Downturn Nozzles, Option CD2, CD3, CD4

Installation Form RZ-NA I-UD-DN

APPLIES TO: Models UDAP and UDAS

Description and Application

Downturn nozzles are designed to direct the discharge air in a more vertical flow. Those downturn nozzle packages apply to Reznor Models UDAS and UDAP only. Downturn nozzles are available in three configurations:

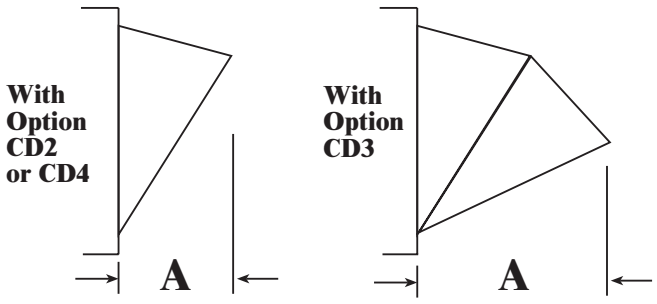
- **Option CD2** - one nozzle selection with a 25-65° range of air deflection
- **Option CD3** - two nozzles sections providing a 50-90° range of air deflection
- **Option CD4** - one nozzle section with a 25-65° range of air deflection and vertical louvers

Kit Components

Size	**30, 45**	**60, 75**	**100, 125**	**150, 175, 200**	**225, 250**	**300, 350, 400**
Option CD2 Pkg P/N	**197103**	**197104**	**197105**	**201202**	**201203**	**201204**
Nozzle Section Right Side	(1)196990	(1)196991	(1)196992	(1)197173	(1)197174	(1)197175
Nozzle Section Left Side	(1)196993	(1)196994	(1)196995	(1)197176	(1)197177	(1)197178
Nozzle Section Top	(1)196987	(1)196988	(1)196989	(1)197170	(1)197171	(1)197172
Nozzle Section Bottom	(1)196996			(1)196997		(1)197179
Screws	(14) 195638, #8-18 x 3/8" long AB point, slotted indented serrated hex washer head					
Option CD3 Pkg P/N	**197111**	**197112**	**197113**	**201205**	**201206**	**201207**
Nozzle Section Right Side	(2)196990	(2)196991	(2)196992	(2)197173	(2)197174	(2)197175
Nozzle Section Left Side	(2)196993	(2)196994	(2)196995	(2)197176	(2)197177	(2)197178
Nozzle Section Top	(2)196987	(2)196988	(2)196989	(2)197170	(2)197171	(2)197172
Nozzle Section Bottom	(2)196996			(2)196997		(2)197179
Screws	(28) 195638, #8-18 x 3/8" long AB point, slotted indented serrated hex washer head					
Option CD4 Pkg P/N	**197114**	**197115**	**197116**	**201208**	**201209**	**201210**
Nozzle Section Right Side	(1)196990	(1)196991	(1)196992	(1)197173	(1)197174	(1)197175
Nozzle Section Left Side	(1)196993	(1)196994	(1)196995	(1)197176	(1)197177	(1)197178
Nozzle Section Top	(1)196987	(1)196988	(1)196989	(1)197170	(1)197171	(1)197172
Nozzle Section Bottom	(1)196996			(1)196997		(1)197179
Louver	(5)196232	(5)196231	(5)196233	(8)196572	(8)196573	(8)195315
Compression Spring	(5)195046	(5)195046	(5)195046	(8)195046	(8)195046	(8)195046
Louver Top and Bottom Support	(2)197056			(2)197189		(2)197190
Louver Side	(2)197057	(2)197058	(2)197059	(2)197186	(2)197187	(2)197188
Screws	(34) 195638, #8-18 x 3/8" long AB point, slotted indented serrated hex washer head					

Dimensions

Dimension A				
Size	**Options CD2 and CD4**		**Option CD3**	
	inches	mm	inches	mm
30, 45	7-1/8	181	12-3/8	314
60, 75	8-5/8	219	15	381
100, 125	12-5/8	321	21-7/8	556
150, 175, 200	11-1/2	292	19-7/8	505
225, 250	14-1/2	368	25-1/8	638
300, 350, 400	18-1/2	470	32	813



Installation Instructions

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury or death. Read the installation, operation, and maintenance instructions thoroughly before installing or servicing this equipment.

Installation should be done by a qualified agency in accordance with the instructions on this sheet and in compliance with all codes and requirements of authorities having jurisdiction.

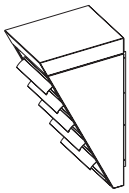
Select and follow the instructions for the option package being installed:

- Option CD2 or CD3 ..... SECTION A
- Option CD4 ..... SECTIONS A and B

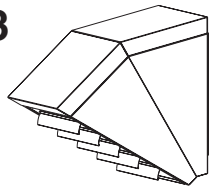
SECTION A

Applies to

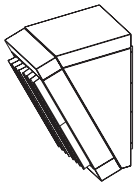
- **Option CD2**



- **Option CD3**



- **Option CD4**



1. If the heater is installed, turn off the gas and the electric power.

2. Assemble Downturn Nozzle Section (See FIGURE 1.)

Using the screws in the kit, attach both sides to the top. Attach the bottom to both sides.

If installing Option CD3, use the second set of nozzle parts and assemble the second nozzle section.

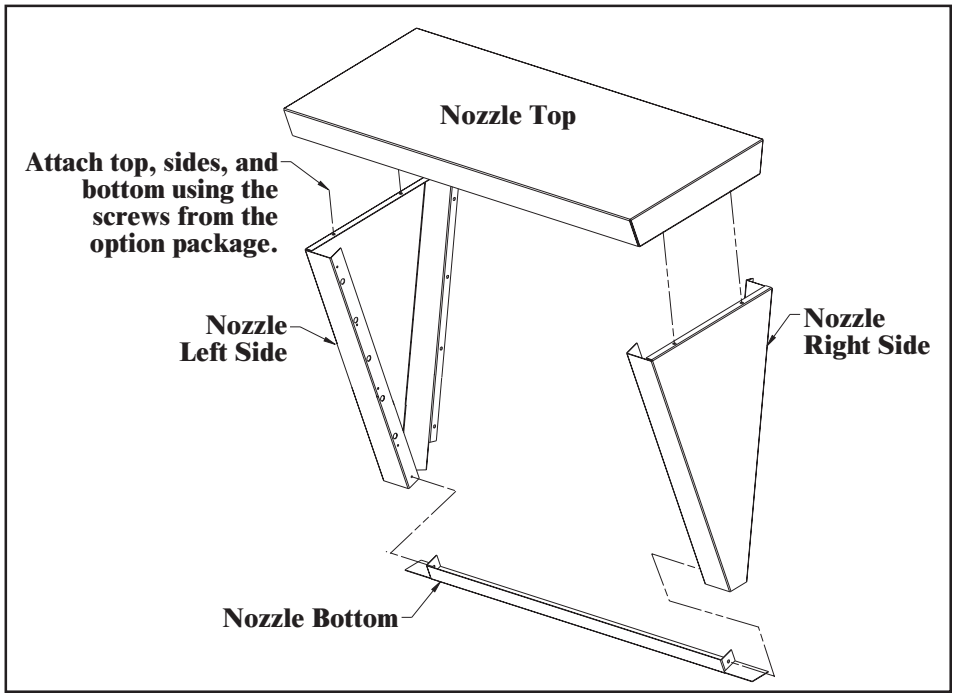


FIGURE 1 - Assemble the Downturn Nozzle

3. Remove the Horizontal Louvers from the Heater

The louvers in the heater outlet are spring mounted. Push on each louver blade compressing the spring so that the louver is released from the opposite end and can be pulled out of the heater outlet. Remove all louver blades being careful not to lose the springs. Save louvers to be re-installed in the nozzle opening.

4. Install the Assembled Downturn Nozzle in the Heater Outlet

Position the assembled nozzle in the heater outlet so that the holes on each side are lined up with the holes in the heater.

Using the screws in the kit, attach the nozzle to the sides of the heater outlet.

If installing Option CD3, position the second assembled nozzle in the outlet of the nozzle already attached to the heater. Attach the second nozzle to the first nozzle creating a downturn with two sections.

5. Install the Louvers in the Nozzle Outlet

Install the spring loaded louvers removed in Step 3. in the nozzle outlet. Adjust the louvers to provide the desired air throw.

CAUTION: To avoid getting burned, adjust louvers while heater is not in operation. If louvers are adjusted while heater is in operation, wear protective gloves.

Option CD2 or CD3 - Installation is complete. If the heater is installed, turn on the electric and the gas. Light the heater following the lighting instructions. Check for proper operation.

Option CD4 - Continue to SECTION B.

SECTION B

Applies to

- **Option CD4**

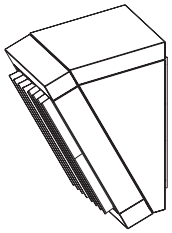
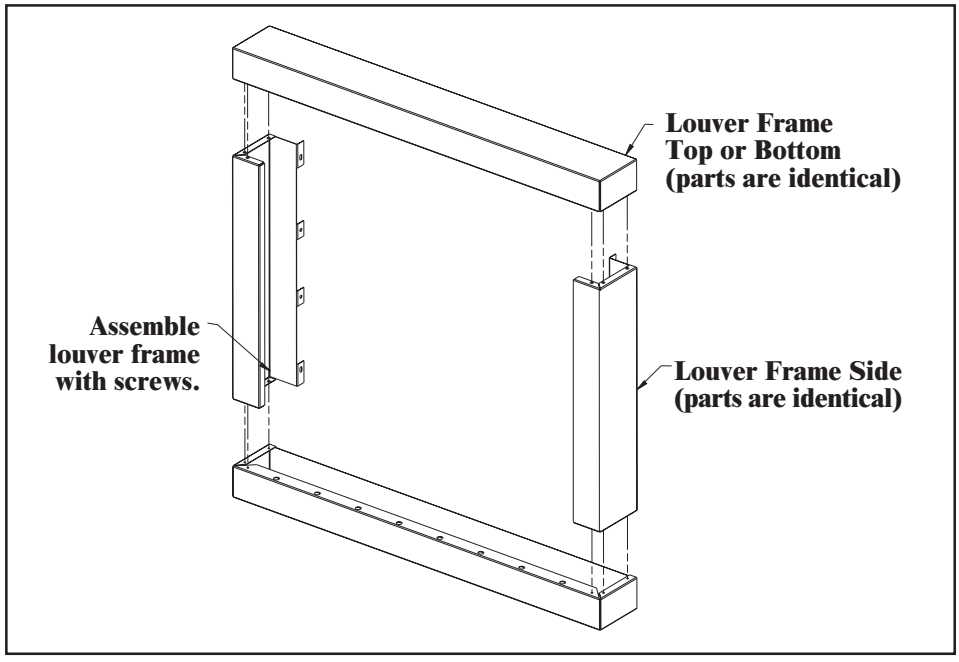


FIGURE 3 - Assemble the Vertical Louver Frame

1. Assemble the Vertical Louver Frame (See FIGURE 3.)

Using the screws in the kit, attach both sides to the top. (NOTE: Top and bottom are identical.) Attach the assembly to the bottom creating a frame.



2. Install the Vertical Louver Frame

Position the assembled louver frame in the nozzle outlet so that the holes in the tabs on each side are lined up with the holes in the nozzle. (The tabs fit between the horizontal louvers.)

Using the screws in the kit, attach the tabs to the sides of the nozzle outlet.

3. Install the Vertical Louvers in the Louver Frame Using the Compression Springs (See FIGURE 4.)

Before actually installing the louvers, note the louver curve and determine how the louvers should be positioned to provide the optimal throw pattern. Depending on where the heater is installed and the desired direction of airflow, louvers may be installed with the curve all the same direction (either way) or the right half one way and the left the other as illustrated in FIGURE 4.

Installation Instructions (cont'd)
SECTION B (cont'd)

Applies to

- **Option CD4**

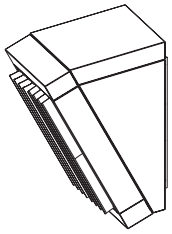


FIGURE 4 - Installing Vertical Louvers in Option CD4

3. Install the Vertical Louvers (cont'd)

a) **With the wider section facing out of the heater,** place one of the compression springs over the tab on the notched end of the louver.

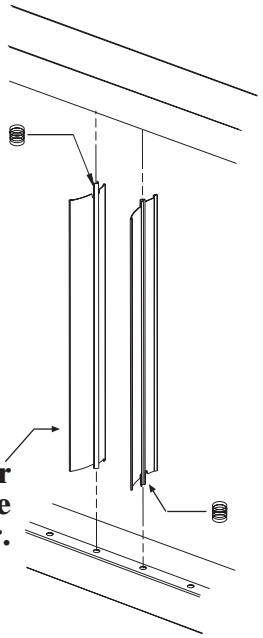
b) Depending on the throw pattern selected, the end with the spring can go either in the top support or the bottom. See FIGURE 4. Slide the tab with the spring into one of the holes in either the top or bottom support. Push the louver, compressing the spring enough to place the tab on the other end into the corresponding hole in the other support.

c) Continue installing the louvers until all vertical louvers are in place.

1) On the notched end of the louver, slide the spring over the tab.

2) When facing the unit, <u>for airflow to the left</u>, push the tab with the spring into a hole in the top louver frame (compressing the spring) and insert the tab on the other end into the corresponding hole in the bottom.

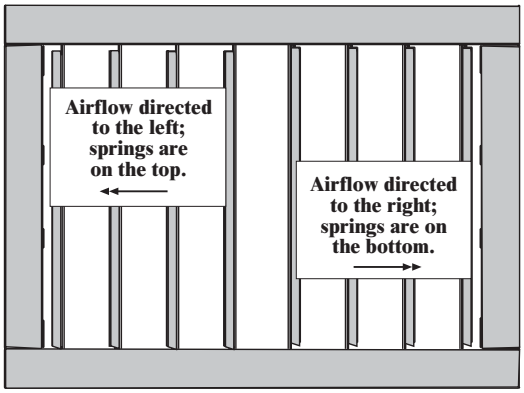
<u>For airflow to the right</u>, push the tab with the spring into a hole in the bottom louver frame (compressing the spring) and insert the tab on the other end into the corresponding hole in the top.



Wider side of the louver blade must always be facing out of the heater.

Front View of Vertical Louver Frame with Louvers Installed

(Nozzle is removed for clarity.)



4. Adjust the horizontal and vertical louvers to provide the desired throw pattern.

CAUTION: To avoid getting burned, adjust louvers while heater is not in operation. If louvers are adjusted while heater is in operation, wear protective gloves.

Installation of Option CD4 is complete. If the heater is installed, turn on the electric and the gas. Light by following the lighting instructions on the heater. Check for proper operation.

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