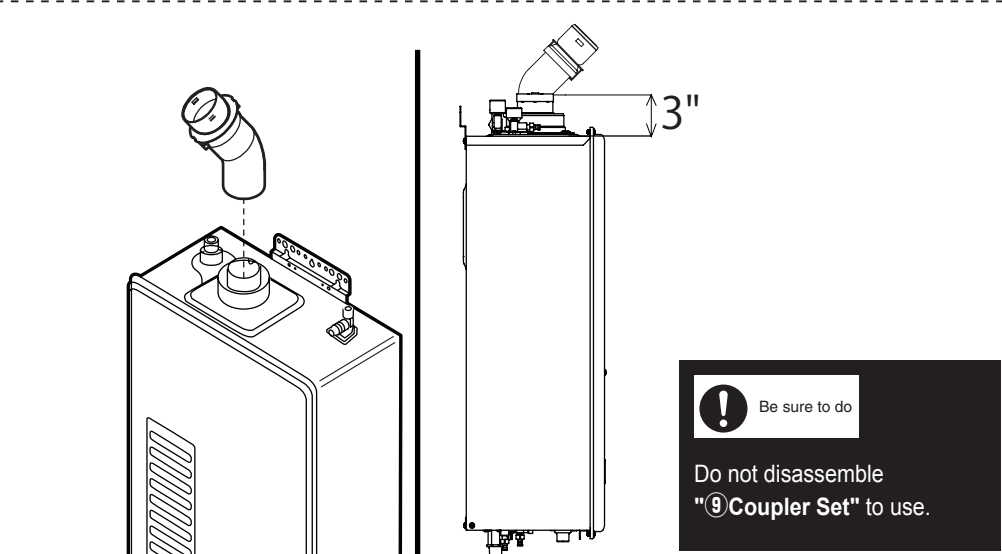
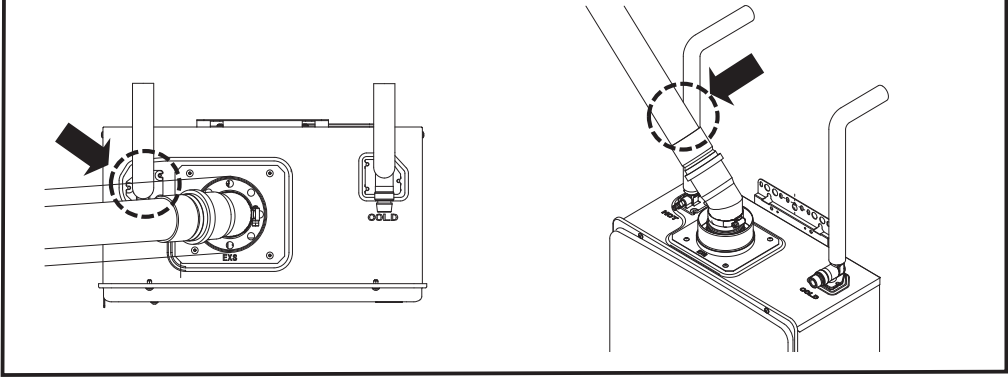

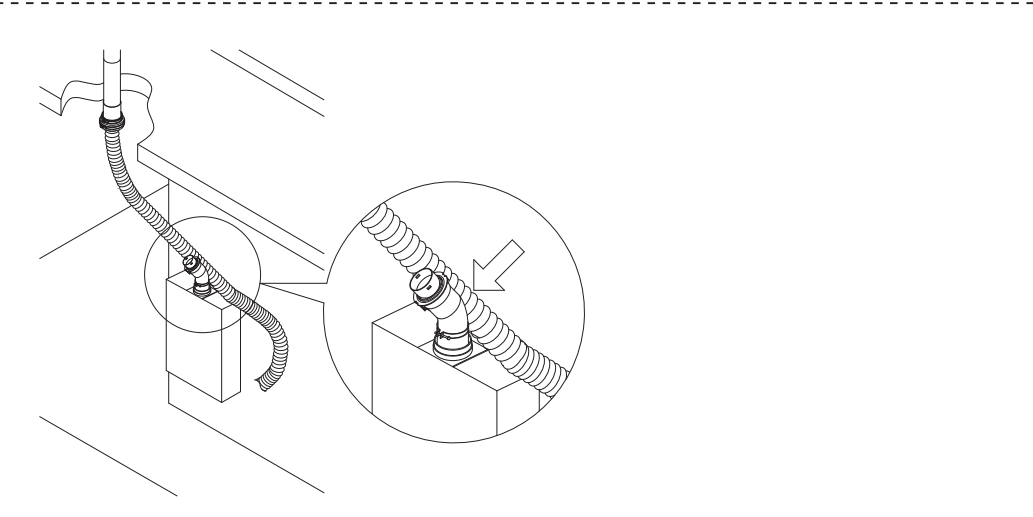


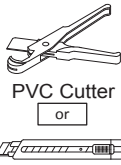
Step	Installation Procedure(ex. @Garage)	Necessary Tool
Step-1 (Work where equipment is installed)	<p>8 Take extra care to ensure that the "<b>④Flex Pipe</b>" does not slip by checking the mark you made on the "<b>④Flex Pipe</b>". Firmly tighten "<b>④Flex Pipe</b>" with "<b>⑦C. Flex Pipe Clamp</b>", but be careful not to over tighten as it may distort the flex pipe. Check to see if it is firmly secured by pulling it by hand.            ※The tightening torque should be between 7" to 10" lbs.</p> 	 Flat head Screwdriver or  Box wrench (5/16")
Step-2 (Work on rooftop)	<p>※ The assembly image figure for all parts in below Step 2 (Procedure 9 ~ 14)            Use this Image to check for correct assembly of the components.</p>  <p style="text-align: center;"> <span>Final drawing in this Step2 (a cross section)</span> <span>Final image in Step 2</span> </p>	
	<p>9 Grab <b>Bag Labeled "Step-2"</b> and necessary tools for this step of the installation.            Climb up on the roof and access the Rain Cap.</p>  <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>[Point]</b>            When climbing up on the roof, use appropriate fall protection to guard against falls. Make sure that safety comes first at your own risk.</p> </div>	Ladder Wet Towel  PVC Cutter or  Box Cutter  Marker  Bag"Step-2"

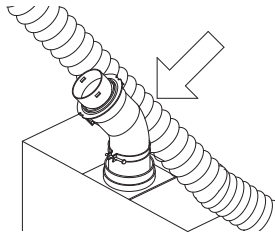
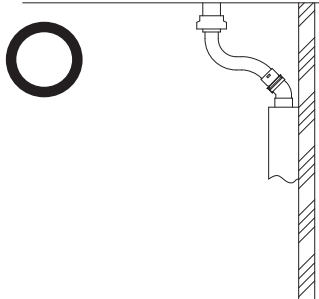
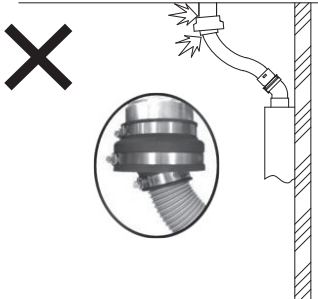
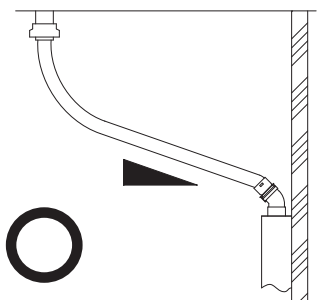
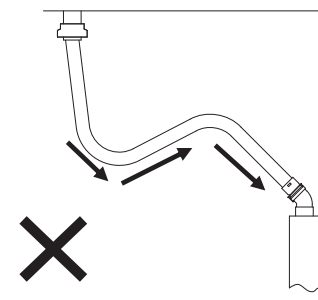
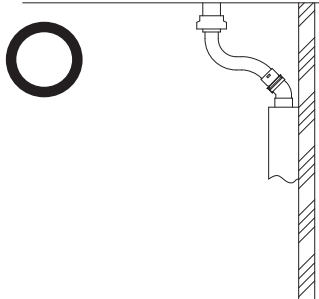
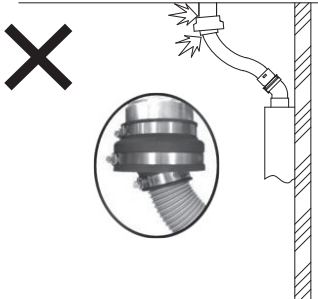
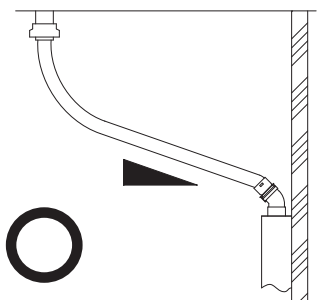
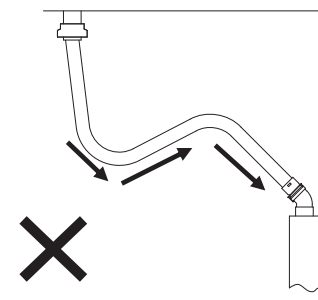
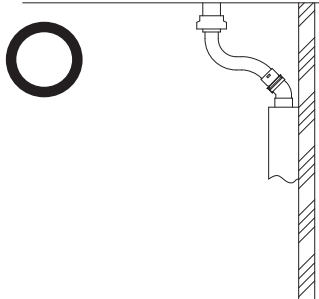
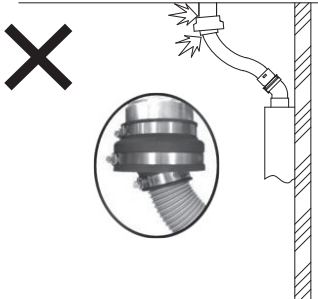
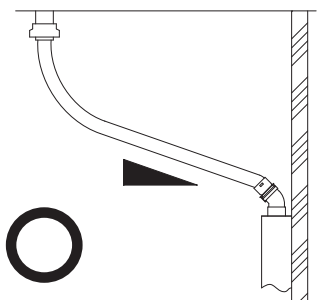
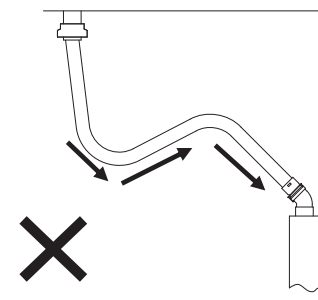
Step	Installation Procedure(ex. @Garage)	Necessary Tool
10	<p>Take off the existing rain cap and place it on the area where it does not fall from the rooftop.            ※Make sure the inside surfaces of the "⑤B-Vent" are clean to ensure a good seal of the parts in this step.</p> 	Wet Towel
11	<p>Use a marker to mark the original position of the "④Flex Pipe", at "⑤B-Vent"'s upper tip.</p>  <div data-bbox="247 1254 1252 1355">  <p>Be sure to do Mark is very important for the function. Do not skip this step. (Necessary for the next step.)</p> </div>	 Marker
12	<p>Slide the "②Top Flex Support for 3" or ③Top Flex Support for 4"" from top to bottom, over the "④Flex Pipe" while holding the "④Flex Pipe". Once the "②Top Flex Support for 3" or ③Top Flex Support for 4"" reaches the "⑤B-Vent" upper tip, press it firmly into the "⑤B-Vent" upper tip.            ※Be sure not to compress the "④Flex Pipe" into the "⑤B-Vent" when pushing the "②Top Flex Support for 3" or ③Top Flex Support for 4"" into the "⑤B-Vent".            ※Do not apply "⑭O-ring lubricant" to "②Top Flex Support for 3" or ③Top Flex Support for 4"".</p>  <div data-bbox="247 1904 1252 2072">  <p>Be sure to do Verify that you can see the mark you made at the top end of the ②Top Flex Support for 3" or ③Top Flex Support for 4" in the previous step. (The flexible vent can be expanded and contracted with the heat of the water heater. Therefore "②Top Flex Support for 3" or ③Top Flex Support for 4" has a risk to be come out.)</p> </div>	 ②Top Flex support for 3"   ③Top Flex support for 4"

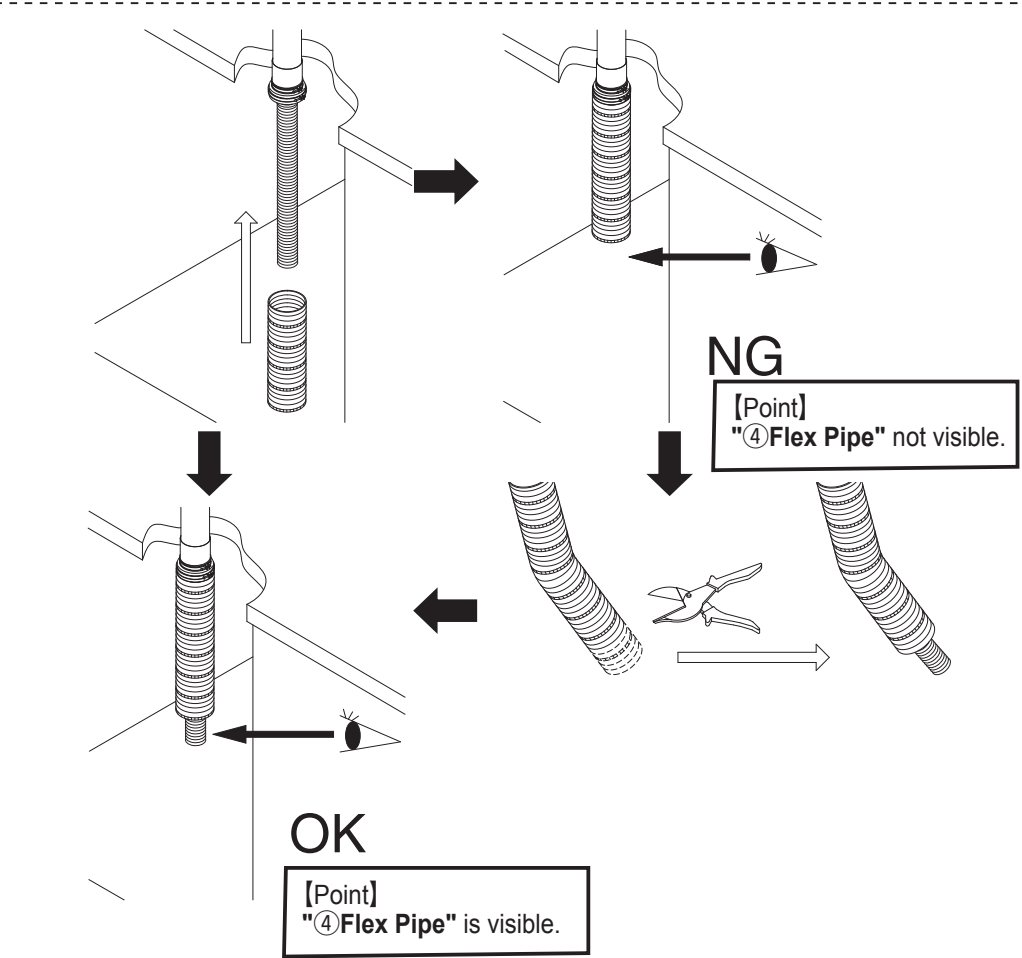

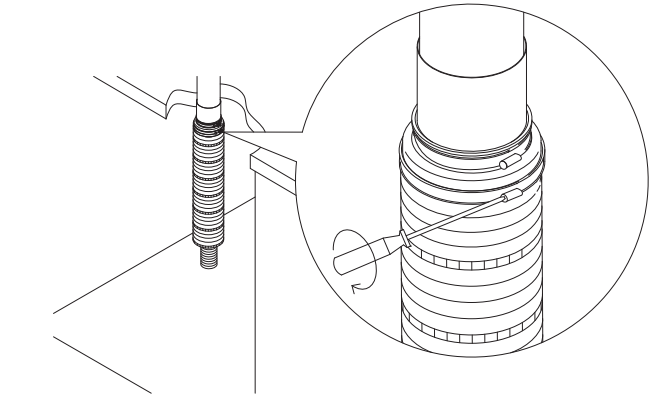
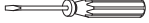

Step	Installation Procedure(ex. @Garage)	Necessary Tool
Step-2 (Work on rooftop)	<p>13 Use a marker to mark the cutting position.</p>  <p>※All cuts must be made at right angle to the pipe. All field cuts must be deburred.          ※Take precaution not to drop debris into "④Flex Pipe". In case debris is dropped, remove from the lower end of the "④Flex Pipe".</p>	
	<p>14 Attach "①Universal Rain Cap"</p>  <div data-bbox="252 1559 1262 1648">  Be sure to do Completely Insert "①Universal Rain Cap" into the "④Flex Pipe", "①Universal Rain Cap" must cover "⑤B-Vent" by 1/2".         </div>	 <p>①Universal Rain Cap</p>

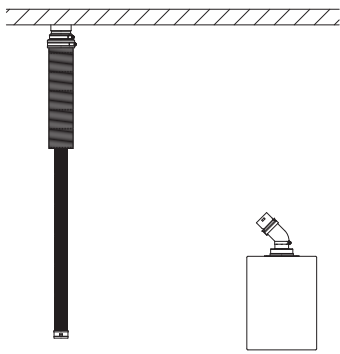
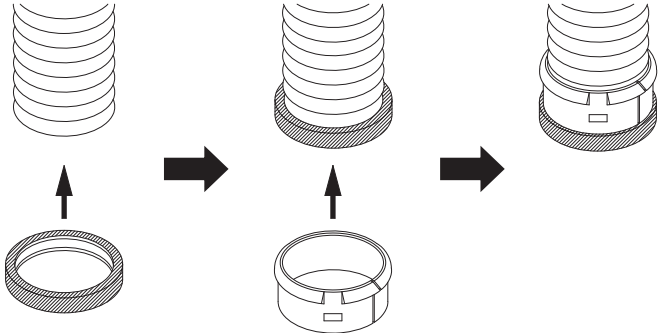
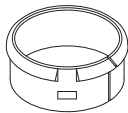
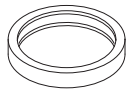
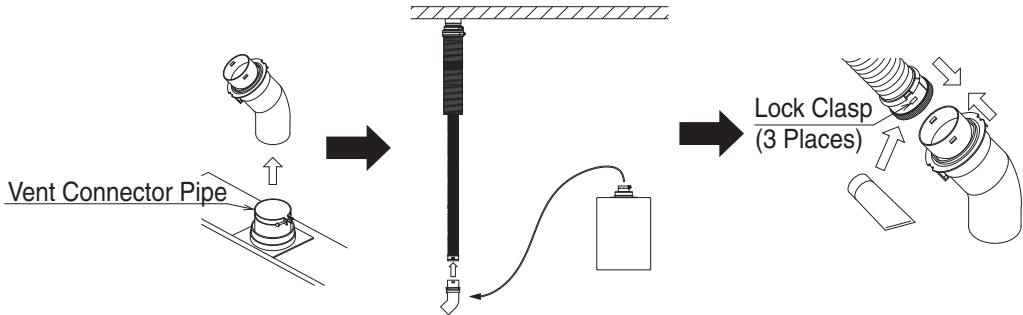
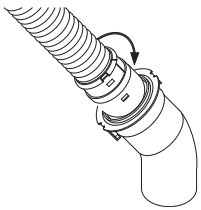


Step	Installation Procedure(ex. @Garage)	Necessary Tool														
Step-3 (Work where equipment is installed)	<p>15 Grab <b>Bag Labeled "Step-3"</b> and necessary tools for this step of the installation. Mount the water heater at the appropriate height according to the chart below, connect the gas, cold and hot water lines, and drain pipes. Follow the NRC663-FSV installation manual on how to set the equipment's clearance from combustibles.</p> <p>※The location(height) where equipment can be installed varies by horizontal distance (L) shown below. Please follow the below chart and install accordingly.</p> <p>■Equipment installation upper limit height chart by horizontal distance</p> <table><tr><td>Horizontal distance (L)</td><td>0'</td><td>~1'</td><td>~2'</td><td>~3'</td><td>~4'</td><td>~5'</td></tr><tr><td>More than height(H)</td><td>2'</td><td>2'</td><td>2'</td><td>2.6'</td><td>3'</td><td>3'</td></tr></table> <div></div>	Horizontal distance (L)	0'	~1'	~2'	~3'	~4'	~5'	More than height(H)	2'	2'	2'	2.6'	3'	3'	<div></div> <p>Tape measure</p> <div></div>
	Horizontal distance (L)	0'	~1'	~2'	~3'	~4'	~5'									
More than height(H)	2'	2'	2'	2.6'	3'	3'										
<div><p><b>【Point】</b> Before you start the plumbing, imagine where the "<b>④Flex Pipe</b>" will be ran and account for any clearance needed.</p></div> <div><p><b>【Point】</b> Always follow the above chart and determine the equipment's installation location (height). →If it is not followed, there will be nonconformance such as large tension to the final connecting area of the vent pipe and/or can't connect.</p></div>																

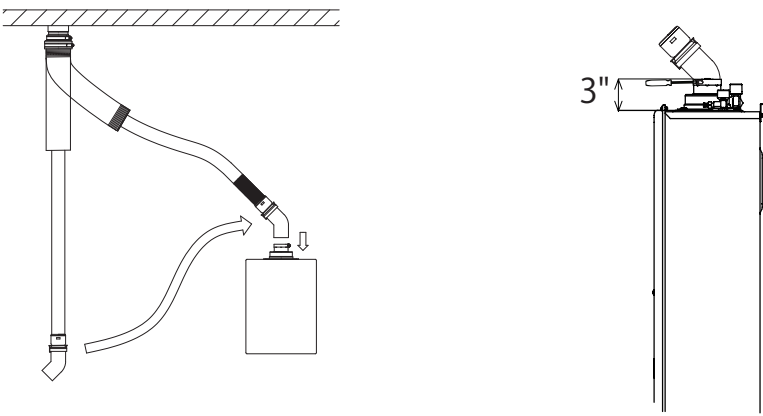
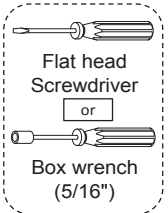
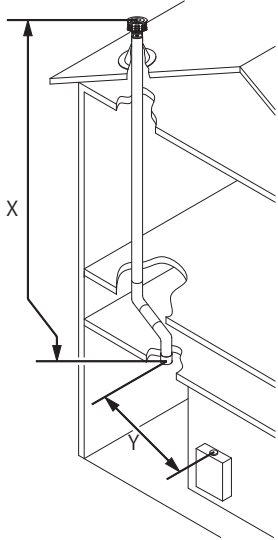
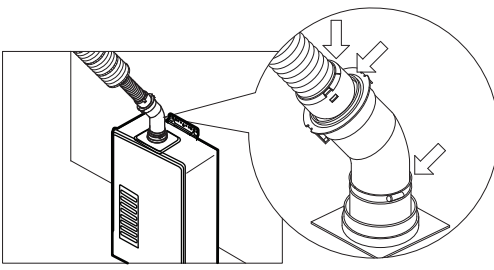



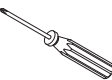
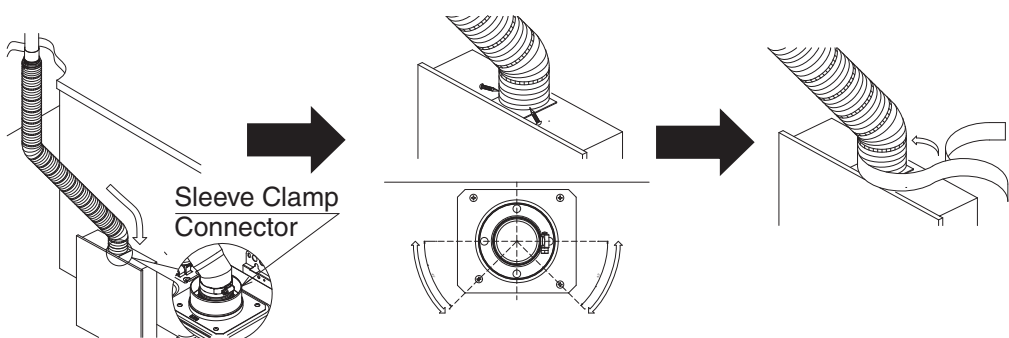


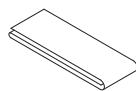
Step	Installation Procedure(ex. @Garage)	Necessary Tool
Step-3 (Work where equipment is installed)	<p>16 Insert "<b>⑨Coupler Set</b>" to the equipment's vent connector pipe. When inserting "<b>⑨Coupler Set</b>", there is tension when it passes through the o-ring within the equipment's vent connector pipe. Continue to insert "<b>⑨Coupler Set</b>" until it is firmly seated all the way into the base of the vent connector pipe.</p> <div data-bbox="236 286 1241 837">  </div> <div data-bbox="261 851 1273 1357"> <p><b>【Point】</b>            If it interferes with water and hot water piping, adjust "<b>⑨Coupler Set</b>"'s angle so that it does not interfere. If the contact is unavoidable, take measures such as inserting heat insulator so that it does not have direct contact.</p>  </div>	 <b>⑨Coupler Set</b>
	<p>17 Follow the next <b>【Point】</b> and cut the "<b>④Flex Pipe</b>" into appropriate length.</p> <div data-bbox="236 1402 1273 2051">  <div data-bbox="268 1930 1273 2051">  <p><b>Be sure to do</b> At this step, be very careful when cutting the 2" flex pipe. If it is cut too short, you must dispose of the vent or use it on another installation where a shorter length is required. These vent pieces cannot be lengthened.</p> </div> </div>	 <b>Marker</b>   <b>PVC Cutter</b> <b>or</b> <b>Box Cutter</b>

Step	Installation Procedure(ex. @Garage)	Necessary Tool							
Step-3 (Work where equipment is installed)	<div><p><b>【Point】</b> When performing the final cut, make the first cut of the "<b>④Flex Pipe</b>" longer to avoid cutting the "<b>④Flex Pipe</b>" too short. It is easy to determine the length by following the <b>【Point】</b> below and matching the dimension using the below figure.</p></div>								
	<div><p><b>【Point】</b> When determining the cut length, take note on the 2 points listed below.</p><div><p><b>【Point①】</b> Determine the proper length not giving too much tension to both "<b>⑦Base Junction Support</b>" and "<b>⑨Coupler Set</b>".</p><table><tr><th><b>【Correct installation】</b></th><th><b>【Incorrect installation】</b></th></tr><tr><td></td><td><p>When the vent pipe is too short, there will be tension to those parts.</p></td></tr></table></div><p><b>【Point②】</b> Be careful not make trap configuration of "<b>④Flex pipe</b>".</p><table><tr><th><b>【Correct installation】</b></th><th><b>【Incorrect installation】</b></th></tr><tr><td></td><td><p>In trap installation, moisture is trapped inside the vent pipe and the exhaust can't be vented.</p></td></tr></table></div>	<b>【Correct installation】</b>	<b>【Incorrect installation】</b>		 <p>When the vent pipe is too short, there will be tension to those parts.</p>	<b>【Correct installation】</b>	<b>【Incorrect installation】</b>		 <p>In trap installation, moisture is trapped inside the vent pipe and the exhaust can't be vented.</p>
<b>【Correct installation】</b>	<b>【Incorrect installation】</b>								
	 <p>When the vent pipe is too short, there will be tension to those parts.</p>								
<b>【Correct installation】</b>	<b>【Incorrect installation】</b>								
	 <p>In trap installation, moisture is trapped inside the vent pipe and the exhaust can't be vented.</p>								

Step	Installation Procedure(ex. @Garage)	Necessary Tool
Step-3 (Work where equipment is installed)	<p>18 Pull "<b>⑧Flex Sleeve</b>" over "<b>④Flex Pipe</b>" under the ceiling. Then, push into the bottom of "<b>⑦Base Junction Support</b>". And check that "<b>④Flex Pipe</b>" is sticking out from "<b>⑧Flex Sleeve</b>". (If it is not sticking out, cut "<b>⑧Flex Sleeve</b>" until "<b>④Flex Pipe</b>" sticks out.)</p>  <p><b>OK</b> [Point] "④Flex Pipe" is visible.</p> <p><b>NG</b> [Point] "④Flex Pipe" not visible.</p> <p>※ Do not extend the "<b>⑧Flex Sleeve</b>" if it needs to be cut, it should be cut while in its compressed state.</p> <div data-bbox="263 1339 1270 1467" style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;"><b>⚠ WARNING</b></p> <p>Pay attention not to get injured from the sharp edge of "<b>⑧Flex Sleeve</b>".</p> </div>	 <p>⑧Flex Sleeve</p>
	<p>19 Firmly tighten "<b>⑦B. Flex Sleeve Clamp</b>" of "<b>⑦Base Junction Support</b>", but be careful not to tighten too much as it may distort the "<b>⑧Flex Sleeve</b>" and rubber. Check to see if it is firmly fixed by pulling it by hand.</p> <p>※The tightening torque shall be between 7" and 10" lbs.</p> 	<div data-bbox="1316 1518 1481 1720" style="border: 1px dashed black; padding: 5px;">  <p>Flat head Screwdriver</p> <p style="text-align: center;">or</p>  <p>Box wrench (5/16")</p> </div>

Step	Installation Procedure(ex. @Garage)	Necessary Tool
Step-3 (Work where equipment is installed)	<p>20 See below chart and set "<b>⑪Coupler O-Ring</b>" and "<b>⑩Coupler Retainer</b>" onto the tip of "<b>④Flex Pipe</b>" in the correct direction.</p>  <div data-bbox="256 667 1267 1133"> <p><b>[Point]</b>            Correct way of setting "<b>⑪Coupler O-Ring</b>" and "<b>⑩Coupler Retainer</b>".</p>  </div>	 <p>⑩ Coupler Retainer</p>  <p>⑪ Coupler O-Ring</p>
	<p>21 Pull out assembled "<b>⑨Coupler Set</b>", which are tentatively locked to the equipment's vent connector pipe. Connect by matching pulled out assembly and 3 lock clasps of "<b>⑩Coupler Retainer</b>", which was set during the previous process.  <u>※ Prior to connecting, make sure to apply "<b>⑭O-ring lubricant</b>" to "<b>⑪Coupler O-Ring</b>".</u></p>  <div data-bbox="256 1711 1267 1800"> <p><b>!</b> Be sure to do When inserting, "<b>⑪Coupler O-Ring</b>" is easy to tear due to pinching. Therefore, take maximum precaution when working.</p> </div> <div data-bbox="256 1816 1267 2056"> <p><b>[Point]</b>            When matching the lock of "<b>⑨A. Coupler Fitting</b>" and "<b>⑩Coupler Retainer</b>", it is easier to match the lock clasp by turning the "<b>⑩Coupler Retainer</b>" by hand.</p>  </div>	 <p>⑨ Coupler Set</p>  <p>⑭ O-ring lubricant</p>

Step	Installation Procedure(ex. @Garage)	Necessary Tool
Step-3 (Work where equipment is installed)	<p>22 Attach "⑨Coupler Set" assembly back onto the unit and secure. When inserting "⑨Coupler Set", there is tension when it passes through the o-ring within the equipment's vent connector pipe. Continue to insert "⑨Coupler Set" until it reaches the all the way to the base of the equipment vent connector pipe. Check to see if it is firmly fixed by pulling it by hand.            ※The tightening torque shall be between 7" and 10" lbs.</p> <div data-bbox="311 347 1077 761">  </div>	<div data-bbox="1316 168 1484 380">  </div>
	<p>23 Refer to the calculated total vent length, using the measured length in step-1, procedure No.3 in addition to the distance from the water heater.            ※Calculate the total vent length to determine the dip switch setting.  <b><u>Vent length = X "total length of B-Vent (measured in procedure No.3)" + Y "the distance from the water heater"</u></b></p> <div data-bbox="375 974 654 1512">  </div>	
	<p>27 Depending on the vent length, set the equipment (Dip switch setting).            ※Follow the equipment's installation manual on how to set the equipment's vent length.</p> <p>28 Test run the water heater and check for any kind exhaust gas leaks in below areas.            If there are no leaks of any kind, continue to the next step.</p> <div data-bbox="263 1736 758 2004">  </div> <div data-bbox="798 1758 1260 1971"> <div data-bbox="901 1758 1157 1825">  <b>WARNING</b> </div> <p>CARBON MONOXIDE POISONING            Failure to properly seal the vent system could cause flue products to enter the living space</p> </div>	

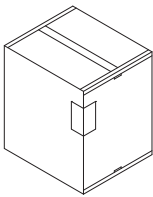
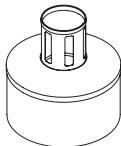


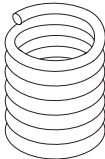
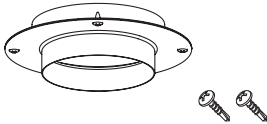
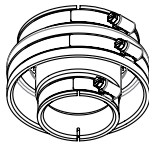
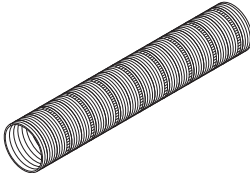
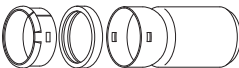
Step	Installation Procedure(ex. @Garage)	Necessary Tool
Step-3 (Work where equipment is installed)	<p>29 Extend the lower end of "<b>⑧Flex Sleeve</b>" to the sleeve clamp connector of the upper portion of equipment. Then secure with "<b>2×⑫screws</b>", and apply "<b>⑬aluminum tape</b>" covering the connecting part. Make sure that it is firmly fixed by pulling by hand.</p> <p>※Do not stretch the "<b>⑧Flex Sleeve</b>" where the screws are secured, it will weaken the point where the screws are attached to the "<b>⑧Flex Sleeve</b>".</p>	 Phillips head Screwdriver
	 <p><b>[Point]</b> Screw locations are within these two 45°</p> <div style="border: 1px solid black; padding: 5px; text-align: center;">  <b>WARNING</b> </div> <p>Pay attention not to get injured from the sharp edge of "<b>⑧Flex Sleeve</b>"</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>[Point]</b> Check and see if "<b>⑧Flex Sleeve</b>" is firmly fixed.</p> </div>	 <b>⑫Screws</b>   <b>⑬Aluminum tape</b>


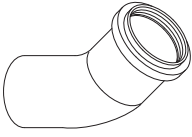
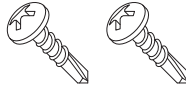
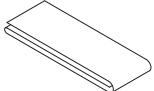
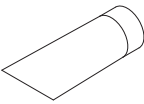

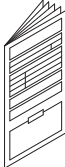

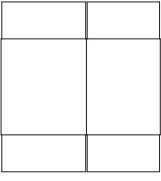
## 7.Maintenance

Periodically check the following to ensure proper operation of the water heater.

- The venting system must be examined periodically by a qualified service technician to check for any leaks or corrosion.
- Check and confirm that there is no tension to the flexible vent by hanging or suspending of anything.
- When changing the water heater, change whole venting components to new ones.

## 8.Parts Lists

No.	Parts name	Shape	Part#
	N-FlexKit2"-35		EZ2FVK35
①	Universal Rain Cap		EZ2FVURC-1
②	Top Flex Support for 3"		EZ2FVTFS
③	Top Flex Support for 4"		EZ2FV4TFS
④	Flex Pipe2"		EZ2FVP35
⑥	Base Junction Adapter Set		EZ2FVBADS-1
⑦	Base Junction Support		EZ2FVBJS
⑧	Flex Sleeve		EZ2FVS
⑨A ⑩ ⑪	Coupler		EZ2FVRC

No.	Parts name	Shape	Part#
⑨B	Connector Ring		EZ2FVCR
⑨C	45 degree PP elbow		EZ2FVR45ELB
⑫	Screw		N/A
⑬	Aluminum tape		N/A
⑭	O-ring lubricant		EZFVL
⑮	Flex Feeder		EZ2FVF
	Installation manual		EZ2FVK35LT-2
	Start Up Guide		EZ2FV35SUG-2
	Packing box		EZ2FVK35BOX

※"No." indicated on this page corresponds to the number on the applicable component on page 8.