

INSTALLATION & SUBMITTAL DATA

roof curb and discharge and/or return air connectors gas-fired weatherproof duct furnace/make-up air units model series: "H" & "O"

Application

A roof curb installation is designed to provide a watertight method for mounting an outdoor heating, ventilating, and/or cooling unit on the roof of a building. The roof curb also raises the height of the unit to prevent snow build-up below fresh air inlet opening.

Installation Instructions

1. Roof curbs are fabricated from 16 gauge galvanized steel and supplied knocked down for assembly on the job site. The curb consists of two side pieces, two end pieces, curb gasketing, four joiner angles, four 2x4 inch wood nailing strips, nuts, bolts, and washers. Roof curbs over 120 inches long include two additional side pieces and two splice plates.
2. Outside dimensions must be held when installing curb. Refer to page 2 for dimensions. All dimensions are $\pm 1/8$ inch. Top surface must be level and straight to insure weathertightness. All corners must be square.
3. Final electric and gas connections must be made after unit is installed to allow for tolerance in setting of unit on curb. For electrical power supply allow approximately eight feet of wire, plus provisions for weathertight flexible conduit for connection to unit, as required by local codes.
4. Maintain a 12 inch minimum height from top of roof deck to top of curb.
5. If discharge and/or return air connectors were included, refer to page 3 for installation and orientation instructions.

Figure 1.1
Typical Curb Details with Unit Installed over Areas where Sound is Not Critical

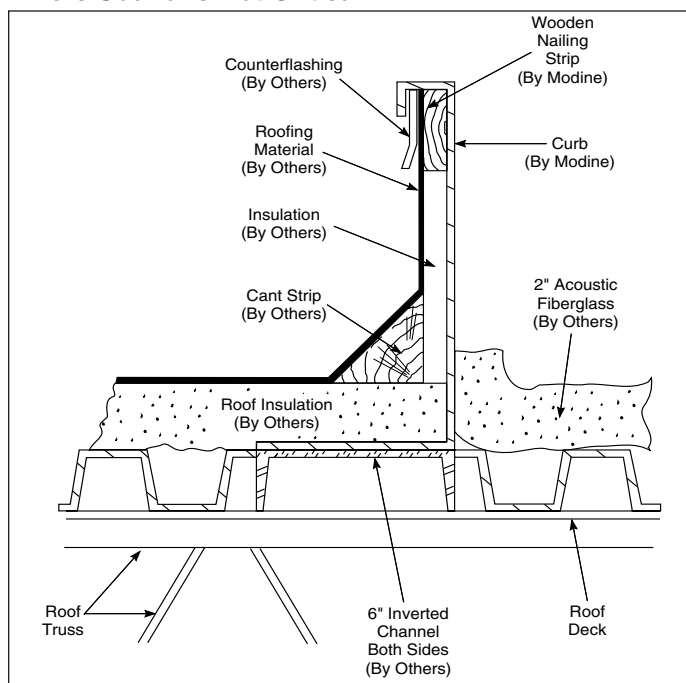
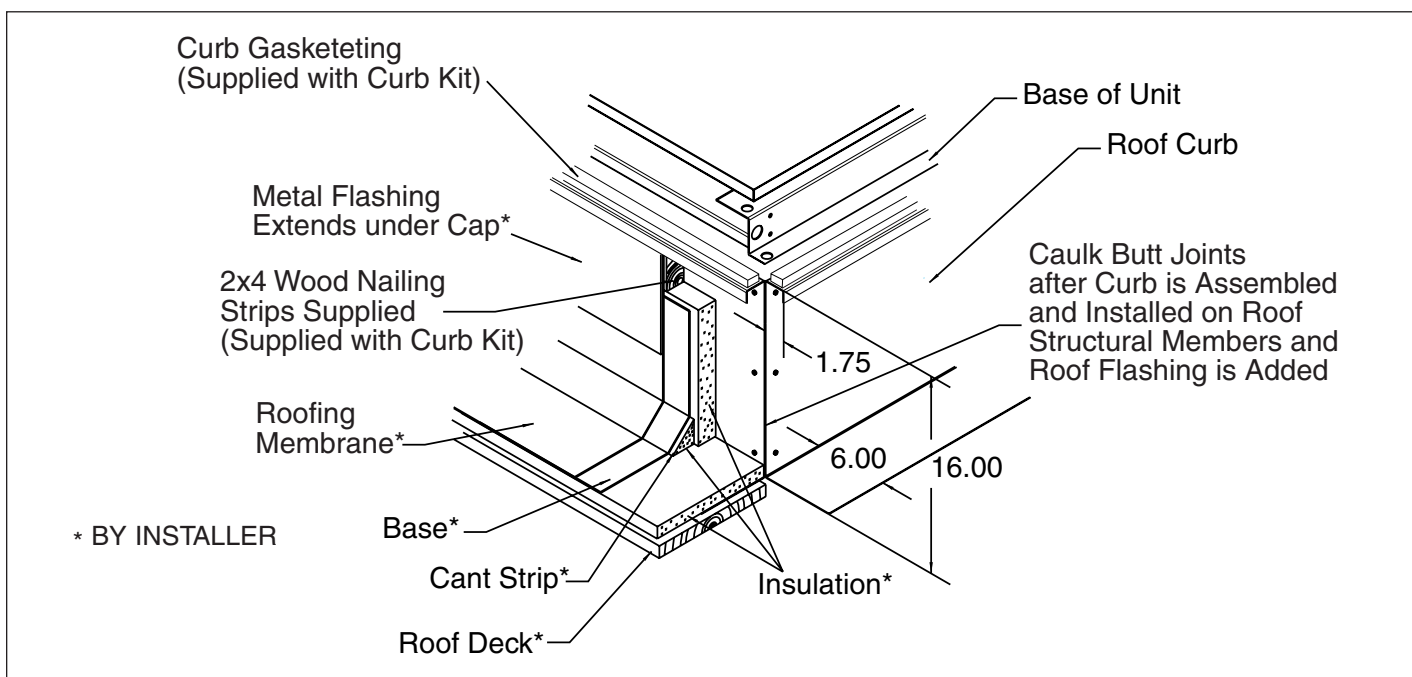


Figure 1.2
Installation and Construction Method



DIMENSIONS - ROOF CURBS

Figure 2.1
Roof Curb Dimensions

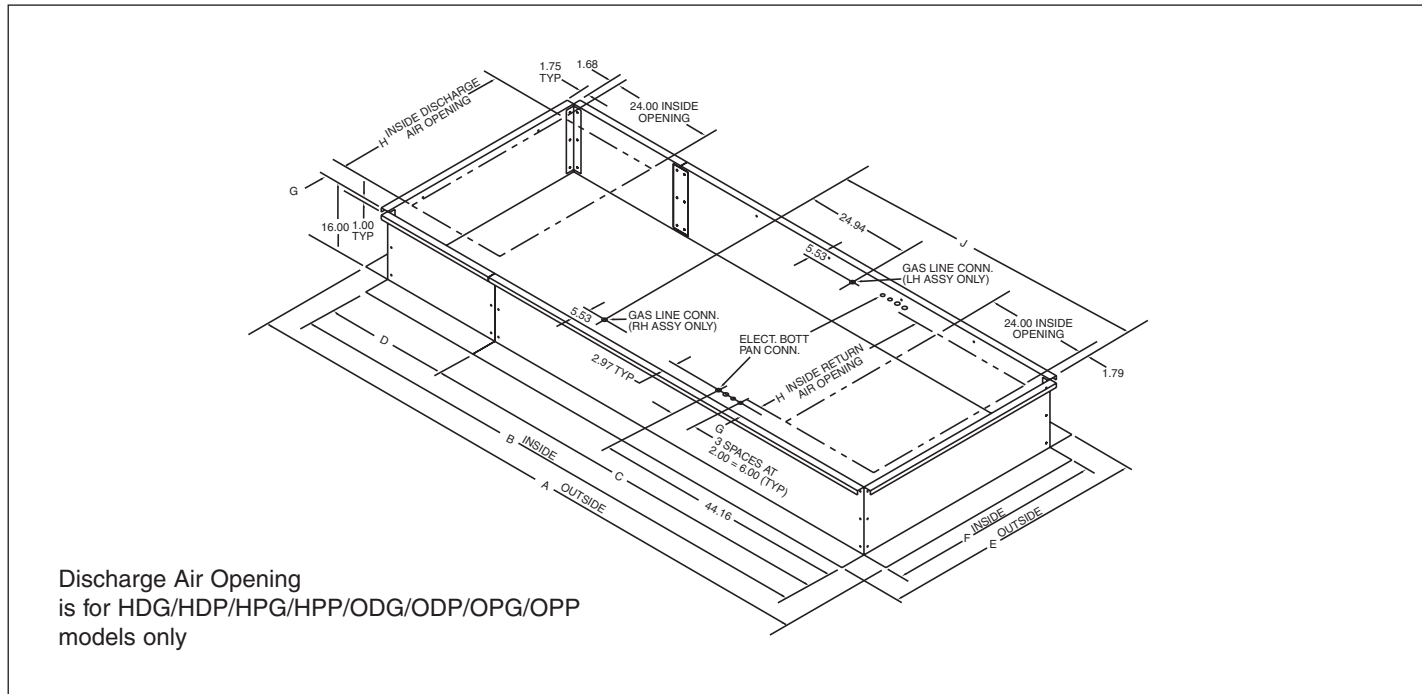


Table 2.1 - HBG/HBP/OBG/OBP & HDG/HDP/ODG/ODP Roof Curb Dimensions (All dimensions in inches)

Model Size	Blower Type (Digit 16)	Dimensions												
		HBG/HBP/OBG/OBP				HDG/HDP/ODG/ODP				HBG/HBP/HDG/HDP/OBG/OBP/ODG/ODP				
		A	B	C	D	A	B	C	D	E	F	G	H	J ①
75	All	88.77	76.77	-	-	117.98	105.98	-	-	39.33	27.33	3.97	19.52	74.84
100/125	All	88.77	76.77	-	-	117.98	105.98	-	-	41.84	29.84	5.22	19.52	74.84
150/175	All	88.77	76.77	-	-	117.98	105.98	-	-	46.18	34.18	5.41	23.49	74.84
200/225	All	88.77	76.77	-	-	117.98	105.98	-	-	48.22	36.22	6.43	23.49	74.84
250/300	E,F,G, or H	88.77	76.77	-	-	117.98	105.98	-	-	51.25	39.25	4.96	29.46	74.84
250/300	I, J, or K	124.61	112.61	-	-	153.83	141.63	105.98	35.85	51.25	39.25	4.96	29.46	110.41
350/400	E,F,G, or H	88.77	76.77	-	-	117.98	105.98	-	-	62.76	50.76	4.74	41.40	74.84
350/400	I, J, or K	124.61	112.61	-	-	153.83	141.63	105.98	35.85	62.76	50.76	4.74	41.40	110.41
500/600	G or H	121.89	109.89	-	-	151.10	139.10	105.98	33.12	51.25	39.25	4.96	29.46	74.84
500/600	I, J, K, or L	157.74	145.74	105.98	39.76	186.98	174.98	105.98	69.00	51.25	39.25	4.96	29.46	110.41
700/800	G or H	121.89	109.89	-	-	151.10	139.10	105.98	33.12	62.76	50.76	4.74	41.40	74.84
700/800	I, J, K, or L	157.74	145.74	105.98	39.76	186.98	174.98	105.98	69.00	62.76	50.76	4.74	41.40	110.41
840/960	I, J, K, or L	191.14	179.14	105.98	73.16	220.39	208.39	105.98	102.41	62.76	50.76	4.74	41.40	110.41

Table 2.2 - HCG/HCP/OCG/OCF & HPG/HPP/OPG/OPP Roof Curb Dimensions (All dimensions in inches)

Model Size	Blower Type (Digit 16)	Dimensions												
		HCG/HCP/OCG/OCF				HPG/HPP/OPG/OPP				HCG/HCP/HPG/HPP/OCG/OCF/OPG/OPP				
		A	B	C	D	A	B	C	D	E	F	G	H	J
75	All	112.74	100.74	-	-	141.98	129.98	100.74	29.24	39.33	27.33	3.97	19.52	74.84
100/125	All	112.74	100.74	-	-	141.98	129.98	100.74	29.24	41.84	29.84	5.22	19.52	74.84
150/175	All	112.74	100.74	-	-	141.98	129.98	100.74	29.24	46.18	34.18	5.41	23.49	74.84
200/225	All	112.74	100.74	-	-	141.98	129.98	100.74	29.24	48.22	36.22	6.43	23.49	74.84
250/300	E,F,G, or H	112.74	100.74	-	-	141.98	129.98	100.74	29.24	51.25	39.25	4.96	29.46	74.84
250/300	I, J, or K	148.59	136.59	105.98	30.61	177.83	165.83	105.98	59.85	51.25	39.25	4.96	29.46	110.41
350/400	E,F,G, or H	112.74	100.74	-	-	141.98	129.98	100.74	29.24	62.76	50.76	4.74	41.40	74.84
350/400	I, J, or K	148.59	136.59	105.98	30.61	177.83	165.83	105.98	59.85	62.76	50.76	4.74	41.40	110.41

① Gas connection for 1st furnace. For Models 500-800 add 33.5" for second furnace gas connection. For Model 840-960 add 33.50" and 67.00" for second and third furnace gas connections.

DISCHARGE AND/OR RETURN AIR CONNECTORS

Application

Discharge and/or return air connectors are used in conjunction with the roof curb and allow the discharge and/or return air ductwork connections to be made before the unit arrives at the job site. When installed in the roof curb, the connectors create a mating surface at the height of the bottom of the blower and/or downturn plenum sections. After caulking the mating surfaces, the installed unit weight holds the bottom of the unit to the connectors so that no additional fastening method is required.

Components of kit:

Duct Connector Spreader (2)

Duct Connector Cross-Channel (2)

Plain Washers, Locknuts, and Screws (16)

Installation Instructions

1. Assemble the roof curb as instructed on page 1.
2. Assemble the discharge and/or return air connector(s) as shown in Figure 3.1. All dimensions are $\pm 1/8$ inch. Top surface must be level and straight to insure airtight connection. All corners must be square.
3. Determine the proper side of the roof curb on which to install the connector based configuration of the ordered unit. Locate the connector mounting holes in the roof curb. See Figure 3.2. When installing only one connector, it is important to determine the proper side of the roof curb on which to install the connector. The location of the duct connector must match the configuration of the ordered unit. (Example: If a discharge air connector is being installed, insure that the connector is installed on the discharge end of the roof curb. The unit orientation must be determined by the building plans.)
4. Install the duct connector using the remaining nuts, screws and washers. See Figure 3.3.
5. Insert the 90° flanged ductwork (by others) into the connector as shown in Figure 3.4. Once the ductwork is inserted, fasten the ductwork to the connector assembly sides (from inside the ductwork) using horizontally driven sheet metal screws (by others).
6. Prior to unit installation, caulk the top of the roof and the connector(s).

Figure 3.1
Duct Connector Assembly

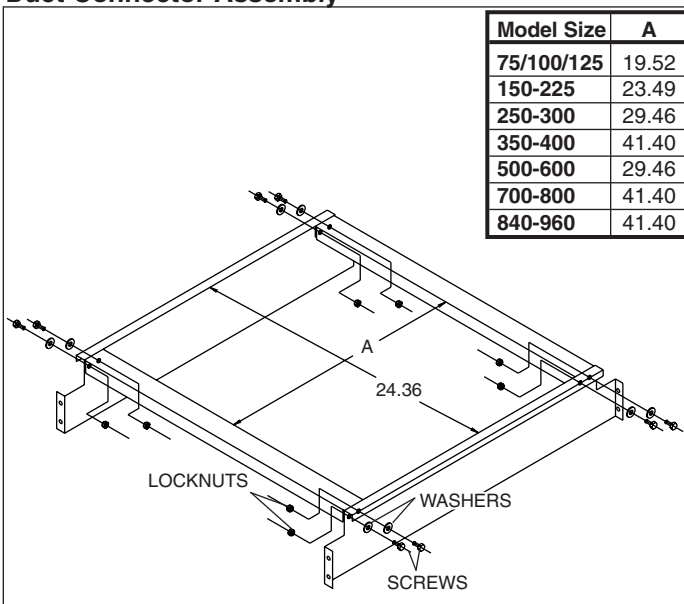


Figure 3.2 - Mounting Hole Locations

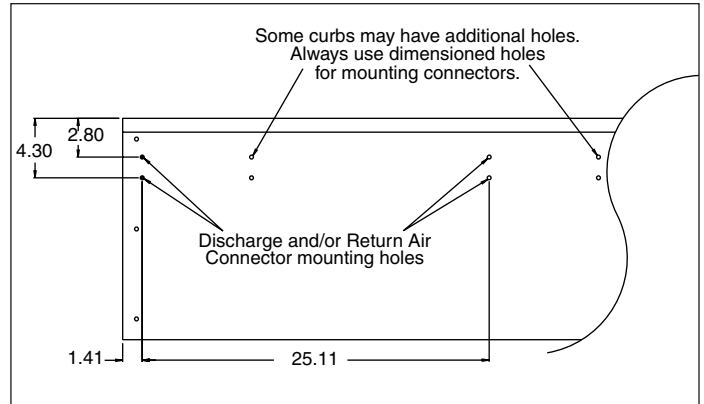


Figure 3.3 - Duct Connector Installation

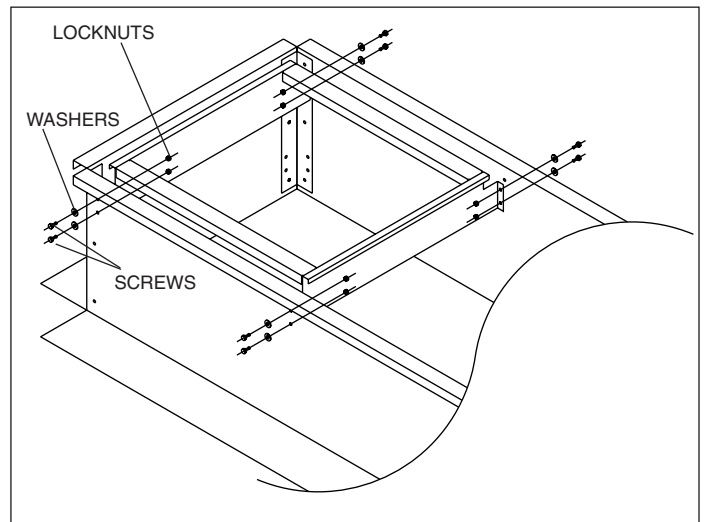


Figure 3.4 - Field Supplied Ductwork Installation

