Installation

Pre-Installation

⚠WARNING

Fiberglass Wool!

Exposition to glass wool fibers without all necessary PPE equipment could result in cancer, respiratory, skin or eye irritation, which could result in death or serious injury. Disturbing the insulation in this product during installation, maintenance or repair will expose you to airborne particles of glass wool fibers and ceramic fibers known to the state of California to cause cancer through inhalation. You MUST wear all necessary Personal Protective Equipment (PPE) including gloves, eye protection, a NIOSH approved dust/mist respirator, long sleeves and pants when working with products containing fiberglass wool.

Precautionary Measures

- Avoid breathing fiberglass dust.
- Use a NIOSH approved dust/mist respirator.
- Avoid contact with the skin or eyes. Wear long-sleeved, loose-fitting clothing, gloves, and eye protection.
- Wash clothes separately from other clothing: rinse washer thoroughly.
- Operations such as sawing, blowing, tear-out, and spraying may generate fiber concentrations requiring additional respiratory protection. Use the appropriate NIOSH approved respiration in these situations.

First Aid Measures

Eye Contact - Flush eyes with water to remove dust. If symptoms persist, seek medical attention.

Skin Contact - Wash affected areas gently with soap and warm water after handling.

Procedure

⚠WARNING

Heavy Objects!

Failure to follow instructions below or properly lift unit could result in unit dropping and possibly crushing operator/technician which could result in death or serious injury, and equipment or property-only damage. Ensure that all the lifting equipment used is properly rated for the weight of the unit being lifted. Each of the cables (chains or slings), hooks, and shackles used to lift the unit must be capable of supporting the entire weight of the unit. Lifting cables (chains or slings) may not be of the same length. Adjust as necessary for even unit lift.

⚠WARNING

Improper Unit Lift!

Failure to properly lift unit could result in unit dropping and possibly crushing operator/technician which could result in death or serious injury, and equipment or property-only damage. Test lift unit approximately 24 inches to verify proper center of gravity lift point. To avoid dropping of unit, reposition lifting point if unit is not level.

Figure 15. Corner weights

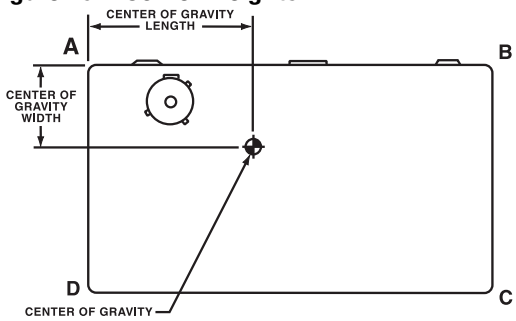

Table 1. Maximum unit & corner weights (lbs) and center of gravity dimensions (in.) - gas/electric models

Tons	Unit Model No.	Maximum Model Weights[a]		Corner Weights[b]				Center of Gravity (in.)	
		Shipping	Net	A	B	C	D	Length	Width
3	YSC033G	577	472	193	178	45	55	33	9
3	YSC036G	577	472	193	178	45	55	33	9
4	YSC043G	598	492	205	183	46	58	33	9
4	YSC048G	598	492	205	183	46	58	33	9
5	YSC060G	627	522	214	193	52	63	33	10
5	YSC063G	602	497	208	184	47	59	32	9
6	YSC072F	805	710	222	217	121	150	41	22
7½	YSC090F	862	767	243	221	155	149	45	21
7½	YSC092F	990	847	265	249	173	160	46	21
8½	YSC102F	1047	904	279	252	187	186	44	22
10	YSC120F	1156	1058	345	242	258	213	41	23
3	YHC036E	607	532	165	137	95	134	31	19
3	YHC037E	676	606	178	162	126	139	33	19
4	YHC048E/YHC047E	858	763	238	200	148	176	40	23
4	YHC048F	806	711	226	199	144	143	44	22
5	YHC060E/YHC067E	917	822	261	218	156	187	40	22
5	YHC060F	850	755	239	214	152	151	44	21
6	YHC072E	1025	927	296	198	205	228	41	24
6	YHC072F	965	822	250	245	174	153	47	21
6	YHC074F	1114	1016	334	231	248	202	41	23
7½	YHC092F	1124	1026	340	233	249	204	41	23
8½	YHC102F	1133	1035	341	236	253	205	49	23
10	YHC120F	1453	1259	356	371	289	242	54	27

(a) Weights are approximate.
(b) Corner weights are given for information only.

Figure 16. Rigging and center of gravity

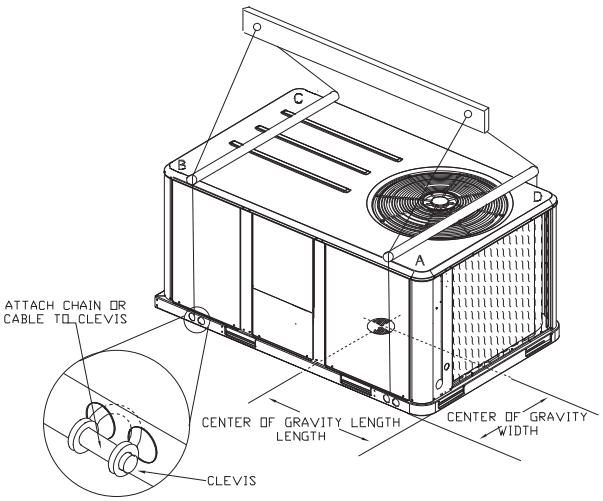

Table 2. Factory installed options (fiops)/accessory net weights (lbs)[a],[b]

Accessory	YSC033G-063G YSC036G-060G YHC036E, YHC037E Net Weight 3 to 5 Tons	YHC047E-067E YHC048E-060E YHC048F-060F Net Weight 4 to 5 Tons	YSC072F-102F YHC072E/F Net Weight 6 to 8½ Tons	YSC120F YHC074F-102F Net Weight 6, 7½, 8½, 10	YHC120F Net Weight 10
Barometric Relief	7	10	10	10	10
Belt Drive Option (3 phase only)	31	31	—	—	—
Coil Guards	12	20	20	20	30
Economizer	26	36	36	36	36
Hinged Doors	10	12	12	12	12
Low Leak Economizer	68	93	93	93	93
Manual Outside Air Damper	16	26	26	26	26
Motorized Outside Air Damper	20	30	30	30	30
Novar Control	8	8	8	8	8
Oversized Motor	5	8	8	—	—
Powered Convenience Outlet	38	38	38	38	50
Powered Exhaust	40	40	80	80	80
Reheat Coil	12[c]	14	15	20[d]	30
Roof Curb	61	78	78	78	89
Smoke Detector, Supply	5	5	5	5	5
Smoke Detector, Return	7	7	7	7	7
Stainless Steel Heat Exchanger[e]	4	6	6	6	6
Through-the-Base Electrical	8	13	13	13	13
Through-the-Base Gas	5	5	5	5	5
Unit Mounted Circuit Breaker	5	5	5	5	5
Unit Mounted Disconnect	5	5	5	5	5
460V/575V[f]	29	29	—	—	—

(a) Weights for options not listed are <5 lbs.
(b) Net weight should be added to unit weight when ordering factory-installed accessories.
(c) Reheat weight here is only applicable to YHC036E models.
(d) Reheat weight for this value only applicable to 7.5 and 8.5 Ton High Efficiency "F" models.
(e) Applicable to Gas/Electric units only.
(f) Apply weight with all 460V and 575V 17 Plus Two-Stage Cooling units.

Foundation

Horizontal Units

If the unit is installed at ground level, elevate it above the snow line. Provide concrete footings at each support location with a "full perimeter" support structure or a slab foundation for support. Refer to Table 1, p. 25 for the unit's operating and point loading weights when constructing a footing foundation.

If anchoring is required, anchor the unit to the slab using hold down bolts or isolators. Isolators should be installed to minimize the transmission of vibrations into the building.

⚠WARNING

Risk of Roof Collapsing!

Failure to ensure proper structural roof support could cause the roof to collapse, which could result in death or serious injury and property damage. Confirm with a structural engineer that the roof structure is strong enough to support the combined weight of the roofcurb and the unit. Refer to 'Weights' page, Table 1, p. 25 for typical unit and curb weights.

For rooftop applications, ensure the roof is strong enough to support the combined unit and support structural weight. Refer to Table 1, p. 25 for the unit operating weights. If anchoring is required, anchor the unit to the roof with hold-down bolts or isolators.

Check with a roofing contractor for proper waterproofing procedures.

Ductwork

Figure 17, p. 27 to Figure 19, p. 27 illustrate the supply and return air openings as viewed from the rear of the unit.

Figure 17. 3-5 ton standard efficiency units & 3 ton high efficiency units - Horizontal supply & return air openings

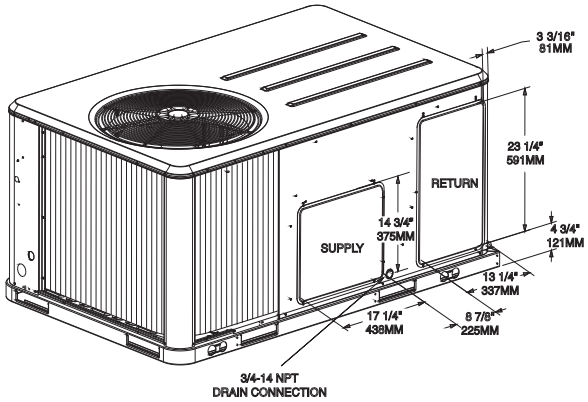

Figure 18. 4-6 ton high efficiency units, 6(074)-8½ (Microchannel) high efficiency unit and 6-10 ton standard efficiency units - horizontal supply & return air openings

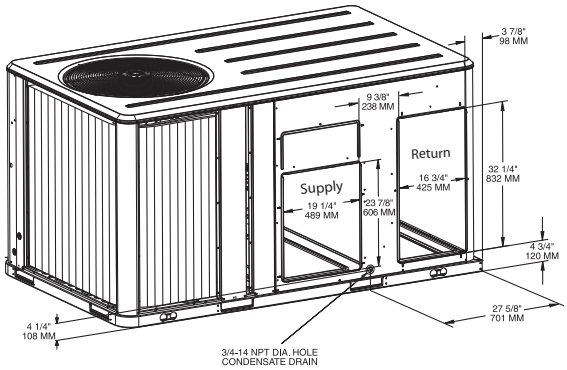

Figure 19. 10 ton high efficiency unit - horizontal supply & return air openings

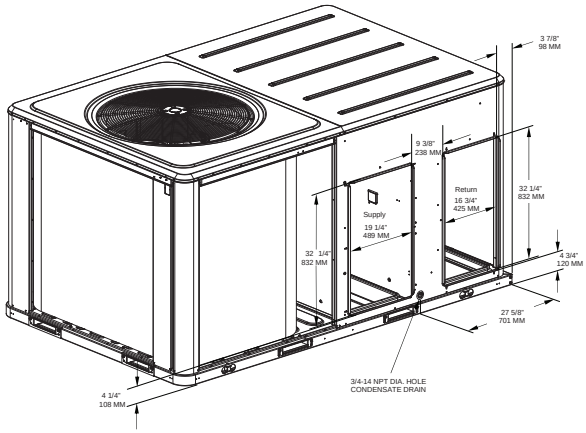

Figure 20, p. 27 to Figure 22, p. 28 illustrate the supply and return air openings in a downflow configuration.

Elbows with turning vanes or splitters are recommended to minimize air noise due to turbulence and to reduce static pressure.

When attaching the ductwork to the unit, provide a water tight flexible connector at the unit to prevent operating sounds from transmitting through the ductwork.

All outdoor ductwork between the unit and the structure should be weather proofed after installation is completed.

Figure 20. 3-5 ton standard efficiency units & 3 ton high efficiency units - Down flow supply & return air openings w/ through-the-base utilities

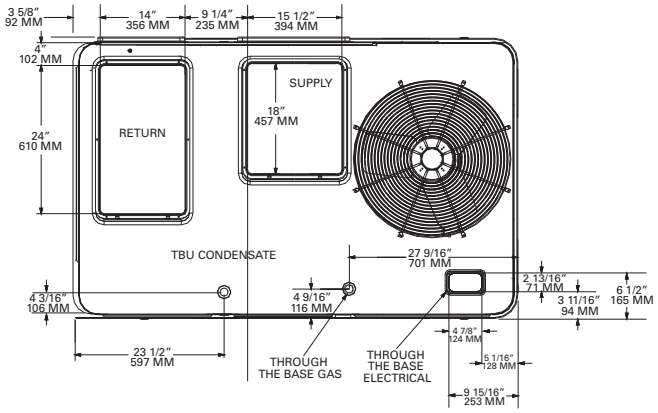

Figure 21. 4-6 ton high efficiency units, 6(074)-8½ (Microchannel) high efficiency units and 6-10 ton standard efficiency units - down flow supply & return air openings w/ through-the-base utilities