

DOWNTURN NOZZLE KIT INSTALLATION FOR UNIT HEATERS

OPTIONS CD57, CD58, AND CD59 FOR MODEL LDAP

- Downturn nozzles are designed to direct the discharge air in a more vertical flow. A discharge nozzle may be installed at each discharge air opening in any direction.
- Option CD57 provides 30-degree air deflection. Option CD58 provides 60-degree air deflection. Option CD59, which includes four-way louvers, provides 30-degree air deflection that may vary with louver adjustment.

NOTE: Do not install four-way louvers with a 60-degree nozzle.

- Refer to the installation manual provided with the heater for important safety information.
- Ensure that all components listed in [Table 1](#) are available before beginning installation.

Table 1. Nozzle Assembly Components

Component	Description	Unit Size								
		400			800			1200		
		Option								
		CD57	CD58	CD59	CD57	CD58	CD59	CD57	CD58	CD59
		Kit PN								
		208094	208097	208100	208886	208888	208890	208887	208889	208891
PN (Quantity)*										
Nozzle section	Right side	207932	207932 (2)	207932	207932	207932 (4)	207932	207932	207932 (6)	207932
	Left side	207933	207933 (2)	207933	207933	207933 (4)	207933	207933	207933 (6)	207933
	Top	207934	207934 (2)	207934	207934	207934 (4)	207934	207934	207934 (6)	207934
	Bottom	207935	207935 (2)	207935	207935	207935 (4)	207935	207935	207935 (6)	207935
Filler	Nozzle side	208747 (2)	208747 (4)	208747 (2)	208747 (4)	208747 (8)	208747 (4)	208747 (6)	208747 (12)	208747 (6)
Bag	Hardware	208356	208357	208358	208356	208357	208358	208356	208357	208358
Screw**	Hex washer head, #8-18 x 3/8, AB point, slotted indented serrated	195638 (20)	195638 (46)	195638 (38)	195638 (20)	195638 (46)	195638 (38)	195638 (20)	195638 (46)	195638 (38)
	#8 x 1/2, self-drilling, Teks	195249 (6)	195249 (12)	195249 (18)	195249 (6)	195249 (12)	195249 (18)	195249 (6)	195249 (12)	195249 (18)
Spring**	Compression	—	—	195046 (7)	—	—	195046 (7)	—	—	195046 (7)
Louver		—	—	195578 (7)	—	—	195578 (14)	—	—	195578 (21)
Support	Louver frame	—	—	207937 (2)	—	—	207937 (4)	—	—	207937 (6)
Side	Louver frame	—	—	207936 (2)	—	—	207936 (4)	—	—	207936 (6)

*Quantity is one (1) for unit size 400, two (2) for unit size 800, or three (3) for unit size 1200 unless otherwise indicated.

**Included in each hardware bag.

INSTALLATION

NOTE: Before installing a downturn nozzle, ensure that the installation location provides sufficient clearance—in accordance with the installation/operation/maintenance manual provided with the unit—for the nozzle option being installed.

Install the downturn nozzle kit as follows:

1. Assemble downturn nozzle assembly (see [Figure 1](#), DETAIL A):
 - a. Secure both side sections to top section using 3/8-inch screws.
 - b. Secure both side sections to bottom section using 3/8-inch screws.
 - c. Install side fillers:
 - (1) For options CD57 and CD58, secure side fillers to both side sections using 3/8-inch screws.
 - (2) For options CD58 and CD59, assemble second nozzle without side fillers and connect both assembled nozzles and using 3/8-inch screws (see [Figure 1](#), DETAIL B).
 - (3) For option CD58, to install side fillers for second nozzle, position each side filler over seam between both bottom nozzle sections, remove screws that align with holes in each side filler, and re-install screws to secure each side filler over seam.
 - (4) For option CD59, do not attach side fillers for second nozzle—these will be installed in step 6b(3).

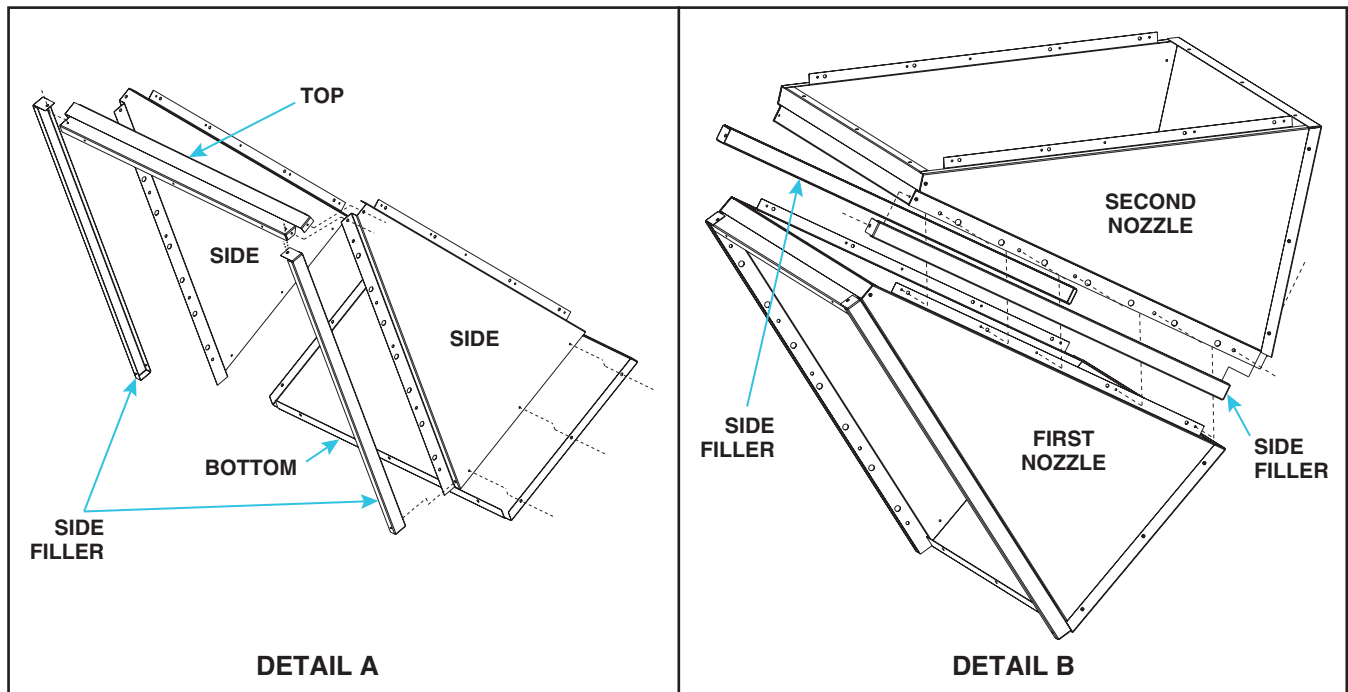


Figure 1. Nozzle Assembly

2. If heater is already installed, turn OFF gas and electric power. Allow time for louvers to cool before proceeding.
3. If horizontal louvers are already installed, remove each louver by pushing louver toward spring to release louver—these will be re-installed in step 5.
4. Install assembled nozzle in heater outlet (see [Figure 2](#)):

NOTE: The discharge opening is square, so the nozzle can be installed in any direction.

- a. Determine desired nozzle direction and position assembled nozzle in heater outlet so that holes on each side align with holes in heater.
- a. Secure nozzle sides to heater using 3/8-inch screws—ensure that screw ends are inside nozzle.
- b. Install 1/2-inch self-drilling screws inside nozzle to secure nozzle top and bottom using existing holes in nozzle top and bottom to position screws.

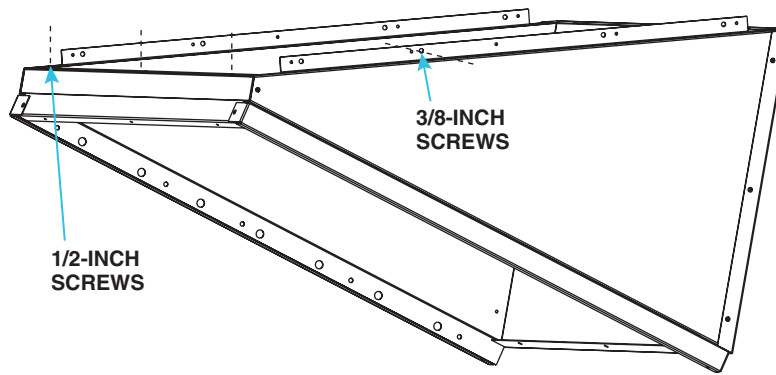


Figure 2. Nozzle Installation

NOTE: Before 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 on the desired airflow direction, the louvers may be installed with their curves all in the same direction (either way) or the right half one way and the left the other.

5. Re-install horizontal louvers removed in step 3 in nozzle outlet:

NOTE: The wider side of the louver blade must always be facing out of the heater. Depending on the desired throw pattern, the end of the louver with the spring can go either into the frame top or bottom.

- a. On notched end of louver, slide compression spring over tab.
- b. With wider louver blade facing in toward heat exchanger, push tab with compression spring into hole in top or bottom louver frame (Figure 3)—spring compresses. Insert tab on other end of louver into opposite louver frame. For left airflow, compress spring into top louver frame. For right airflow, compress spring into bottom louver frame.
- c. Install all remaining louvers in accordance with steps 5a and 5b.

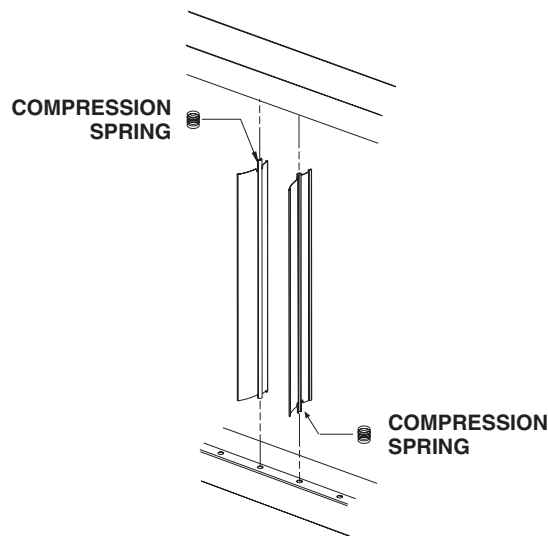


Figure 3. Louver Installation

6. For option CD59, install vertical louvers as follows:

- a. Assemble louver frame (see Figure 4). Secure both sides to both supports using 3/8-inch screws.

INSTALLATION—CONTINUED

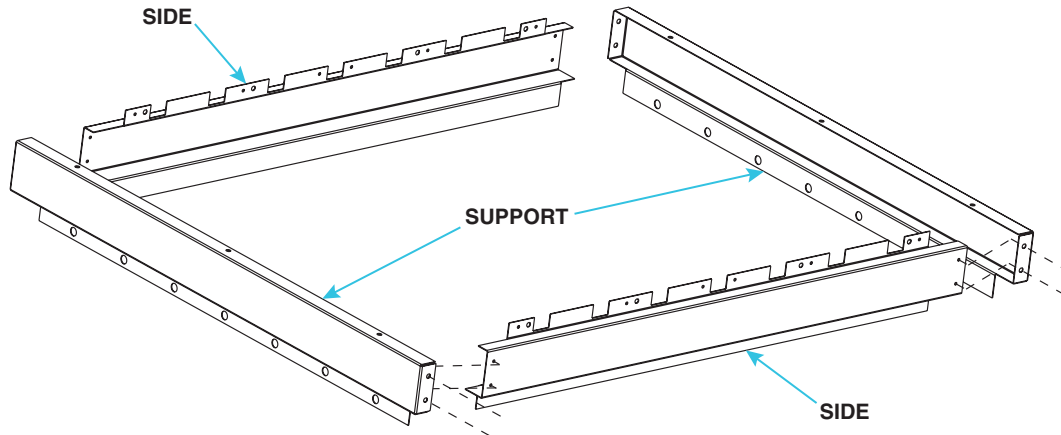


Figure 4. Louver Frame

b. Install assembled louver frame:

- (1) Position assembled louver frame in nozzle outlet so that holes in tabs on sides align with holes in nozzle. Tabs fit between horizontal louvers already installed in nozzle discharge.
- (2) Secure louver frame tabs to nozzle using 3/8-inch screws—ensure that screw ends are inside nozzle.
- (3) Align holes in louver frame supports and holes in nozzle side fillers with holes in nozzle outlet and secure louver frame and side fillers to nozzle outlet using 1/2-inch self-drilling screws.
- (4) Install vertical louvers in accordance with steps 5a, 5b, and 5c.

⚠ WARNING ⚠

To avoid burns, adjust louvers while heater is not in operation. If louvers must be adjusted while heater is operating, wear protective gloves.

7. Adjust all louvers to provide desired throw pattern.
8. Repeat steps 1 through 6 as required for each heat section.
9. Turn ON gas and electric power.
10. Light heater in accordance with lighting instructions.
11. Check for proper operation.

