

## POLYTUBE ADAPTER KIT INSTALLATION FOR BLOWER-TYPE GAS-FIRED UNIT HEATERS

### OPTION CD11 FOR MODELS UBX, UBXC, AND UBZ

#### NOTES:

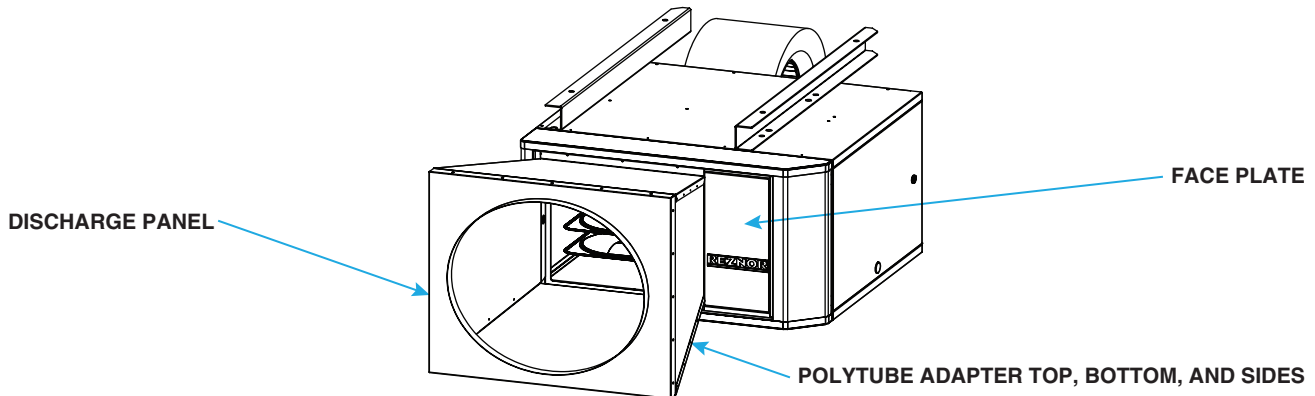
- Before installing a polytube adapter assembly, ensure that the installation location provides sufficient clearance for the adapter and field-installed ductwork.
  - Polytubes are normally supplied open at both ends. The end opposite the heater must be closed to permit the polytube to inflate.
  - Polytube selection is the responsibility of the installer. Different grades, hole positions, hole sizes, and lengths are available. Some local code authorities require that polytube material be a nationally-recognized or certified material. Consult code authorities that have jurisdiction and the polytube supplier to determine the appropriate polytube material and recommend methods of suspension.
  - The total open or free area of the polytube is important. Polytube suppliers have a great deal of flexibility in the placement and sizing of holes. Too small of a free area will cause overheating and damage to the polytube. Too large of an open area may not permit the tube to inflate.
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- The polytube adapter kit (option CD11) adapts unit sizes 75–400 of blower-type unit heaters for use with polytube ductwork. The adapter is installed directly in line with the heater discharge on the front of the heater and is equipped with a collar for attaching the field-supplied polytube.
  - The most common application of polytube ductwork for distribution of tempered air is in greenhouses. Polytubes are also used in industrial buildings to improve operating efficiency by recovering stratified air and reducing the need for complete area heating.
  - 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. Kit Components**

Component	Unit Size (MBTUh)				
	75	100, 125	150, 175, 200	225, 250	300, 350, 400
	Kit PN				
	1036371*	1036372	1036373	1036374	1036375*
	1047428**			1047427**	
	Component PN (Quantity)***				
Adapter top	1036332*				1036336*
Adapter bottom	1047426**	1036333	1036334	1036335	1047424**
Adapter right side	1036337*				1036341*
Adapter left side	1047425**	1036338	1036339	1036340	1047423**
Discharge panel assembly	101249		101250		
Discharge duct collar clamp	101499		146463		
Screw, sheet metal, #10 × 1/2 long	11813 (52)				
Screw, sheet metal, #10 × 3/4 long	20859 (6)		—		
Screw, hex head, 1/4-20 × 3/4 long	16246 (6)	—	16246 (6)		
Nut, hex, 1/4-20	7328 (6)	—	7328 (6)		
Nut, wing, 1/4-20	—	107246 (6)			
*For units manufactured <i>before</i> 1 JAN 2020.					
**For units manufactured <i>after</i> 31 DEC 2019.					
***Quantity is one (1) unless otherwise indicated.					

## INSTALLATION

1. If heater is installed, turn OFF gas 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. Position polytube adapter side panels (see **Figure 1**) so that louver holes align and secure panels to face plate using screws from kit.



**Figure 1. Typical Face Plate Assembly and Polytube Adapter Assembly**

4. Position polytube adapter top panel (see **Figure 1**) so that holes align with side panels and mark holes across top of heater outlet. Remove top panel and drill 1/8-inch holes in face plate. Reposition panel, align holes, and secure panel to face plate using screws from kit.
5. Position polytube adapter bottom panel (see **Figure 1**) so that holes align with side panels and mark holes across bottom of heater outlet. Remove bottom panel and drill 1/8-inch holes in face plate. Reposition panel, align holes, and secure panel to face plate using screws from kit.
6. Slide discharge panel (see **Figure 1**) over front of polytube adapter assembly and secure panel to top, bottom, and side panels using screws from kit.
7. Connect field-supplied polytube ductwork (refer to **Table 2**) to discharge panel and secure using discharge duct collar clamp.
8. Provide support for polytube ductwork in accordance with polytube manufacturer's instructions. General recommendations are that first suspension point be 10 feet (3 meters) from heater and that additional suspension be provided at approximately 8-foot (2.4-meter) intervals.
9. Turn ON gas and electric power.
10. Light heater in accordance with lighting instructions.
11. Check for proper operation.
12. Check discharge air temperature in polytube ductwork 6–8 feet (1.8–2.4 meters) from heater using thermometer. Temperature rise range of 55–65°F is recommended.
13. Check motor load in accordance with installation manual provided with unit.

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**NOTE: For unit sizes 75 and 100 with a polytube adapter and ductwork, the required direct-drive blower speed is LOW. For unit size 125, the required speed is MEDIUM.**

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14. Adjust blower speed in accordance with installation manual provided with unit to achieve desired range while maintaining motor current draw below full load amperes shown on motor rating plate.

**Table 2. Field-Supplied Polytube Ductwork Specifications and Recommendations**

Parameter	Unit of Measure	Unit Size (MBTUh)														
		75	100	125	150	175	200	225	250	300	350	400				
		Value														
CFM at 60°F temperature rise	CFM	960	1345	1540	1920	2240	2560	2880	3200	3840	4480	5120				
Approximate free area	inch <sup>2</sup>	115	160	185	230	270	300	340	380	460	540	600				
Diameter of holes with 50-foot polytube	inch	1	1-1/2		2	1-7/8		2		2-1/4		2-1/2				
Diameter of holes with 75-foot polytube		1	1-1/2		2	1-7/8		2		2-1/4		2-1/2				
Diameter of holes with 125-foot polytube		1	1-1/2		2	1-1/2		2		2-1/4		2	2-1/2	2-1/4		
Diameter of holes with 100-foot polytube		1	1-1/2		2	1-1/2		2		2-1/4		2	2-1/2	2-1/4		
Diameter of holes with 150-foot polytube		1	1-1/2		1-7/8	1-1/2		2		2-1/4		2	2-1/2	2-1/4		
Spacing of holes with 50-foot polytube		8	12-1/2		12	15		12		14		12	10	12	10	
Spacing of holes with 50-foot polytube		12	18-3/4		18	22-1/2		18		21		18	15	18	15	
Spacing of holes with 50-foot polytube		16	25		24	30		15		24		28	24	16	24	16
Spacing of holes with 50-foot polytube		20	31-1/4		30	37-1/2		18-3/4		30		35	25	20	30	20
Spacing of holes with 50-foot polytube		24	37-1/2		36	40		22-1/2		36		42	30	24	36	24
Number of holes with 50-foot polytube	quantity	75	48	50	40	50		42		50	60	50	60			
Number of holes with 75-foot polytube		75	48	50	40	50		42		50	60	50	60			
Number of holes with 100-foot polytube		75	48	50	40	80	50	42	50	75	50	75				
Number of holes with 125-foot polytube		75	48	50	40	80	50	42	60	75	50	75				
Number of holes with 150-foot polytube		75	48	50	45	80	50	42	60	75	50	75				
Polytube diameter	inch	18				24										

