

Installation Form for Downturn Nozzles, Options CD2, CD3, CD4, and CD5

Applies to: **V3® Models UDAP, UDAS, UDBP, UDBS, UEAS**

Description and Application

Downturn nozzles are designed to direct the discharge air in a more vertical flow. These downturn nozzle packages apply only to Reznor Models UDAP, UDAS, UDBP, UDBS and UEAS.

Models UDAP and UDAS are designed for either 2-pt or 4-pt suspension. Models UDBP, UDBS, and UEAS are designed with 4-pt suspension. **Four-point suspension is required when installing a downturn nozzle.**

Downturn nozzles are available in four configurations:

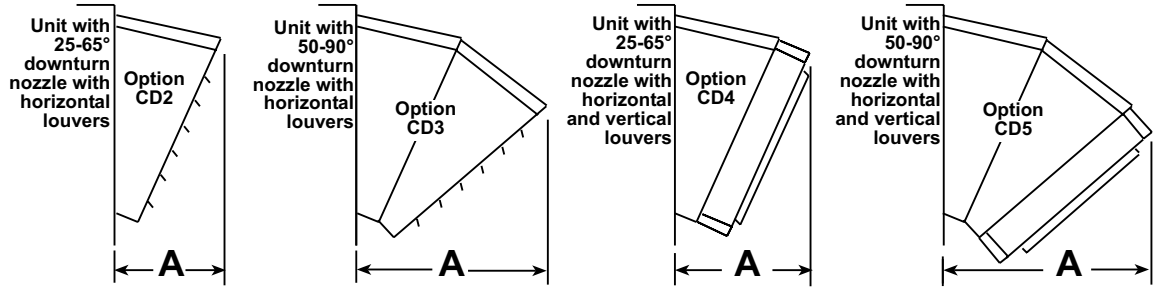
- **Option CD2** - one nozzle section with a 25-65° range of air deflection
- **Option CD4** - same as CD2 plus vertical louvers
- **Option CD3** - two nozzle sections providing a 50-90° range of air deflection
- **Option CD5** - same as CD3 plus vertical louvers (Install on blower Model UDBP or UDBS only; **do not** install CD5 on Model UDAP, UDAS, or UEAS.)

Kit Components

Models UDAP, UDAS, UDBP, UDBS	30, 45	60, 75	100, 125	150, 175, 200	225, 250	300, 350, 400
Model UEAS				130, 180		260, 310
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 Bracket	--	--	--	(2)201708		(2)201709
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 CD4 Pkg P/N	197114	197115	197116	201208	201209	201210
Same components as Option CD2 above PLUS						
Vertical 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 Frame Side	(2)197057	(2)197058	(2)197059	(2)197186	(2)197187	(2)197188
Screws	(20) 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 Bracket	--	--	--	(2)201708		(2)201709
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 CD5 Pkg P/N	202094	202095	202096	202097	202098	202099
Same components as Option CD3 above PLUS						
Vertical Louver	(5)196232	(5)196231	(5)196233	(8)196572	(8)196573	(8)195315
Compression Spring	(8)195046	(8)195046	(8)195046	(8)195046	(8)195046	(8)195046
Louver Top and Bottom Support		(2)197056		(2)197189		(2)197190
Louver Frame Side	(2)197057	(2)197058	(2)197059	(2)197186	(2)197187	(2)197188
Screws	(22) 195638, #8-18 x 3/8" long AB point, slotted indented serrated hex washer head					

Downturn Nozzle Dimensions

- Downturn nozzles require 4-pt suspension.
- Install Option CD5 on UDBP or UDBS only.



Size	Dimension A							
	with Option CD2		with Option CD3		with Option CD4		with Option CD5	
	inches	mm	inches	mm	inches	mm	inches	mm
30, 45	7-1/8	181	12-3/8	314	10-1/8	257	14-1/8	359
60, 75	8-5/8	219	15	381	11-5/8	295	16-3/4	425
100, 125	12-5/8	321	21-7/8	556	15-5/8	397	23-5/8	600
130, 150, 175, 180, 200	11-1/2	292	19-7/8	505	14-1/2	368	19-7/8	505
225, 250	14-1/2	368	25-1/8	638	17-1/2	445	26-7/8	683
260, 300, 310, 350, 400	18-1/2	470	32	813	21-1/2	546	33-3/4	858

Installation Instructions

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.

IMPORTANT: Model UDAP and Model UDAS require four-point suspension when installing a downturn nozzle.

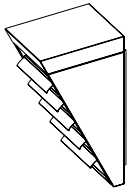
Select and follow the instructions for the option package being installed:

- Option CD2 or CD3 SECTION A only
- Option CD4 or CD5 SECTIONS A and B

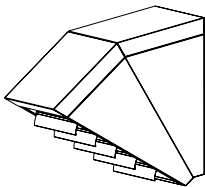
SECTION A

Applies to:

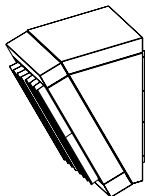
■ Option CD2



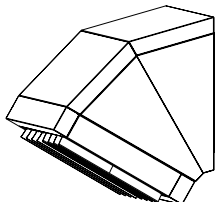
■ Option CD3



■ Option CD4



■ Option CD5



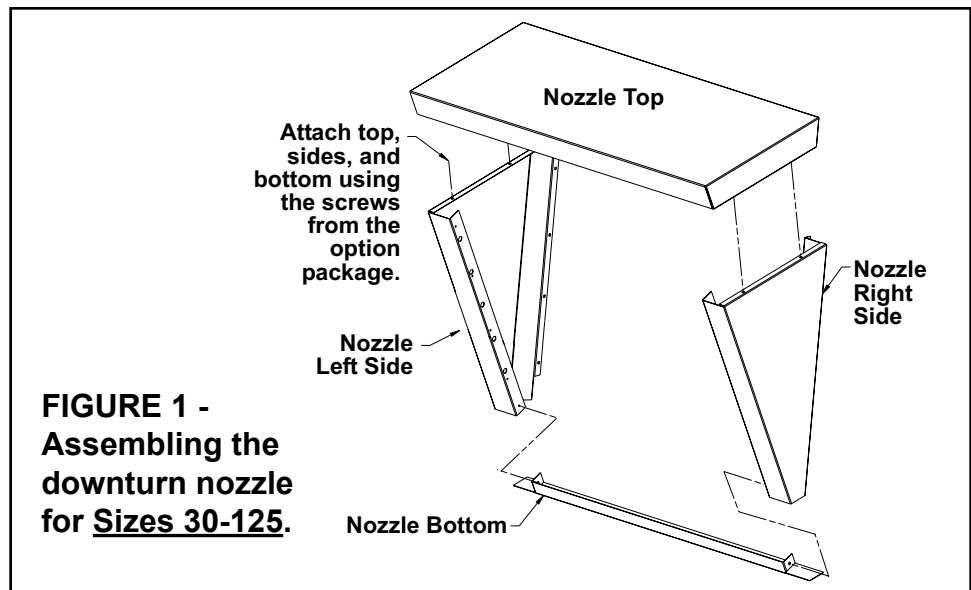
1. If the heater is installed, turn off the gas and the electric power.

2. Assemble Downturn Nozzle Section

Sizes 30-125 (See FIGURE 1.) - Using the screws in the kit, attach both sides to the top. Attach the bottom to both sides.

Sizes 150-400 (See FIGURE 2.) - Using the brackets and the screws in the kit, attach both sides to the top. Attach the bottom to both sides.

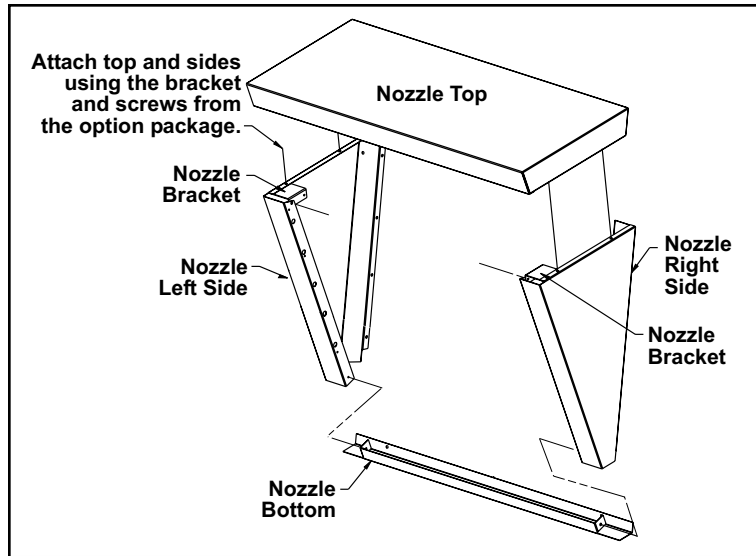
If installing Option CD3 or CD5, use the second set of nozzle parts and assemble the second nozzle section.



**FIGURE 1 -
Assembling the
downturn nozzle
for Sizes 30-125.**

**FIGURE 2 -
Assembling the
downturn nozzle
for UDAP, UDAS, UDBP,
UDBS Sizes 150-400 and
UEAS 130-310.**

**Install a nozzle bracket
in the top front corners
of each section.**



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 or CD5, 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.

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.

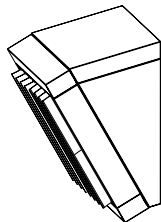
Options CD4 and CD5 - Continue to **SECTION B.**

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.

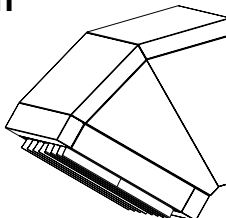
SECTION B

Applies to

■ **Option CD4**

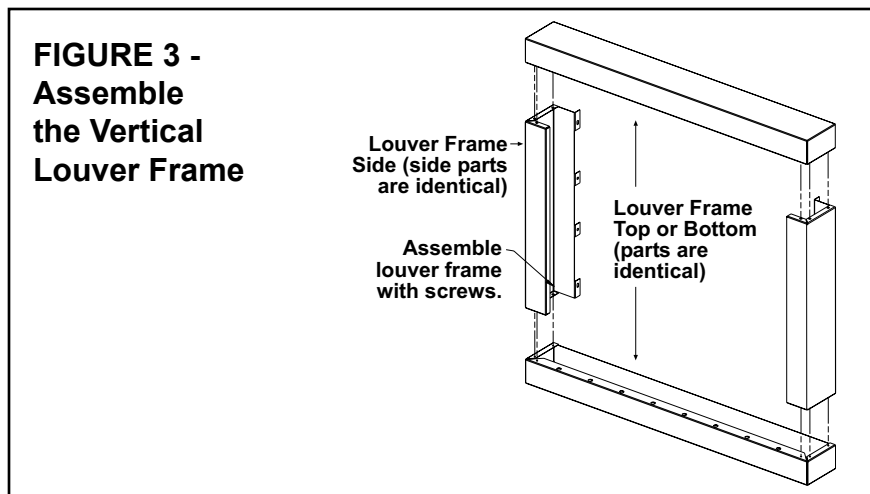


■ **Option CD5**



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.



Installation Instructions (cont'd)

SECTION B - Options CD4 and CD5 (cont'd)

APPLICATION NOTE:

Option CD5 may only be installed on Model UDBP or UDBS; **DO NOT** install CD5 on a Model UDAP, UDAS, or UEAS.

FIGURE 4 - Installing Vertical Louvers in Option CD4 or CD5

2. Install the Vertical Louver Frame

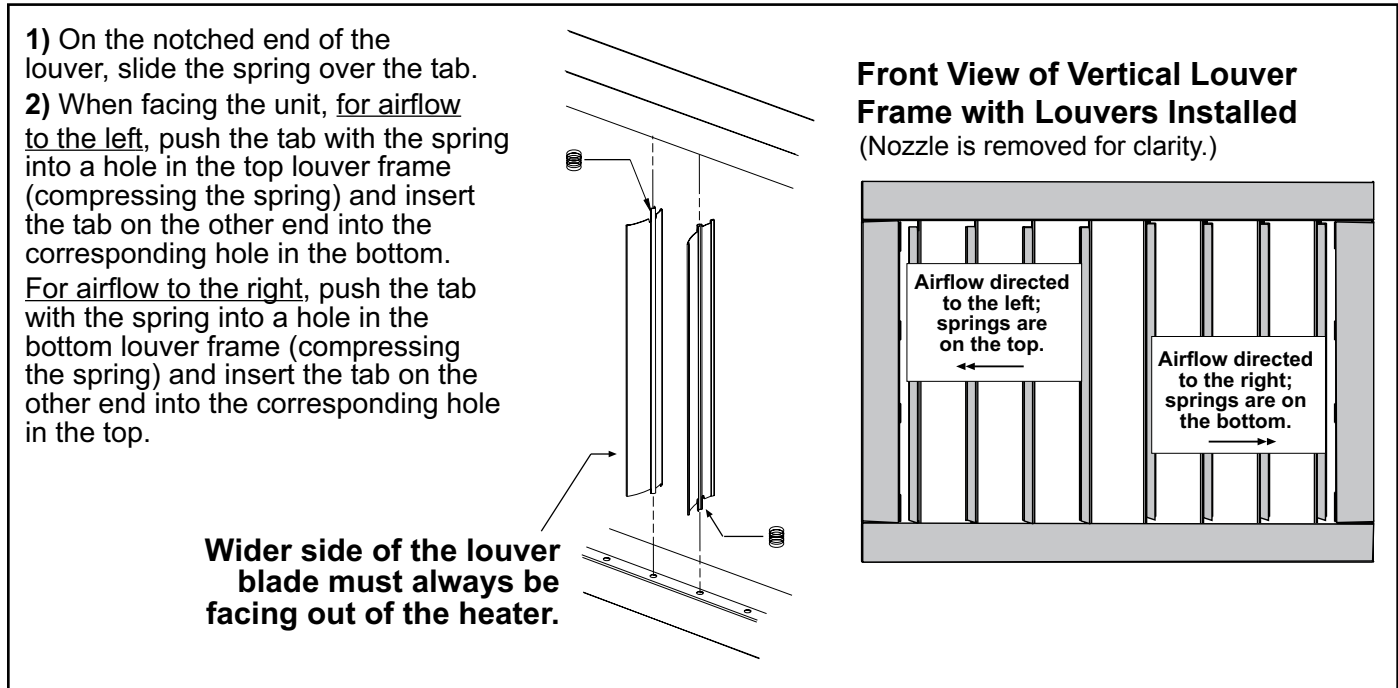
Position the assembled louver frame in the nozzle outlet so that the holes in the tabs on each side are lined up with the holes in the nozzle. (The tabs fit between the horizontal louvers.)

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**.

- 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.
- 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.
- Continue installing the louvers until all vertical louvers are in place.



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 or CD5 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.