REZNOR®

Revision: OPT-CD2,3,4,5 (06-24) 1036421-D

Supersedes: OPT-CD2,3,4,5 (01-24) 1036421-C

DOWNTURN NOZZLE KIT INSTALLATION FOR UNIT HEATERS

OPTIONS CD2, CD3, CD4, AND CD5 FOR GAS-FIRED MODELS UBX, UBXC, UBZ, UDX, UDXC, UDZ, AND UEZ AND HYDRONIC MODEL UWS

- Downturn nozzles are designed to direct the discharge air in a more vertical flow. Ensure that the unit location provides sufficient clearance for the nozzle option that is being installed.
- Refer to the installation manual provided with the heater for important safety information.
- Refer to **Table 1** for option descriptions.

Table 1. Downturn Nozzle Options

Option	Description	Option	Description
CD2	Downturn of from 25- to 65-degrees	CD4	CD2 nozzle with vertical louvers (option CD1)
CD3	Downturn of from 50- to 90-degrees	CD5	CD3 nozzle with vertical louvers (option CD1)

KIT COMPONENTS

Ensure that all components listed in **Table 2**, **Table 3**, or **Table 4** are available before beginning installation.

Table 2. Kit Components (Models UBX, UBXC, UBZ, UDX, UDXC, and UDZ)

Component	Option	Model	Unit Size (MBTUh)					
			30, 45	60, 75	100, 125	150, 175, 200	225, 250	300, 350, 400
			PN (Quantity)*					
Kit package	CD2	All	1036261	1036262	1036263	1036264	1036265	1036266
		UBZ, UDZ**	1036267	1036268	1036269	1036270	1036271	1036272
	CD3	All	1036273	1036274	1036275	1036276	1036277	1036278
		UBZ, UDZ**	1036279	1036280	1036281	1036282	1036283	1036284
	CD4	All	1036285	1036286	1036287	1036288	1036289	1036290
		UBZ, UDZ**	1036291	1036292	1036293	1036294	1036295	1036296
	CD5	UBX, UBXC, UBZ, UDXC, UDZ	1036306	1036307	1036308	1036309	1036310	1036311
		UBZ, UDZ**	1036312	1036313	1036314	1036315	1036316	1036317
Right nozzle panel	CD2, CD4	All	1033918	1034681	1034682	1034683	1034684	1034685
	CD3, CD5		1033918 (2)	1034681 (2)	1034682 (2)	1034683 (2)	1034684 (2)	1034685 (2)
Left nozzle panel	CD2, CD4	All	1033917	1034676	1034677	1034678	1034679	1034680
	CD3, CD5		1033917 (2)	1034676 (2)	1034677 (2)	1034678 (2)	1034679 (2)	1034680 (2)
Top nozzle panel	CD2, CD4	All	1033919	1034671	1034672	1034673	1034674	1034675
	CD3, CD5		1033919 (2)	1034671 (2)	1034672 (2)	1034673 (2)	1034674 (2)	1034675 (2)
Nozzle bottom	CD2, CD4	All	1033921	1033921	1033921	1034669	1034669	1034670
	CD3, CD5		1033921 (2)	1033921 (2)	1033921 (2)	1034669 (2)	1034669 (2)	1034670 (2)
Nozzle blockoff	CD2, CD3, CD4, CD5	All	1036215	1034686	1036205	1036206	1036207	1036208
		UBZ, UDZ**	1036209	1036210	1036211	1036212	1036213	1036214
Blockoff panel	CD3, CD5	All	1033920	1036216	1036217	1036218	1036219	1036220
Louver frame	CD4, CD5	All	1028413	1028433	1028443	1033695	1033715	1033728
Vertical louver			1028418 (5)	1028434 (5)	1028441 (5)	1033904 (8)	1033961 (8)	1033730 (8)
Louver spring			195046 (5)	195046 (5)	195046 (5)	195046 (8)	195046 (8)	195046 (8)
Screw, sheet metal, 8-18 × 3/8			195638 (AR)					

*Quantity is one (1) unless otherwise indicated. AR = as required.

For model UBZ or UDZ units manufactured ***before* 8 NOV 2022.

DO NOT DESTROY. PLEASE READ CAREFULLY. KEEP IN A SAFE PLACE FOR FUTURE REFERENCE.

KIT COMPONENTS—CONTINUED

Table 3. Kit Components (Model UEZ)

Component	Option	Unit Size (MBTUh)				
		55	85	110	130, 180	260, 310
		PN (Quantity)*				
Kit package	CD2	1041269	1041272	1041275	1042599	1042600
	CD3	1041270	1041273	1041276	1042601	1042602
	CD4	1041271	1041274	1041277	1036297	1042603
Right nozzle panel	CD2, CD4	1036677	1036683	1036689	1042328	1042333
	CD3	1036677 (2)	1036683 (2)	1036689 (2)	1042328 (2)	1042333 (2)
Left nozzle panel	CD2, CD4	1036676	1036682	1036688	1042327	1042332
	CD3	1036676 (2)	1036682 (2)	1036688 (2)	1042327 (2)	1042332 (2)
Top nozzle panel	CD2, CD4	1036675	1036681	1036687	1042325	1042330
	CD3	1036675 (2)	1036681 (2)	1036687 (2)	1042325 (2)	1042330 (2)
Nozzle bottom	CD2, CD4	1036678	1036684	1036690	1042324	1042329
	CD3	1036678 (2)	1036684 (2)	1036690 (2)	1042324 (2)	1042329 (2)
Nozzle blockoff	CD2, CD3, CD4	1036680	1036686	1036692	1042326	1042331
Blockoff panel	CD3	1036679	1036685	1036691	1042597	1042598
Louver frame	CD4	1036666	1036668	1036670	1033902	1033728
Vertical louver		1036667 (6)	1036669 (6)	1036671 (7)	1033904 (8)	1033730 (8)
Louver spring		195046 (6)	195046 (6)	195046 (7)	195046 (8)	195046 (8)
Screw, sheet metal, 8-18 × 3/8		195638 (AR)				

*Quantity is one (1) unless otherwise indicated. AR = as required.

Table 4. Kit Components (Model UWS)

Component	Option	Unit Size (MBTUh)							
		10/15	15/21, 22/31	32/45	44/62	62/77	83/104	110/137	159/191
		PN (Quantity)*							
Kit package	CD2	1047179	1047180	1047181	1047182	1047183	1047184	1047185	1047186
	CD3	1047187	1047188	1047189	1047190	1047191	1047192	1047193	1047194
	CD4	1047195	1047196	1047197	1047198	1047199	1047200	1047201	1047202
	CD5	1047203	1047204	1047205	1047206	1047207	1047208	1047209	1047210
Right nozzle panel	All	1047009	1047018	1047037	1047000	1047046	1047046	1047060	1047027
Left nozzle panel		1047010	1047019	1047038	1047001	1047047	1047047	1047061	1047028
Top nozzle panel		1047011	1047020	1047039	1047002	1047048	1047048	1047062	1047029
Bottom nozzle panel		1047012	1047021	1047040	1047003	1047049	1047049	1047063	1047030
Face plate, painted		1042740	1042806	1042823	1042774	1042834	1042858	1042851	1042784
Nozzle bracket		1047036							
Reznor logo		1043007							
Face plate, unpainted	CD3, CD5	1042740	1042806	1042823	1042774	1042834	1042858	1042851	1042784
Louver frame bottom	CD4, CD5	1047013	1047022	1047041	1047004	1047050	1047055	1047064	1047031
Louver frame left panel		1047014	1047023	1047042	1047005	1047051	1047056	1047065	1047032
Louver frame right panel		1047015	1047024	1047043	1047006	1047052	1047057	1047066	1047033
Louver frame top panel		1047016	1047025	1047044	1047007	1047053	1047058	1047067	1047034
Louver		1047017 (4)	1047026 (5)	1047045 (5)	1047008 (7)	1047054 (7)	1047059 (8)	1047068 (9)	1047035 (11)
Spring, compression		195046 (4)	195046 (5)		195046 (7)		195046 (8)	195046 (9)	195046 (11)
Screw, sheet metal, 8-18 × 3/8		195638 (92)						195638 (120)	

*Quantity is one (1) unless otherwise indicated.

INSTALLATION

For a gas-fired unit heater, refer to the **Install Downturn Nozzle on Gas-Fired Unit Heater** section. For a hydronic unit heater, refer to the **Install Downturn Nozzle on Hydronic Unit Heater** section.

Install Downturn Nozzle on Gas-Fired Unit Heater

⚠ DANGER ⚠

Before installing a downturn nozzle on a gas-fired unit heater, ensure that the unit is installed using four-point suspension in accordance with the installation manual provided with the unit.

1. Assemble top and side panels of downturn nozzle assembly (see **Figure 1**):
   a. Secure right and left panels to top panel using screws from kit. Ensure that panel with slotted holes in bottom of panel is installed on door side of unit. Nozzle bottom will be added in step 7.
   b. If installing option CD3 or CD5, assemble second nozzle section—sections will be joined in step 6.

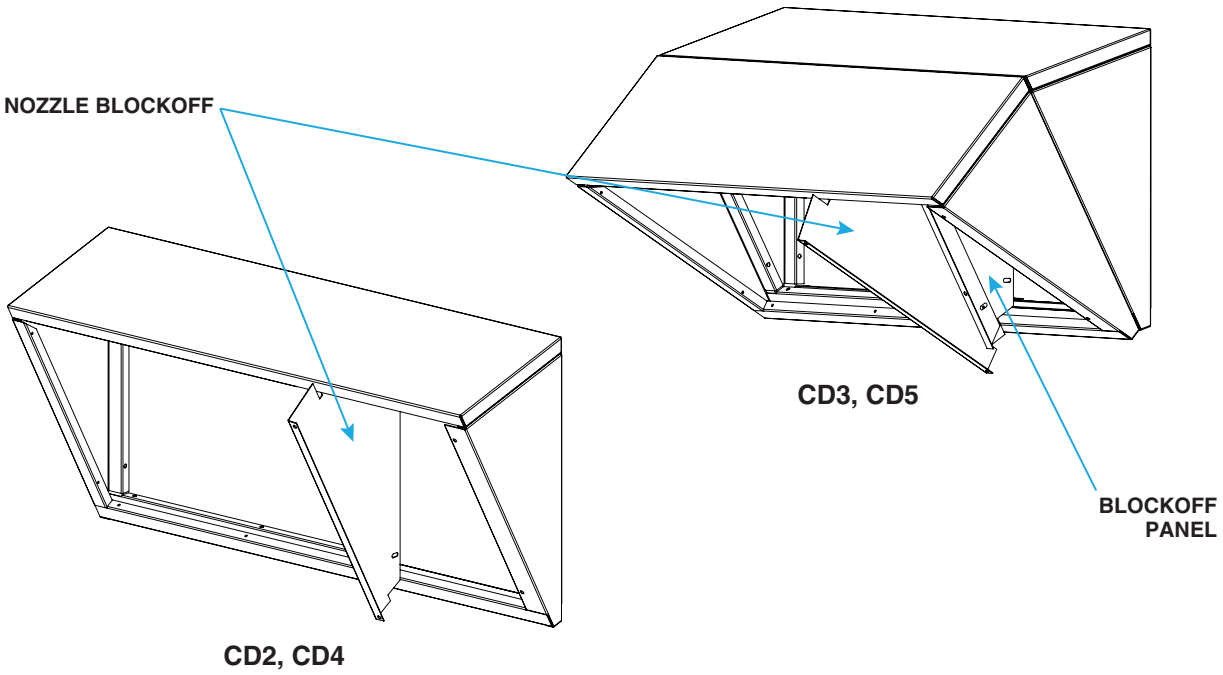

Figure 1. Gas-Fired Unit Heater Downturn Nozzle Assemblies

2. If heater is installed, turn OFF gas and electric power. Allow time for louvers to cool before proceeding.
3. Remove each horizontal louver by pushing louver toward spring to release louver.
4. Remove face plate assembly (see **Figure 2**):
   a. Loosen screwlock, open access door, disconnect door strap, and remove door.
   b. Remove and save two screws next to access door slots from back of face plate.
   c. Remove and save screws that secure face plate to unit and remove face plate assembly.

Install Downturn Nozzle on Gas-Fired Unit Heater—Continued

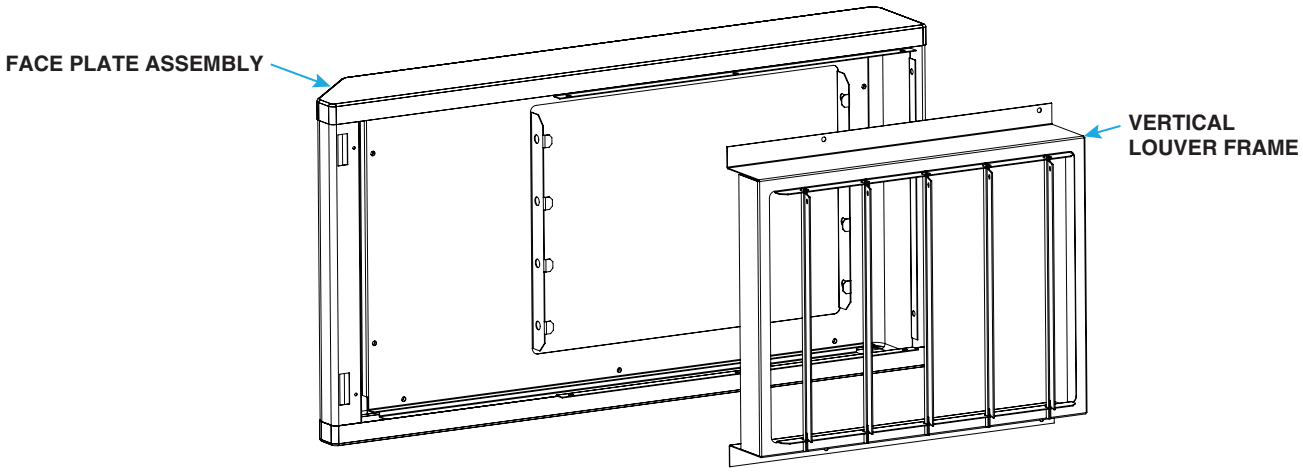

Figure 2. Typical Gas-Fired Unit Heater Face Plate Assembly (with Vertical Louver Frame Shown)

NOTE: The vertical louver frame is installed only on units ordered with either option CD4 or CD5—vertical louvers (option CD1) with either a CD2 nozzle or a CD3 nozzle.

5. If installing option CD4 or CD5, install vertical louver frame (see **Figure 2**):
   a. Position frame in face plate outlet so that holes align.
   b. Secure frame to face plate using screws from kit.
6. If installing option CD3 or CD5, position second assembled nozzle section in outlet of nozzle already assembled. Secure second nozzle section to first nozzle section using screws from kit to create downturn with two sections (see **Figure 1**).
7. Install downturn nozzle assembly on face plate assembly:
   a. Position top and side panels assembled in step 1 on back of face plate assembly so that holes align.
   b. Secure top panel using screws from kit. Do not install screws in side panels at this point.
   c. Slide nozzle bottom (see **Figure 1**) into place so that it rests on small tabs on each side. Align holes and secure nozzle bottom to face plate using screws from kit.
   d. Align holes and secure side panels to face plate using screws from kit.
8. Install downturn nozzle assembly with face plate assembly:
   a. Position downturn nozzle assembly with face plate assembly so that holes align and secure nozzle to front of unit using existing screws.
   b. Position nozzle blockoff (see **Figure 1**) so that holes align and secure to face plate using screws from kit.
   c. If installing option CD3 or CD5, secure blockoff panel (see **Figure 1**) to nozzle blockoff.
   d. Re-install existing two screws in back of face plate next to slots for access door.
   e. Place access door tabs in slots, reconnect door strap, close door, and tighten screwlock.

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.

9. Install and adjust louvers:
   a. If installing option CD4 or CD5, install vertical louvers in louver frame:
      (1) On notched end of louver, slide louver spring over tab.

NOTE: Depending on the desired throw pattern, the end of the louver with the spring can go either into the frame top or bottom.

      (2) With wider louver blade facing in toward heat exchanger, push tab with louver spring into hole in top or bottom louver frame (see **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.

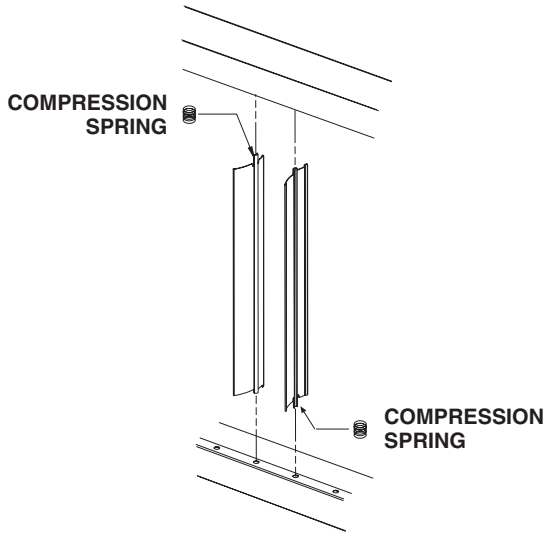

Figure 3. Vertical Louver Installation

      (3) Install all remaining louvers in accordance with steps 9a(1) and 9a(2).
   b. Install horizontal louvers removed in step 3.

⚠ WARNING ⚠

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

   c. Adjust all louvers to produce desired throw pattern.
10. Turn ON gas and electric power and check for proper operation.

Install Downturn Nozzle on Hydronic Unit Heater

1. If heater is installed, turn OFF hot water and electric power. Allow time for louvers to cool before proceeding.
2. Remove each horizontal louver by pushing louver toward spring to release louver.
3. Assemble downturn nozzle assembly (see **Figure 4**):
   a. Assemble top and side nozzle panels, align holes, and secure panels together using screws from kit.
   b. Position face plate into nozzle assembly so that holes on side of face plate align with holes on side nozzle panels.
   c. Secure face plate to nozzle assembly using screws from kit.
   d. Slide nozzle bottom into place so that it rests on small tabs on each side. Align holes and secure nozzle bottom to face plate using screws from kit.

Install Downturn Nozzle on Hydronic Unit Heater—Continued

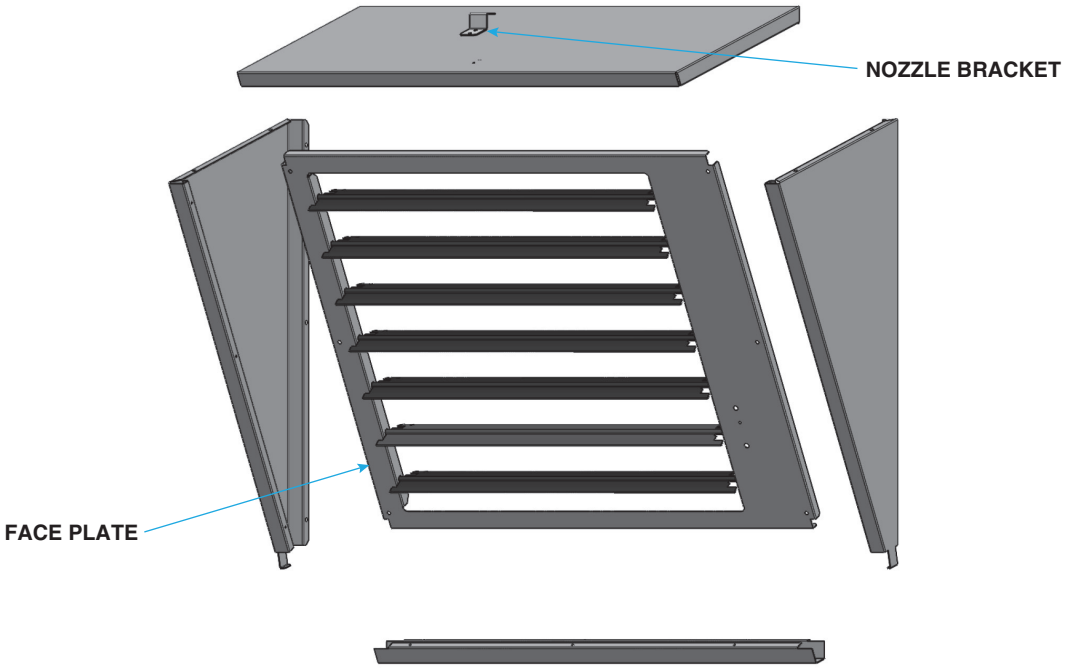

Figure 4. Hydronic Unit Heater Downturn Nozzle Assembly

NOTE: The vertical louver frame is installed only on units ordered with either option CD4 or CD5—vertical louvers (option CD1) with either a CD2 nozzle or a CD3 nozzle.

4. If installing option CD4 or CD5, install vertical louver frame:
   a. Position frame against recessed black face plate on nozzle (see **Figure 4**).
   b. Align holes on inside of frame top, bottom, and sides and secure frame to unit using screws from kit.
5. If installing option CD3 or CD5:
   a. Ensure that first assembled nozzle section that will be attached to unit is assembled with ***unpainted*** face plate—second assembled nozzle section will have ***painted*** face plate.
   b. Position second assembled nozzle section in outlet of nozzle already assembled. Secure second nozzle section to first nozzle section using screws from kit to create downturn with two sections.
6. Install downturn nozzle assembly:
   a. Position assembly against recessed black face plate on unit.
   b. Align holes on inside of assembly and secure assembly to unit using screws from kit.

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.

7. Install and adjust louvers:
   a. If installing option CD4 or CD5, install vertical louvers in louver frame:
      (1) On notched end of louver, slide louver spring over tab.

NOTE: Depending on the desired throw pattern, the end of the louver with the spring can go either into the frame top or bottom.

      (2) With wider louver blade facing in toward heat exchanger, push tab with louver spring into hole in top or bottom louver frame (see **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.
      (3) Install all remaining louvers in accordance with steps 7a(1) and 7a(2).
   b. Install horizontal louvers removed in step 2.

⚠ WARNING ⚠

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

   c. Adjust all louvers to produce desired throw pattern.
8. Position H_2O logo in three holes in right side of face plate and snap into place.

⚠ DANGER ⚠

Horizontal discharge units with a downturn nozzle require three-point suspension—from the heater's two 3/8-16 suspension points and from the nozzle bracket provided in the kit that is to be installed on top of the downturn nozzle assembly.

NOTE: If the downturn nozzle is being installed on a unit with downward discharge, the nozzle bracket is not required.

9. For units with downward discharge, proceed to step 10. For units with horizontal discharge, install nozzle bracket as follows:
   a. Position nozzle bracket on first nozzle as shown in **Figure 4** and secure bracket using screws from kit.
   b. Secure suspension hardware to nozzle bracket.
10. Turn ON hot water and electric power and check for proper operation.

Specifications and illustrations subject to change without notice or incurring obligations.
Latest version of this manual is available at **www.reznorhvac.com**.

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