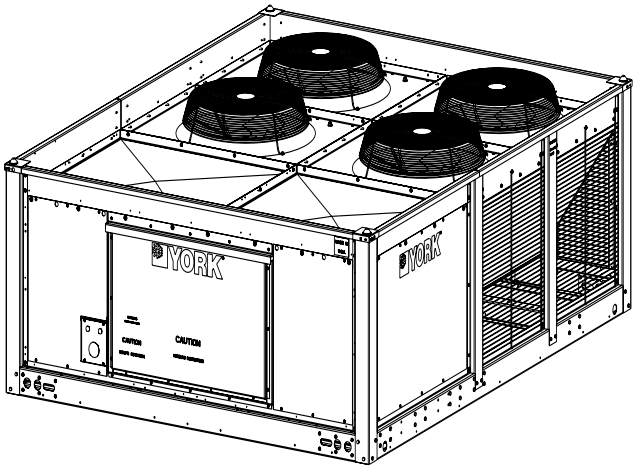
YORK®
Heating and Air Conditioning

TECHNICAL GUIDE

SPLIT-SYSTEM
AIR-COOLED CONDENSING UNITS

HA300, HB360, HB480 & HB600
25 THRU 50 NOMINAL TONS



ISO 9001
Certified Quality
Management System

DESCRIPTION

These units are completely assembled, piped and wired at the factory to provide one-piece shipment and rigging. Each unit is pressurized with a holding charge of Refrigerant-22 for storage and/or shipping.

The compact design, clean styling, low silhouette, and quiet operation make these condensing units suitable for almost any outdoor location. On rooftops . . . because they weigh much less than a single package unit of similar capacity and are much easier to rig and support. At ground level . . . because their ample sub-cooling capacity allows them to be located three or more stories below the evaporator coil.

Every condenser coil is pressurized with air to 325 psig and leak tested under water. After assembly, the unit is pressurized with a combination of Refrigerant-22 and nitrogen to 450 psig for pressure testing and additional leak testing. During this pressure test, the operation of the high pressure control is checked. As the unit is being evacuated and dehydrated, the operation of the low pressure control is checked. Every compressor, condenser fan motor, crankcase heater, and electrical control circuit is checked to assure a trouble-free start-up and years of reliable operation.

The condenser fan guards are vinyl-coated to provide additional rust protection and to enhance the appearance of the unit.

Compressors are mounted on rubber isolators to reduce the transmission of vibration. Vertical discharge condenser fans direct sound upward and away from any surrounding structures.

All sheet metal parts are constructed of commercial grade (G90) galvanized steel. After fabrication, each part is thoroughly cleaned to remove any grease or dirt from its surfaces. The external parts are coated with a powder paint to assure a quality finish for many years. This UL approved coating system has passed the 1000 hour, 20% salt spray test per ASTM Standard B117.

All models include a 1-year limited warranty on the complete unit. An additional 4-year extended compressor warranty is available as an option on all models.

A matching line of Evaporator Blower units is also offered to meet your precise capacity and air handling requirements.

FEATURES

- Meets or exceeds ASHRAE 90.1 standards.
- Scroll compressors provide both high efficiency and reliability.
- Simplicity® Controls
- Dual refrigerant circuits on HB models.
- Condenser coils are constructed of copper tubes and aluminum fins for durability and long lasting efficient operation.
- Crankcase heaters that will be de-energized when the compressor is operating.
- Both high and low pressure controls. Since these controls are self-contained, there are no capillary lines to be damaged.
- Solid state or internal line break compressor motor protection.
- Class 2, 24-volt thermostat control circuit.

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- Optional factory installed service valves.
- Optional skid for fork truck handling (requires 96” length forks).
- A filter-drier is shipped in the unit's control box for field installation in the liquid line near the evaporator coil. Two are provided on all 30, 40 and 50 ton models.
- Copper stub-outs are factory mounted on the suction and liquid lines to simplify the field piping connections. These stubs are provided on units equipped with or without service valves.
- Multiple controls to provide stable system operation at ambient temperatures down to 40ºF with kits available for operation to 0ºF.
- Capacity staging for more economical operation and more even temperature levels within the conditioned space.
- A lockout circuit to prevent the unit from cycling on safety control.
- Pump-out on unit startup to prevent liquid refrigerant returning to the compressor is standard on 25 through 50 ton models.
- Inherently protected condenser fan motors.
- V-Coil Design with exterior service port connections.
- Five-minute anti-short cycle timer and minimum compressor run time.
- Factory installed disconnect and Technicoat coils option.
- Self contained high and low pressure controls.

PRODUCT NOMENCLATURE

PRODUCT NOMENCLATURE

York® OUTDOOR SPLIT CONDENSING UNITS

H A 300 C 00 A 2 A AA 2

Model #	Model Number Description	Options	
H	**Product Category**	H = Air Conditioner Split System	
A	**Product Identifier**	A = R-22 Standard Efficiency 2-Pipe B = R-22 Standard Efficiency 4-Pipe	
300	**Nominal Cooling Capacity MBH**	300 = 25 Ton 360 = 30 Ton 480 = 40 Ton 600 = 50 Ton	
C	**Heat Type**	C = Cooling Only	
00	**Nominal Heating Capacity**	00 = No Heat Installed	
A	**Airflow Options**	A = Standard Motor	
2	**Voltage**	2 = 208/230-3-60 4 = 460-3-60	5 = 575-3-60
A	**Installation Options**	A = None B = Disconnect	C = Service Valves D = Service Valves + Disconnect
AA	**Additional Options**	AA = None AC = Technicoated Coil	
2	**Product Generation**	1 = 1st Generation	2 = 2nd Generation

TABLE 1: RATINGS*

Condensing Unit	EER Condensing Unit Only	Evaporator Blower Unit	Net System Capacity, MBH	System EER	SYSTEM IPLV	Condensing Unit Sound Rating†, dB
HA300	11.5	LA300	320	10.0	9.8	90
HB360	11.0	LB360	376	9.5	10.0	92
HB480	11.1	LB600	510	9.7	9.9	92
HB600	11.6	LB600	600	9.5	10.8	92

* Rated in accordance with ARI Standard 340/360-2000.

† Sound ratings are based on calculated valves and not in accordance with ARI Standard 370-2001.

EER = Energy Efficiency Ratio at full load - the cooling capacity in Btu's per hour (Btuh) divided by the power input in watts, expressed in Btuh per watt (Btuh/watt).

EER; condensing unit only ratings based on 45º F SST and 95ºF entering outdoor air temperature.

IPLV - A single number cooling part-load efficiency based on equipment capacity stages and EER at these capacity stages. (ARI STD 340/360-2000)

LEGEND
EER = Energy Efficiency Ratio
SST = Saturated Suction Temperature
ARI = Air Conditioning and Refrigeration Institute
IPLV = Integrated Part-Load Valve

TABLE 2: PHYSICAL DATA

Model HA/HB	Compressor*		Condenser											Unit Weight (Lbs.)		Charge, R-22	
			Fan (Propeller)				Fan Motor		Coil (Copper Tube-Aluminum Fin)								
	Nominal Capacity (tons)	Capacity Stages	Qty.	Dia.	Pitch Deg.	Nom. CFM	RPM	HP	Face Area (Ft.†)	Rows Deep	Coil Width (In.)	Tube OD (In.)	Fins per inch	Ship-ping	Opera-tion	Operation‡ (Lbs.-Oz.)	Holding (Lbs.)
300	25	2	4	24	34	23244	1140	1.25	50	2	60	3/8	16	1608	1658	49.65	1.0
360																	
System 1	15	2	2	24	36	12690		1.25	25		60			1730	1790	30.08	1.0
System 2	15	2	2	24	36	12690		1.25	25		60					30.08	
480																	
System 1	20	2	2	30	22	15414		1.50	32.5		78			1961	2037	37.83	1.0
System 2	20	2	2	30	22	15414		1.50	32.5		78					37.83	
600																	
System 1	25	2	2	30	26	19386		1.50	52		78			2470	2563	46.59	1.0
System 2	25	2	2	30	26	19386		1.50	52		78					46.59	

* All compressors are Scrolls.

† One of the fan motors is controlled by a pressure switch and will not operate until system pressure reaches 280 psig and drops below 180 psig.

‡ The total operating charge of the condensing unit, matching indoor unit and 25 feet of interconnecting piping.

TABLE 3: UNIT APPLICATION DATA

Voltage Variation* Min. / Max.	208/230-3-60	187/252
	460-3-60	432/504
	575-3-60	540/630
Ambient Air on Condenser Coil Min. /Max.		40°F/125°F†
Suction Pressure at Compressor and Corresponding Temp. at Saturation Min. / Max.		57.5 psig / 92.6 psig 32.0 °F / 55.0 °F

* Utilization range “A” in accordance with ARI Standard 110.

† These units can operate in an ambient temperature of 125°F providing the wet bulb temperature of the air entering the evaporator coil does not exceed 67°F.

NOTE: Unit can operate to 0°F if equipped with a low ambient kit. See product Price Pages for correct Low Ambient Kit.

TABLE 4: ELECTRICAL DATA

Unit Model Designation		Compressor*				Fan Motor				Unit Ampacity (Amps)	Max. Fuse Size (Amps)	Min. Disconnect Size
		Power Supply	Qty.	RLA (each)	LRA (each)	Power Supply	HP	Qty.	FLA (each)			
HA300	2	208/230-3-60	2	47.1	350.0	208/230-3-60	1.25	4	4.5/4.3	124.6	150	150
	4	460-3-60	2	25.0	158.0	460-3-60	1.25	4	2.15	64.9	80	70
	5	575-3-60	2	19.9	125.0	575-3-60	1.25	4	1.7	51.6	70	60
	7	380/415-3-50	2	25.0	158.0	380/415-3-50	1.50	4	2.6/2.5	66.7	90	70
HB360	2	208/230-3-60	4	32.1	195.0	208/230-3-60	1.25	4	4.5/4.3	154.4	175	175
	4	460-3-60	4	16.4	95.0	460-3-60	1.25	4	2.15	78.3	90	90
	5	575-3-60	4	12.1	80.0	575-3-60	1.25	4	1.7	58.2	70	70
	7	380/415-3-50	4	16.4	95.0	380/415-3-50	1.50	4	2.6/2.5	80.1	90	90
HB480	2	208/230-3-60	4	42.0	239.0	208/230-3-60	1.50	4	5.8	201.7	225	225
	4	460-3-60	4	19.2	125.0	460-3-60	1.50	4	2.9	93.2	110	110
	5	575-3-60	4	13.8	80.0	575-3-60	1.50	4	2.2	67.5	80	80
	7	380/415-3-50	4	19.2	125.0	380/415-3-50	1.50	4	2.6/2.5	92.0	110	110
HB600	2	208/230-3-60	4	47.1	350.0	208/230-3-60	1.50	4	5.8	224.7	250	250
	4	460-3-60	4	25.0	158.0	460-3-60	1.50	4	2.9	117.9	125	150
	5	575-3-60	4	19.9	125.0	575-3-60	1.50	4	2.2	93.4	110	110
	7	380/415-3-50	4	25.0	158.0	380/415-3-50	1.50	4	2.6/2.5	116.7	125	150

* Compressor quantity refers to each compressor.

TABLE 5: UNIT COOLING CAPACITIES AND POWER REQUIREMENTS - CONDENSING UNIT ONLY

Model	Suction Press. & Corresponding Temp. @ Saturation		Temperature of Air on Condenser Coil, °F																	
			65			75			85			95			105			115		
	PSIG	°F	MBH	EER	KW*	MBH	EER	KW*	MBH	EER	KW*	MBH	EER	KW*	MBH	EER	KW*	MBH	EER	KW*
HA300	61.5	35	308	14.8	20.8	295	13.1	22.5	282	11.5	24.5	268	10.0	26.7	255	9.1	28.0	241	7.5	32.2
	68.5	40	336	15.9	21.2	322	14.1	22.9	307	12.3	24.9	292	10.8	27.1	277	9.5	29.3	262	8.0	32.7
	76.0	45	366	16.9	21.7	350	15.0	23.3	333	13.2	25.3	317	11.5	27.5	300	10.1	29.7	284	8.6	33.1
	84.0	50	396	17.9	22.1	379	15.9	23.7	361	14.1	25.7	343	12.3	28.0	325	10.8	30.1	307	9.1	33.6
HB360	61.5	35	377	14.4	26.2	358	12.7	28.2	340	11.1	30.5	321	9.7	33.2	302	8.3	36.2	283	7.1	39.6
	68.5	40	409	15.3	26.8	389	13.5	28.8	370	11.9	31.2	350	10.4	33.8	330	9.0	36.8	310	7.7	40.3
	76.0	45	442	16.1	27.4	422	14.3	29.5	401	12.6	31.8	380	11.0	34.5	360	9.6	37.5	339	8.3	41.0
	84.0	50	476	16.9	28.1	455	15.1	30.1	433	13.3	32.5	412	11.7	35.2	390	10.2	38.2	368	8.8	41.7
HB480	61.5	35	502	14.7	34.2	479	13.0	36.9	456	11.4	40.0	432	9.9	43.5	409	8.6	47.6	385	7.4	52.1
	68.5	40	543	15.5	35.1	518	13.7	37.8	494	12.1	40.9	469	10.6	44.4	444	9.2	48.5	419	7.9	53.0
	76.0	45	585	16.2	36.1	559	14.4	38.8	533	12.7	41.9	507	11.2	45.4	481	9.7	49.4	455	8.4	54.0
	84.0	50	628	16.9	37.1	601	15.1	39.8	574	13.4	42.9	546	11.8	46.5	519	10.3	50.5	491	8.9	55.0
HB600	61.5	35	609	15.4	39.6	583	13.5	43.0	556	11.8	47.1	529	10.2	51.7	503	8.8	56.9	476	7.6	62.9
	68.5	40	663	16.4	40.5	634	14.4	44.0	604	12.6	48.0	575	10.9	52.7	545	9.4	58.0	515	8.1	64.0
	76.0	45	719	17.3	41.5	687	15.3	45.0	655	13.4	49.0	623	11.6	53.7	590	10.0	59.1	558	8.6	65.2
	84.0	50	777	18.2	42.6	743	16.1	46.0	708	14.1	50.0	673	12.3	54.8	638	10.6	60.2	603	9.1	66.4

*These power requirements include the following condenser fan motor KW.

Model	HA300	HB360	HB480	HB600
KW	3.4	4.3	4.3	3.8

**See Table 1 for condensing unit only EER ratings.

LINE SIZING

When sizing refrigerant pipe for a split-system air conditioner, check the following:

1. Suction line pressure drop due to friction.
2. Liquid line pressure drop due to friction.
3. Suction line velocity for oil return.
4. Liquid line pressure drop due to vertical rise.

Tables 6 and 7 list friction losses for both the suction and liquid lines on the condensing section. For certain piping arrangements, different sizes of suction line pipe may have to be used. The velocity of the refrigerant vapor must always be great enough to carry the oil back to the compressor.

Evaporator Below Condensing Section - On a split system where the evaporator blower is located below the condensing section, the suction line must be sized for both pressure drop and for oil return. Oil traps may be required on this type of application. See Table 6.

Condensing Section Below Evaporator - When the condensing section is located below the evaporator blower, the liquid line must be designed for the pressure drop due to both friction loss and vertical rise. See Table 7. If the pressure drop due to vertical rise and friction exceeds 40 psi, some refrigerant will flash before it reaches the thermal expansion valve.

Flash Gas:

1. Increases the liquid line pressure loss due to friction which in turn causes further flashing.
2. Reduces the capacity of the refrigerant control device which starves the evaporator.
3. Erodes the seat of the refrigerant control device.
4. Causes erratic control of the refrigerant entering the evaporator. (See Installation Instructions for more detail.)

TABLE 6: SUCTION LINES

Model Designation			Nominal Capacity (Tons)	Refrigerant Flow Rate (Lbs./Min.)	Copper Tubing (Inches, O.D.)	Refrigerant Gas Velocity (Ft./Min.)	Friction Loss (PSI/100 Ft.)
HA300	System #1	Full Capacity	25	80	2 1/8	1945	1.2
					2 5/8	1500	0.6
					3 1/8	1040	0.3
		Half Capacity	12.5	40	2 1/8	1110	0.5
					2 5/8	750	0.2
					3 1/8	520	0.1
HB360	System #1	Full Capacity	15	47	1 3/8	2873	4.1
					1 5/8	2030	1.8
					2 1/8	1167	0.5
		Half Capacity	7.5	23.5	1 3/8	1437	1.1
					1 5/8	1015	0.5
					2 1/8	850	0.2
	System #2	Full Capacity	15	47	1 3/8	2873	4.1
					1 5/8	2030	1.8
					2 1/8	1167	0.5
		Half Capacity	7.5	23.5	1 3/8	1437	1.1
					1 5/8	1015	0.5
					2 1/8	850	0.2
HB480	System #1	Full Capacity	20	64	1 5/8	3120	4.3
					2 1/8	1800	1.2
					2 5/8	1200	0.4
		Half Capacity	10	32	1 5/8	1560	1.2
					2 1/8	900	0.3
					2 5/8	600	0.1
	System #2	Full Capacity	20	64	1 5/8	3120	4.3
					2 1/8	1800	1.2
					2 5/8	1200	0.4
		Half Capacity	10	32	1 5/8	1560	1.2
					2 1/8	1800	1.2
					2 5/8	1200	0.4
HB600	System #1	Full Capacity	25	76	1 5/8	3384	4.5
					2 1/8	1945	1.2
					2 5/8	1500	0.6
		Half Capacity	12.5	38	1 5/8	1710	1.4
					2 1/8	983	0.4
					2 5/8	750	0.2
	System #2	Full Capacity	25	76	1 5/8	3384	4.5
					2 1/8	1945	1.2
					2 5/8	1500	0.6
		Half Capacity	12.5	38	1 5/8	1710	1.4
					2 1/8	983	0.4
					2 5/8	750	0.2

TABLE 7: LIQUID LINES

Model Designation			Nominal Capacity (Tons)	Refrigerant Flow Rate (Lbs./Min.)	Copper Tubing (Inches, O.D.)	Refrigerant Liquid Velocity (Ft./Min.)	Friction Loss (PSI/100 Ft.)
HA300	System #1	Full Capacity	25	80	5/8	500	14.2
					7/8	265	3.4
					1 1/8	156	1.0
HB360	System #1	Full Capacity	15	47	5/8	330	7.9
					7/8	159	1.4
					1 1/8	100	0.8
	System #2	Full Capacity	15	47	5/8	330	7.9
					7/8	159	1.4
					1 1/8	100	0.8
HB480	System #1	Full Capacity	20	64	5/8	440	13.2
					7/8	212	2.3
					1 1/8	90	0.6
	System #2	Full Capacity	20	64	5/8	440	13.2
					7/8	212	2.3
					1 1/8	90	0.6
HB600	System #1	Full Capacity	25	76	5/8	400	8.5
					7/8	265	3.4
					1 1/8	156	1.0
	System #2	Full Capacity	25	76	5/8	400	8.5
					7/8	265	3.4
					1 1/8	156	1.0

TABLE 8: R-22 LINE CHARGE*

LINE SET, O.D.†	O.D., (INCHES)	REFRIGERANT, LB/FT
LIQUID	7/8	0.236
SUCTION	1 5/8	0.019
	2 1/8	0.033

* Charges based on 40 ºF suction temperature and 105ºF liquid temperature.

† Type “L” copper tubing.

NOTE: Add the operating charge of the condensing unit, the evaporator coil and the refrigerant lines to determine the total refrigerant charge of the system.

TABLE 9: COOLING CAPACITY 25 TON UNIT - HA300 CONDENSING UNIT MATCHED WITH LA300 EVAPORATOR UNIT

AIR ON EVAP. COIL		TEMPERATURE OF AIR ON CONDENSER COIL 85ºF								
CFM	WB (ºF)	GROSS CAPACITY (MBH)	TOTAL INPUT (Kw)	GROSS SENSIBLE CAPACITY (MBh) RETURN DRY BULB (ºF)						
				86	83	80	77	74	71	68
7500	72	348.3	25.78	218.3	194.0	169.7	145.4	121.1	#N/A	#N/A
	67	326.2	25.42	266.5	242.2	217.9	193.6	169.3	145.0	120.7
	62	305.0	25.08	305.0	291.9	267.6	243.3	219.0	194.7	170.4
	57	310.4	25.24	310.4	308.4	284.1	259.8	235.5	211.2	186.9
8750	72	357.1	25.91	239.0	210.6	182.3	153.9	125.6	#N/A	#N/A
	67	334.4	25.54	290.7	262.4	234.0	205.7	177.3	149.0	120.6
	62	312.7	25.20	312.7	306.1	287.3	259.0	230.6	202.3	173.9
	57	318.2	25.36	318.2	317.2	305.1	276.7	248.4	220.0	191.7
10000	72	365.9	26.03	259.6	227.2	194.8	162.4	130.0	#N/A	#N/A
	67	342.7	25.66	314.9	282.5	250.1	217.7	185.3	152.9	120.5
	62	320.3	25.32	320.3	320.3	307.1	274.7	242.3	209.9	177.5
	57	326.0	25.48	326.0	326.0	326.0	293.6	261.2	228.8	196.4
11250	72	372.1	26.13	279.4	242.9	206.5	170.0	133.6	#N/A	#N/A
	67	348.5	25.76	334.7	301.6	265.1	228.7	192.2	155.8	119.3
	62	325.8	25.41	325.8	325.8	319.2	282.8	246.3	209.9	173.4
	57	331.6	25.57	331.6	331.6	331.6	295.2	258.7	222.3	185.8
12500	72	378.4	26.22	299.2	258.7	218.2	177.7	137.2	#N/A	#N/A
	67	354.4	25.85	354.4	320.6	280.1	239.6	199.1	158.6	118.1
	62	331.3	25.51	331.3	331.3	331.3	290.8	250.3	209.8	169.3
	57	337.2	25.67	337.2	337.2	337.2	296.7	256.2	215.7	175.2
TEMPERATURE OF AIR ON CONDENSER COIL 105ºF										
7500	72	319.6	31.41	206.4	182.1	157.8	133.5	109.2	#N/A	#N/A
	67	300.0	30.96	254.7	230.4	206.1	181.8	157.5	133.2	108.9
	62	285.8	30.71	285.8	280.4	256.1	231.8	207.5	183.2	158.9
	57	288.9	30.73	288.9	286.4	262.1	237.8	213.5	189.2	164.9
8750	72	327.2	31.53	226.7	198.4	170.0	141.7	113.3	#N/A	#N/A
	67	307.1	31.08	278.7	250.4	222.0	193.7	165.3	137.0	108.6
	62	292.6	30.83	292.6	289.9	275.8	247.5	219.1	190.8	162.4
	57	295.7	30.85	295.7	294.5	282.3	254.0	225.6	197.3	168.9
10000	72	334.7	31.65	247.0	214.6	182.2	149.8	117.4	#N/A	#N/A
	67	314.2	31.20	302.8	270.4	238.0	205.6	173.2	140.8	108.4
	62	299.4	30.95	299.4	299.4	295.6	263.2	230.8	198.4	166.0
	57	302.6	30.97	302.6	302.6	302.6	270.2	237.8	205.4	173.0
11250	72	339.9	31.75	268.2	231.7	195.3	158.8	122.4	#N/A	#N/A
	67	319.1	31.29	313.3	290.8	255.1	218.7	182.2	145.8	109.3
	62	304.0	31.04	304.0	304.0	302.1	265.7	229.2	192.8	156.3
	57	307.2	31.06	307.2	307.2	307.2	270.8	234.3	197.9	161.4
12500	72	345.1	31.84	289.4	248.9	208.4	167.9	127.4	#N/A	#N/A
	67	323.9	31.38	323.9	311.3	272.3	231.8	191.3	150.8	110.3
	62	308.7	31.13	308.7	308.7	308.7	268.2	227.7	187.2	146.7
	57	311.9	31.15	311.9	311.9	311.9	271.4	230.9	190.4	149.9
TEMPERATURE OF AIR ON CONDENSER COIL 125ºF										
7500	72	288.8	37.8	193.1	168.8	144.5	120.2	95.9	#N/A	#N/A
	67	272.8	37.2	242.1	217.8	193.5	169.2	144.9	120.6	96.3
	62	269.0	37.4	269.0	267.2	242.9	218.6	194.3	170.0	145.7
	57	265.2	37.0	265.2	260.5	236.2	211.9	187.6	163.3	139.0
8750	72	295.8	37.9	214.0	185.7	157.3	129.0	100.6	#N/A	#N/A
	67	279.4	37.2	267.3	239.0	210.6	182.3	153.9	125.6	97.2
	62	275.5	37.4	275.5	274.6	264.3	236.0	207.6	179.3	150.9
	57	271.7	37.0	271.7	269.3	257.2	228.8	200.5	172.1	143.8
10000	72	302.8	37.9	234.9	202.5	170.1	137.7	105.3	#N/A	#N/A
	67	286.0	37.2	286.0	260.1	227.7	195.3	162.9	130.5	98.1
	62	282.0	37.4	282.0	282.0	282.0	253.4	221.0	188.6	156.2
	57	278.1	37.0	278.1	278.1	278.1	245.7	213.3	180.9	148.5
11250	72	306.1	38.1	258.4	221.9	185.5	149.0	112.6	#N/A	#N/A
	67	289.1	37.4	289.1	282.5	248.2	211.7	175.3	138.8	102.4
	62	285.1	37.6	285.1	285.1	285.1	250.5	214.1	177.6	141.2
	57	281.1	37.2	281.1	281.1	281.1	244.7	208.2	171.8	135.3
12500	72	309.4	38.3	281.8	241.3	200.8	160.3	119.8	#N/A	#N/A
	67	292.2	37.6	292.2	292.2	268.7	228.2	187.7	147.2	106.7
	62	288.2	37.8	288.2	288.2	288.2	247.7	207.2	166.7	126.2
	57	284.2	37.4	284.2	284.2	284.2	243.7	203.2	162.7	122.2

AIR ON EVAP. COIL		TEMPERATURE OF AIR ON CONDENSER COIL 95ºF								
CFM	WB (ºF)	GROSS CAPACITY (MBH)	TOTAL INPUT (Kw)	GROSS SENSIBLE CAPACITY (MBh) RETURN DRY BULB (ºF)						
				86	83	80	77	74	71	68
7500	72	335.0	28.19	213.1	188.8	164.5	140.2	115.9	#N/A	#N/A
	67	313.6	27.83	261.1	236.8	212.5	188.2	163.9	139.6	115.3
	62	294.3	27.39	294.3	287.0	262.7	238.4	214.1	189.8	165.5
	57	300.7	27.59	300.7	299.4	275.1	250.8	226.5	202.2	177.9
8750	72	342.8	28.37	233.0	204.7	176.3	148.0	119.6	#N/A	#N/A
	67	320.9	28.00	284.5	256.1	227.8	199.4	171.1	142.7	114.4
	62	301.2	27.56	301.2	297.5	281.6	253.2	224.9	196.5	168.2
	57	307.7	27.76	307.7	307.1	294.9	266.6	238.2	209.9	181.5
10000	72	350.7	28.55	253.0	220.6	188.2	155.8	123.4	#N/A	#N/A
	67	328.3	28.18	307.9	275.5	243.1	210.7	178.3	145.9	113.5
	62	308.1	27.73	308.1	308.1	300.5	268.1	235.7	203.3	170.9
	57	314.8	27.94	314.8	314.8	314.8	282.4	250.0	217.6	185.2
11250	72	356.8	28.59	273.1	236.6	200.2	163.7	127.3	#N/A	#N/A
	67	334.0	28.22	323.8	295.0	258.6	222.1	185.7	149.2	112.8
	62	313.5	27.77	313.5	313.5	309.7	273.3	236.8	200.4	163.9
	57	320.3	27.98	320.3	320.3	320.3	283.8	247.4	210.9	174.5
12500	72	363.0	28.63	293.2	252.7	212.2	171.7	131.2	#N/A	#N/A
	67	339.8	28.26	339.8	314.5	274.0	233.5	193.0	152.5	112.0
	62	318.9	27.81	318.9	318.9	318.9	278.4	237.9	197.4	156.9
	57	325.8	28.02	325.8	325.8	325.8	285.3	244.8	204.3	163.8
TEMPERATURE OF AIR ON CONDENSER COIL 115ºF										
7500	72	304.2	34.63	199.8	175.5	151.2	126.9	102.6	#N/A	#N/A
	67	286.4	34.09	248.4	224.1	199.8	175.5	151.2	126.9	102.6
	62	277.4	34.03	277.4	273.8	249.5	225.2	200.9	176.6	152.3
	57	277.1	33.87	277.1	273.5	249.2	224.9	200.6	176.3	152.0
8750	72	311.5	34.69	220.4	192.0	163.7	135.3	107.0	#N/A	#N/A
	67	293.3	34.15	273.0	244.7	216.3	188.0	159.6	131.3	102.9
	62	284.0	34.10	284.0	282.2	270.1	241.7	213.4	185.0	156.7
	57	283.7	33.93	283.7	281.9	269.7	241.4	213.0	184.7	156.3
10000	72	318.8	34.76	241.0	208.6	176.2	143.8	111.4	#N/A	#N/A
	67	300.1	34.22	297.6	265.2	232.8	200.4	168.0	135.6	103.2
	62	290.7	34.16	290.7	290.7	290.7	258.3	225.9	193.5	161.1
	57	290.3	34.00	290.3	290.3	290.3	257.9	225.5	193.1	160.7
11250	72	323.0	34.91	263.3	226.8	190.4	153.9	117.5	#N/A	#N/A
	67	304.1	34.36	302.9	286.7	251.6	215.2	178.7	142.3	105.8
	62	294.6	34.31	294.6	294.6	294.6	258.1	221.7	185.2	148.8
	57	294.2	34.14	294.2	294.2	294.2	257.7	221.3	184.8	148.4
12500	72	327.2	35.06	285.6	245.1	204.6	164.1	123.6	#N/A	#N/A
	67	308.1	34.51	308.1	308.1	270.5	230.0	189.5	149.0	108.5
	62	298.4	34.45	298.4	298.4	298.4	257.9	217.4	176.9	136.4
	57	298.0	34.29	298.0	298.0	298.0	257.5	217.0	176.5	136.0

[1]These capacities are gross ratings. For net capacity, deduct air blower motor, MBH - 3.415 X kW. Refer to the appropriate Blower Performance Table for the kW of the supply air blower motor.

[2]These ratings include condenser fan motors and the compressor motors but not the supply blower motor.

TABLE 10: COOLING CAPACITY 30 TON UNIT - HB360 CONDENSING UNIT MATCHED WITH LB360 EVAPORATOR UNIT

AIR ON EVAP. COIL		TEMPERATURE OF AIR ON CONDENSER COIL 85ºF									AIR ON EVAP. COIL		TEMPERATURE OF AIR ON CONDENSER COIL 95ºF								
CFM	WB (ºF)	GROSS CAPACITY (MBH)	TOTAL INPUT (Kw)	GROSS SENSIBLE CAPACITY (MBh) RETURN DRY BULB (ºF)							CFM	WB (ºF)	GROSS CAPACITY (MBH)	TOTAL INPUT (Kw)	GROSS SENSIBLE CAPACITY (MBh) RETURN DRY BULB (ºF)						
				86	83	80	77	74	71	68					86	83	80	77	74	71	68
9000	72	417.9	32.58	261.8	232.7	203.5	174.4	145.2	#N/A	#N/A	9000	72	401.5	35.41	256.4	227.3	198.1	169.0	139.8	#N/A	#N/A
	67	391.8	31.97	321.3	292.1	262.9	233.8	204.6	175.5	146.3		67	376.3	34.84	314.8	285.7	256.5	227.3	198.2	169.0	139.9
	62	366.3	31.41	366.3	352.2	323.0	293.9	264.7	235.5	206.4		62	352.9	34.26	352.9	345.5	316.3	287.1	258.0	228.8	199.7
	57	377.6	31.74	377.6	376.5	347.4	318.2	289.0	259.9	230.7		57	364.2	34.57	364.2	363.3	334.1	304.9	275.8	246.6	217.5
10500	72	428.0	32.79	285.8	251.8	217.8	183.7	149.7	#N/A	#N/A	10500	72	410.9	35.63	280.1	246.1	212.1	178.1	144.1	#N/A	#N/A
	67	401.3	32.18	349.4	315.4	281.3	247.3	213.3	179.3	145.3		67	385.1	35.06	342.6	308.6	274.6	240.6	206.6	172.5	138.5
	62	375.2	31.61	375.2	368.2	345.6	311.6	277.6	243.6	209.5		62	361.1	34.48	361.1	357.4	338.6	304.6	270.6	236.5	202.5
	57	386.8	31.95	386.8	386.2	371.7	337.6	303.6	269.6	235.6		57	372.7	34.79	372.7	372.2	357.7	323.6	289.6	255.6	221.6
12000	72	438.2	33.00	309.8	270.9	232.0	193.1	154.2	#N/A	#N/A	12000	72	420.3	35.85	303.8	264.9	226.1	187.2	148.3	#N/A	#N/A
	67	410.9	32.39	377.5	338.6	299.7	260.9	222.0	183.1	144.2		67	393.9	35.27	370.4	331.6	292.7	253.8	214.9	176.0	137.2
	62	384.1	31.82	384.1	384.1	368.2	329.3	290.5	251.6	212.7		62	369.4	34.69	369.4	369.4	360.9	322.0	283.1	244.3	205.4
	57	396.0	32.16	396.0	396.0	396.0	357.1	318.2	279.3	240.4		57	381.2	35.00	381.2	381.2	381.2	342.3	303.5	264.6	225.7
13500	72	445.5	33.15	333.1	289.4	245.6	201.9	158.2	#N/A	#N/A	13500	72	427.3	36.00	327.0	283.3	239.5	195.8	152.1	#N/A	#N/A
	67	417.7	32.54	401.0	361.1	317.4	273.6	229.9	186.2	142.4		67	400.4	35.42	388.7	353.9	310.1	266.4	222.6	178.9	135.2
	62	390.5	31.97	390.5	390.5	382.6	338.8	295.1	251.3	207.6		62	375.5	34.83	375.5	375.5	371.3	327.5	283.8	240.1	196.3
	57	402.6	32.30	402.6	402.6	402.6	358.8	315.1	271.3	227.6		57	387.6	35.15	387.6	387.6	387.6	343.8	300.1	256.3	212.6
15000	72	452.8	33.31	356.5	307.9	259.3	210.7	162.1	#N/A	#N/A	15000	72	434.2	36.15	350.2	301.6	253.0	204.4	155.8	#N/A	#N/A
	67	424.5	32.69	424.5	383.6	335.0	286.4	237.8	189.2	140.6		67	407.0	35.57	407.0	376.2	327.6	279.0	230.4	181.8	133.2
	62	396.9	32.11	396.9	396.9	396.9	348.3	299.7	251.1	202.5		62	381.7	34.98	381.7	381.7	381.7	333.1	284.5	235.9	187.3
	57	409.1	32.45	409.1	409.1	409.1	360.5	311.9	263.3	214.7		57	393.9	35.29	393.9	393.9	393.9	345.3	296.7	248.1	199.5
TEMPERATURE OF AIR ON CONDENSER COIL 105ºF											TEMPERATURE OF AIR ON CONDENSER COIL 115ºF										
9000	72	384.1	39.06	249.6	220.4	191.2	162.1	132.9	#N/A	#N/A	9000	72	366.7	42.71	242.7	213.5	184.3	155.2	126.0	#N/A	#N/A
	67	359.7	38.46	307.5	278.3	249.1	220.0	190.8	161.7	132.5		67	343.2	42.07	300.1	270.9	241.8	212.6	183.4	154.3	125.1
	62	345.0	38.07	345.0	340.8	311.6	282.5	253.3	224.2	195.0		62	337.2	41.88	337.2	336.1	307.0	277.8	248.7	219.5	190.3
	57	350.6	38.22	350.6	349.6	320.5	291.3	262.2	233.0	203.8		57	337.1	41.87	337.1	336.0	306.9	277.7	248.5	219.4	190.2
10500	72	392.7	39.27	273.0	238.9	204.9	170.9	136.9	#N/A	#N/A	10500	72	374.6	42.90	265.8	231.8	197.8	163.7	129.7	#N/A	#N/A
	67	367.8	38.66	335.0	301.0	267.0	233.0	198.9	164.9	130.9		67	350.5	42.26	327.4	293.4	259.4	225.3	191.3	157.3	123.3
	62	352.8	38.27	352.8	350.7	334.0	299.9	265.9	231.9	197.9		62	344.4	42.07	344.4	343.9	329.3	295.3	261.3	227.3	193.2
	57	358.5	38.42	358.5	358.0	343.4	309.4	275.4	241.4	207.3		57	344.3	42.06	344.3	343.8	329.2	295.2	261.1	227.1	193.1
12000	72	401.4	39.47	296.4	257.5	218.6	179.7	140.9	#N/A	#N/A	12000	72	382.5	43.10	288.9	250.1	211.2	172.3	133.4	#N/A	#N/A
	67	375.9	38.86	362.6	323.7	284.8	245.9	207.1	168.2	129.3		67	357.9	42.45	354.7	315.8	276.9	238.1	199.2	160.3	121.4
	62	360.5	38.47	360.5	360.5	356.3	317.4	278.5	239.6	200.8		62	351.7	42.26	351.7	351.7	351.7	312.8	273.9	235.0	196.1
	57	366.4	38.62	366.4	366.4	366.4	327.5	288.6	249.7	210.8		57	351.5	42.25	351.5	351.5	351.5	312.6	273.8	234.9	196.0
13500	72	408.2	39.62	319.6	275.9	232.1	188.4	144.6	#N/A	#N/A	13500	72	389.1	43.25	312.2	268.5	224.7	181.0	137.2	#N/A	#N/A
	67	382.3	39.01	375.6	346.2	302.4	258.7	214.9	171.2	127.5		67	364.1	42.60	362.5	338.4	294.7	251.0	207.2	163.5	119.7
	62	366.6	38.62	366.6	366.6	364.5	320.8	277.0	233.3	189.6		62	357.8	42.41	357.8	357.8	357.8	314.0	270.3	226.5	182.8
	57	372.6	38.77	372.6	372.6	372.6	328.9	285.1	241.4	197.6		57	357.6	42.40	357.6	357.6	357.6	313.9	270.2	226.4	182.7
15000	72	415.0	39.77	342.8	294.2	245.6	197.0	148.4	#N/A	#N/A	15000	72	395.8	43.40	335.4	286.8	238.2	189.6	141.0	#N/A	#N/A
	67	388.6	39.16	388.6	368.6	320.0	271.4	222.8	174.2	125.6		67	370.3	42.75	370.3	361.0	312.4	263.8	215.2	166.6	118.0
	62	372.8	38.77	372.8	372.8	372.8	324.2	275.6	227.0	178.4		62	363.9	42.55	363.9	363.9	363.9	315.3	266.7	218.1	169.5
	57	378.8	38.92	378.8	378.8	378.8	330.2	281.6	233.0	184.4		57	363.7	42.55	363.7	363.7	363.7	315.1	266.5	217.9	169.3
TEMPERATURE OF AIR ON CONDENSER COIL 125ºF																					
9000	72	349.4	46.4	235.8	206.6	177.5	148.3	119.1	#N/A	#N/A											
	67	326.6	45.7	292.7	263.5	234.4	205.2	176.1	146.9	117.7											
	62	329.3	45.7	329.3	329.3	302.3	273.2	244.0	214.8	185.7											
	57	323.5	45.5	323.5	322.4	293.2	264.1	234.9	205.8	176.6											
10500	72	356.5	46.5	258.6	224.6	190.6	156.6	122.6	#N/A	#N/A											
	67	333.3	45.9	319.8	285.8	251.7	217.7	183.7	149.7	115.7											
	62	336.1	45.9	336.1	336.1	324.7	290.7	256.6	222.6	188.6											
	57	330.1	45.7	330.1	329.5	315.0	280.9	246.9	212.9	178.9											
12000	72	363.6	46.7	281.5	242.6	203.7	164.9	126.0	#N/A	#N/A											
	67	339.9	46.0	339.9	308.0	269.1	230.2	191.3	152.4	113.6											
	62	342.8	46.0	342.8	342.8	342.8	308.2	269.3	230.4	191.5											
	57	336.7	45.9	336.7	336.7	336.7	297.8	258.9	220.0	181.2											
13500	72	370.0	46.9	304.8	261.0	217.3	173.6	129.8	#N/A	#N/A											
	67	346.0	46.2	346.0	330.7	287.0	243.2	199.5	155.8	112.0											
	62	348.9	46.2	348.9	348.9	348.9	307.3	263.5	219.8	176.1											
	57	342.7	46.0	342.7	342.7	342.7	298.9	255.2	211.4	167.7											
15000	72	376.5	47.0	328.1	279.5	230.9	182.3	133.7	#N/A	#N/A											
	67	352.0	46.3	352.0	352.0	304.9	256.3	207.7	159.1	110.5											
	62	355.0	46.3	355.0	355.0	355.0	306.4	257.8	209.2	160.6											
	57	348.7	46.2	348.7	348.7	348.7	300.1	251.5	202.9	154.3											

[1]These capacities are gross ratings. For net capacity, deduct air blower motor, MBH - 3.415 X kW. Refer to the appropriate Blower Performance Table for the kW of the supply air blower motor.

[2]These ratings include condenser fan motors and the compressor motors but not the supply blower motor.

TABLE 11: COOLING CAPACITY 40/40 TON UNIT - HB480 CONDENSING UNIT MATCHED WITH LB480 EVAPORATOR UNIT

AIR ON EVAP. COIL		TEMPERATURE OF AIR ON CONDENSER COIL 85ºF								
CFM	WB (ºF)	GROSS CAPACITY (MBH)	TOTAL INPUT (Kw)	GROSS SENSIBLE CAPACITY (MBh) RETURN DRY BULB (ºF)						
				86	83	80	77	74	71	68
12000	72	539.6	45.22	340.2	301.3	262.4	223.5	184.6	#N/A	#N/A
	67	514.1	41.84	423.9	385.0	346.1	307.2	268.3	229.5	190.6
	62	470.8	43.24	470.8	453.4	414.5	375.6	336.7	297.9	259.0
	57	492.1	43.78	492.1	487.3	448.5	409.6	370.7	331.8	292.9
14000	72	557.3	44.33	375.3	330.0	284.6	239.2	193.9	#N/A	#N/A
	67	531.0	41.01	466.1	420.7	375.4	330.0	284.7	239.3	193.9
	62	486.2	42.39	486.2	477.5	449.6	404.2	358.9	313.5	268.1
	57	508.2	42.91	508.2	505.8	486.4	441.0	395.7	350.3	304.9
16000	72	574.9	43.43	410.5	358.6	306.8	255.0	203.1	#N/A	#N/A
	67	547.8	40.18	508.3	456.5	404.7	352.8	301.0	249.1	197.3
	62	501.6	41.53	501.6	501.6	484.6	432.8	381.0	329.1	277.3
	57	524.3	42.04	524.3	524.3	524.3	472.5	420.6	368.8	317.0
18000	72	578.9	44.86	437.5	379.2	320.8	262.5	204.2	#N/A	#N/A
	67	551.6	41.51	531.9	481.5	423.2	364.9	306.5	248.2	189.9
	62	505.1	42.90	505.1	505.1	496.6	438.3	380.0	321.6	263.3
	57	527.9	43.43	527.9	527.9	527.9	469.6	411.3	353.0	294.7
20000	72	582.9	46.30	464.5	399.7	334.9	270.1	205.3	#N/A	#N/A
	67	555.4	42.84	555.4	506.5	441.7	376.9	312.1	247.3	182.5
	62	508.6	44.27	508.6	508.6	508.6	443.8	379.0	314.2	249.4
	57	531.6	44.82	531.6	531.6	531.6	466.8	402.0	337.2	272.4
TEMPERATURE OF AIR ON CONDENSER COIL 105ºF										
12000	72	504.2	51.33	329.0	290.1	251.2	212.3	173.5	#N/A	#N/A
	67	473.3	50.38	406.1	367.2	328.3	289.4	250.6	211.7	172.8
	62	465.3	50.16	465.3	462.2	423.3	384.5	345.6	306.7	267.8
	57	465.0	50.15	465.0	461.9	423.1	384.2	345.3	306.4	267.5
14000	72	515.8	51.62	360.8	315.4	270.1	224.7	179.4	#N/A	#N/A
	67	484.2	50.67	443.7	398.3	353.0	307.6	262.2	216.9	171.5
	62	476.1	50.45	476.1	474.5	455.1	409.7	364.4	319.0	273.7
	57	475.8	50.44	475.8	474.2	454.8	409.4	364.1	318.7	273.4
16000	72	527.5	51.91	392.6	340.8	288.9	237.1	185.3	#N/A	#N/A
	67	495.2	50.95	481.3	429.4	377.6	325.8	273.9	222.1	170.2
	62	486.9	50.74	486.9	486.9	486.9	435.0	383.2	331.3	279.5
	57	486.5	50.72	486.5	486.5	486.5	434.7	382.9	331.0	279.2
18000	72	535.9	52.12	423.7	365.4	307.0	248.7	190.4	#N/A	#N/A
	67	503.0	51.16	496.1	459.6	401.3	342.9	284.6	226.3	168.0
	62	494.6	50.94	494.6	494.6	494.6	436.3	377.9	319.6	261.3
	57	494.2	50.93	494.2	494.2	494.2	435.9	377.6	319.3	261.0
20000	72	544.2	52.33	454.7	389.9	325.1	260.3	195.5	#N/A	#N/A
	67	510.9	51.37	510.9	489.7	424.9	360.1	295.3	230.5	165.7
	62	502.3	51.15	502.3	502.3	502.3	437.5	372.7	307.9	243.1
	57	502.0	51.13	502.0	502.0	502.0	437.2	372.4	307.6	242.8
TEMPERATURE OF AIR ON CONDENSER COIL 125ºF										
12000	72	458.6	60.7	310.5	271.6	232.7	193.8	154.9	#N/A	#N/A
	67	431.4	59.7	388.2	349.3	310.4	271.5	232.7	193.8	154.9
	62	429.8	59.6	429.8	424.9	386.0	347.1	308.2	269.3	230.5
	57	429.3	59.6	429.3	424.4	385.6	346.7	307.8	268.9	230.0
14000	72	468.7	61.0	342.3	297.0	251.6	206.2	160.9	#N/A	#N/A
	67	440.9	60.0	426.3	381.0	335.6	290.2	244.9	199.5	154.2
	62	439.2	59.9	439.2	436.8	417.3	372.0	326.6	281.3	235.9
	57	438.8	59.9	438.8	436.3	416.9	371.5	326.2	280.8	235.5
16000	72	478.8	61.2	374.2	322.3	270.5	218.6	166.8	#N/A	#N/A
	67	450.4	60.2	450.4	412.6	360.8	308.9	257.1	205.2	153.4
	62	448.7	60.1	448.7	448.7	448.7	396.9	345.0	293.2	241.4
	57	448.2	60.1	448.2	448.2	448.2	396.4	344.6	292.7	240.9
18000	72	485.9	61.5	403.6	345.3	286.9	228.6	170.3	#N/A	#N/A
	67	457.1	60.5	457.1	441.0	382.7	324.4	266.1	207.8	149.4
	62	455.4	60.4	455.4	455.4	455.4	397.1	338.8	280.4	222.1
	57	454.9	60.3	454.9	454.9	454.9	396.6	338.3	280.0	221.6
20000	72	493.0	61.7	433.0	368.2	303.4	238.6	173.8	#N/A	#N/A
	67	463.9	60.7	463.9	463.9	404.7	339.9	275.1	210.3	145.5
	62	462.1	60.6	462.1	462.1	462.1	397.3	332.5	267.7	202.9
	57	461.6	60.6	461.6	461.6	461.6	396.8	332.0	267.2	202.4

AIR ON EVAP. COIL		TEMPERATURE OF AIR ON CONDENSER COIL 95ºF								
CFM	WB (ºF)	GROSS CAPACITY (MBH)	TOTAL INPUT (Kw)	GROSS SENSIBLE CAPACITY (MBh) RETURN DRY BULB (ºF)						
				86	83	80	77	74	71	68
12000	72	527.0	46.63	338.3	299.4	260.5	221.6	182.7	#N/A	#N/A
	67	494.2	45.70	415.0	376.1	337.3	298.4	259.5	220.6	181.7
	62	483.1	45.42	483.1	480.9	442.0	403.1	364.3	325.4	286.5
	57	482.9	45.41	482.9	480.7	441.8	402.9	364.0	325.2	286.3
14000	72	539.4	46.94	370.0	324.7	279.3	234.0	188.6	#N/A	#N/A
	67	505.9	46.00	452.4	407.0	361.6	316.3	270.9	225.6	180.2
	62	494.5	45.73	494.5	493.4	474.0	428.6	383.3	337.9	292.5
	57	494.3	45.72	494.3	493.2	473.7	428.4	383.0	337.7	292.3
16000	72	551.9	47.26	401.8	350.0	298.2	246.3	194.5	#N/A	#N/A
	67	517.5	46.31	489.7	437.9	386.0	334.2	282.3	230.5	178.7
	62	505.9	46.04	505.9	505.9	505.9	454.1	402.3	350.4	298.6
	57	505.7	46.02	505.7	505.7	505.7	453.8	402.0	350.2	298.3
18000	72	560.8	47.46	433.7	375.4	317.1	258.8	200.4	#N/A	#N/A
	67	526.0	46.51	512.0	468.9	410.5	352.2	293.9	235.6	177.3
	62	514.2	46.23	514.2	514.2	514.2	455.9	397.5	339.2	280.9
	57	513.9	46.22	513.9	513.9	513.9	455.6	397.3	339.0	280.6
20000	72	569.8	47.66	465.6	400.8	336.0	271.2	206.4	#N/A	#N/A
	67	534.4	46.70	534.4	499.8	435.0	370.2	305.4	240.6	175.8
	62	522.4	46.43	522.4	522.4	522.4	457.6	392.8	328.0	263.2
	57	522.1	46.41	522.1	522.1	522.1	457.3	392.5	327.7	262.9
TEMPERATURE OF AIR ON CONDENSER COIL 115ºF										
12000	72	481.4	56.03	319.7	280.8	242.0	203.1	164.2	#N/A	#N/A
	67	452.4	55.06	397.1	358.2	319.4	280.5	241.6	202.7	163.8
	62	447.6	54.90	447.6	443.5	404.7	365.8	326.9	288.0	249.1
	57	447.2	54.89	447.2	443.2	404.3	365.4	326.6	287.7	248.8
14000	72	492.2	56.30	351.6	306.2	260.8	215.5	170.1	#N/A	#N/A
	67	462.6	55.33	435.0	389.6	344.3	298.9	253.6	208.2	162.8
	62	457.7	55.17	457.7	455.7	436.2	390.9	345.5	300.1	254.8
	57	457.3	55.16	457.3	455.3	435.8	390.5	345.1	299.8	254.4
16000	72	503.1	56.57	383.4	331.6	279.7	227.9	176.0	#N/A	#N/A
	67	472.8	55.60	472.8	421.0	369.2	317.3	265.5	213.7	161.8
	62	467.8	55.44	467.8	467.8	467.8	415.9	364.1	312.3	260.4
	57	467.4	55.42	467.4	467.4	467.4	415.5	363.7	311.9	260.0
18000	72	510.9	56.79	413.6	355.3	297.0	238.7	180.3	#N/A	#N/A
	67	480.1	55.81	480.1	450.3	392.0	333.7	275.3	217.0	158.7
	62	475.0	55.65	475.0	475.0	475.0	416.7	358.3	300.0	241.7
	57	474.6	55.64	474.6	474.6	474.6	416.3	357.9	299.6	241.3
20000	72	518.6	57.01	443.9	379.1	314.3	249.5	184.7	#N/A	#N/A
	67	487.4	56.03	487.4	479.6	414.8	350.0	285.2	220.4	155.6
	62	482.2	55.87	482.2	482.2	482.2	417.4	352.6	287.8	223.0
	57	481.8	55.85	481.8	481.8	481.8	417.0	352.2	287.4	222.6

[1]These capacities are gross ratings. For net capacity, deduct air blower motor, MBH - 3.415 X kW. Refer to the appropriate Blower Performance Table for the kW of the supply air blower motor.

[2]These ratings include condenser fan motors and the compressor motors but not the supply blower motor.

NOTE: HB480 matched with LB480 does not meet ASHRAE 90.1-1999 minimum EER requirements.

TABLE 12: COOLING CAPACITY 40 TON UNIT - HB480 CONDENSING UNIT MATCHED WITH LB600 EVAPORATOR UNIT

AIR ON EVAP. COIL		TEMPERATURE OF AIR ON CONDENSER COIL 85ºF								
CFM	WB (ºF)	GROSS CAPACITY (MBH)	TOTAL INPUT (Kw)	GROSS SENSIBLE CAPACITY (MBh) RETURN DRY BULB (ºF)						
				86	83	80	77	74	71	68
12000	72	560.5	43.11	351.8	312.9	274.1	235.2	196.3	#N/A	#N/A
	67	527.2	42.15	431.8	392.9	354.1	315.2	276.3	237.4	198.5
	62	493.5	41.25	493.5	474.2	435.3	396.4	357.5	318.7	279.8
	57	505.5	41.69	505.5	502.0	463.1	424.2	385.3	346.4	307.6
14000	72	574.0	43.43	384.5	339.2	293.8	248.4	203.1	#N/A	#N/A
	67	539.9	42.46	470.3	424.9	379.6	334.2	288.9	243.5	198.1
	62	505.4	41.56	505.4	495.7	466.7	421.3	375.9	330.6	285.2
	57	517.7	42.00	517.7	515.9	496.4	451.1	405.7	360.4	315.0
16000	72	587.5	43.75	417.2	365.4	313.6	261.7	209.9	#N/A	#N/A
	67	552.5	42.78	508.8	456.9	405.1	353.3	301.4	249.6	197.7
	62	517.3	41.87	517.3	517.3	498.0	446.2	394.4	342.5	290.7
	57	529.8	42.31	529.8	529.8	529.8	478.0	426.1	374.3	322.5
18000	72	596.7	44.00	448.6	390.3	332.0	273.7	215.3	#N/A	#N/A
	67	561.2	43.02	539.3	487.2	428.9	370.6	312.3	253.9	195.6
	62	525.4	42.11	525.4	525.4	515.8	457.5	399.1	340.8	282.5
	57	538.1	42.55	538.1	538.1	538.1	479.8	421.5	363.2	304.8
20000	72	605.9	44.26	480.0	415.2	350.4	285.6	220.8	#N/A	#N/A
	67	569.9	43.27	569.9	517.5	452.7	387.9	323.1	258.3	193.5
	62	533.5	42.35	533.5	533.5	533.5	468.7	403.9	339.1	274.3
	57	546.4	42.80	546.4	546.4	546.4	481.6	416.8	352.0	287.2
		TEMPERATURE OF AIR ON CONDENSER COIL 105ºF								
12000	72	268.2	51.61	179.9	160.4	129.6	90.7	51.8	#N/A	#N/A
	67	252.9	50.66	217.1	197.6	171.4	132.6	93.7	54.8	15.9
	62	245.7	50.03	245.7	235.6	214.0	175.2	136.3	97.4	58.5
	57	246.2	50.28	246.2	236.1	214.9	176.0	137.1	98.3	59.4
14000	72	403.3	51.93	289.1	253.4	212.1	166.7	121.4	#N/A	#N/A
	67	380.0	50.98	353.7	318.0	279.0	233.7	188.3	142.9	97.6
	62	365.1	50.34	365.1	360.1	346.7	301.3	255.9	210.6	165.2
	57	368.8	50.59	368.8	363.8	353.2	307.8	262.5	217.1	171.8
16000	72	538.5	52.25	398.3	346.4	294.6	242.8	190.9	#N/A	#N/A
	67	507.2	51.29	490.3	438.5	386.6	334.8	282.9	231.1	179.3
	62	484.6	50.65	484.6	484.6	479.3	427.4	375.6	323.8	271.9
	57	491.5	50.90	491.5	491.5	491.5	439.7	387.8	336.0	284.1
18000	72	546.5	52.48	428.7	370.4	312.1	253.8	195.5	#N/A	#N/A
	67	514.8	51.52	506.3	467.9	409.6	351.3	292.9	234.6	176.3
	62	491.8	50.88	491.8	491.8	489.2	430.8	372.5	314.2	255.9
	57	498.8	51.13	498.8	498.8	498.8	440.5	382.2	323.9	265.6
20000	72	554.5	52.72	459.2	394.4	329.6	264.8	200.0	#N/A	#N/A
	67	522.3	51.75	522.3	497.4	432.6	367.8	303.0	238.2	173.4
	62	499.1	51.10	499.1	499.1	499.1	434.3	369.5	304.7	239.9
	57	506.2	51.36	506.2	506.2	506.2	441.4	376.6	311.8	247.0
		TEMPERATURE OF AIR ON CONDENSER COIL 125ºF								
12000	72	714.3	61.0	449.3	391.0	344.1	305.2	266.3	#N/A	#N/A
	67	673.7	60.0	566.3	507.9	456.4	417.5	378.6	339.7	300.9
	62	657.3	59.9	657.3	627.1	570.9	532.0	493.1	454.2	415.3
	57	656.5	59.6	656.5	626.4	569.8	530.9	492.1	453.2	414.3
14000	72	601.3	61.3	413.9	358.8	309.4	264.1	218.7	#N/A	#N/A
	67	567.4	60.4	519.0	464.0	412.3	366.9	321.5	276.2	230.8
	62	558.1	60.2	558.1	543.0	517.6	472.2	426.9	381.5	336.1
	57	554.2	59.9	554.2	539.1	510.8	465.5	420.1	374.8	329.4
16000	72	488.2	61.6	378.5	326.6	274.8	222.9	171.1	#N/A	#N/A
	67	461.1	60.7	461.1	420.0	368.1	316.3	264.5	212.6	160.8
	62	459.0	60.5	459.0	459.0	459.0	412.5	360.6	308.8	256.9
	57	451.8	60.2	451.8	451.8	451.8	400.0	348.2	296.3	244.5
18000	72	494.9	61.8	407.8	349.5	291.1	232.8	174.5	#N/A	#N/A
	67	467.4	60.9	467.4	448.4	390.1	331.7	273.4	215.1	156.8
	62	465.2	60.7	465.2	465.2	465.2	409.6	351.2	292.9	234.6
	57	458.0	60.4	458.0	458.0	458.0	399.7	341.3	283.0	224.7
20000	72	501.5	62.0	437.1	372.3	307.5	242.7	177.9	#N/A	#N/A
	67	473.7	61.1	473.7	473.7	412.0	347.2	282.4	217.6	152.8
	62	471.5	60.9	471.5	471.5	471.5	406.7	341.9	277.1	212.3
	57	464.1	60.6	464.1	464.1	464.1	399.3	334.5	269.7	204.9

AIR ON EVAP. COIL		TEMPERATURE OF AIR ON CONDENSER COIL 95ºF								
CFM	WB (ºF)	GROSS CAPACITY (MBH)	TOTAL INPUT (Kw)	GROSS SENSIBLE CAPACITY (MBh) RETURN DRY BULB (ºF)						
				86	83	80	77	74	71	68
12000	72	538.6	46.93	343.6	304.7	265.8	226.9	188.0	#N/A	#N/A
	67	506.8	45.97	423.3	384.4	345.5	306.7	267.8	228.9	190.0
	62	475.4	45.11	475.4	463.8	424.9	386.0	347.1	308.2	269.4
	57	488.7	45.62	488.7	485.2	446.3	407.4	368.6	329.7	290.8
14000	72	551.1	47.25	375.9	330.5	285.2	239.8	194.4	#N/A	#N/A
	67	518.5	46.29	461.4	416.1	370.7	325.3	280.0	234.6	189.3
	62	486.4	45.42	486.4	480.6	455.8	410.5	365.1	319.7	274.4
	57	500.0	45.93	500.0	498.3	478.8	433.5	388.1	342.7	297.4
16000	72	563.6	47.57	408.2	356.4	304.5	252.7	200.8	#N/A	#N/A
	67	530.2	46.60	499.5	447.7	395.9	344.0	292.2	240.3	188.5
	62	497.4	45.72	497.4	497.4	486.8	434.9	383.1	331.2	279.4
	57	511.3	46.24	511.3	511.3	511.3	459.5	407.6	355.8	304.0
18000	72	572.3	47.83	439.2	380.9	322.6	264.3	205.9	#N/A	#N/A
	67	538.4	46.85	523.1	477.7	419.3	361.0	302.7	244.4	186.1
	62	505.2	45.97	505.2	505.2	499.8	441.5	383.2	324.9	266.5
	57	519.3	46.49	519.3	519.3	519.3	460.9	402.6	344.3	286.0
20000	72	581.0	48.08	470.3	405.5	340.7	275.9	211.1	#N/A	#N/A
	67	546.7	47.10	546.7	507.6	442.8	378.0	313.2	248.4	183.6
	62	512.9	46.21	512.9	512.9	512.9	448.1	383.3	318.5	253.7
	57	527.2	46.73	527.2	527.2	527.2	462.4	397.6	332.8	268.0
		TEMPERATURE OF AIR ON CONDENSER COIL 115ºF								
12000	72	491.2	56.29	314.6	275.7	236.8	197.9	159.1	#N/A	#N/A
	67	463.3	55.36	391.7	352.8	313.9	275.0	236.2	197.3	158.4
	62	451.5	54.96	451.5	431.3	392.5	353.6	314.7	275.8	236.9
	57	451.4	54.95	451.4	431.2	392.4	353.5	314.6	275.7	236.8
14000	72	502.3	56.60	351.5	306.1	260.8	215.4	170.0	#N/A	#N/A
	67	473.7	55.67	436.4	391.0	345.6	300.3	254.9	209.6	164.2
	62	461.6	55.26	461.6	451.6	432.1	386.8	341.4	296.0	250.7
	57	461.5	55.26	461.5	451.5	432.0	386.7	341.3	295.9	250.6
16000	72	513.4	56.92	388.4	336.5	284.7	232.8	181.0	#N/A	#N/A
	67	484.2	55.98	481.1	429.2	377.4	325.5	273.7	221.9	170.0
	62	471.8	55.57	471.8	471.8	471.8	419.9	368.1	316.3	264.4
	57	471.7	55.56	471.7	471.7	471.7	419.8	368.0	316.2	264.3
18000	72	520.7	57.14	418.3	359.9	301.6	243.3	185.0	#N/A	#N/A
	67	491.1	56.19	489.5	458.1	399.8	341.5	283.2	224.9	166.5
	62	478.5	55.78	478.5	478.5	478.5	420.2	361.9	303.6	245.2
	57	478.4	55.78	478.4	478.4	478.4	420.1	361.8	303.4	245.1
20000	72	528.0	57.36	448.2	383.4	318.6	253.8	189.0	#N/A	#N/A
	67	498.0	56.40	498.0	487.1	422.3	357.5	292.7	227.9	163.1
	62	485.3	56.00	485.3	485.3	485.3	420.5	355.7	290.9	226.1
	57	485.1	55.99	485.1	485.1	485.1	420.3	355.5	290.7	225.9

[1]These capacities are gross ratings. For net capacity, deduct air blower motor, MBH - 3.415 X kW. Refer to the appropriate Blower Performance Table for the kW of the supply air blower motor.

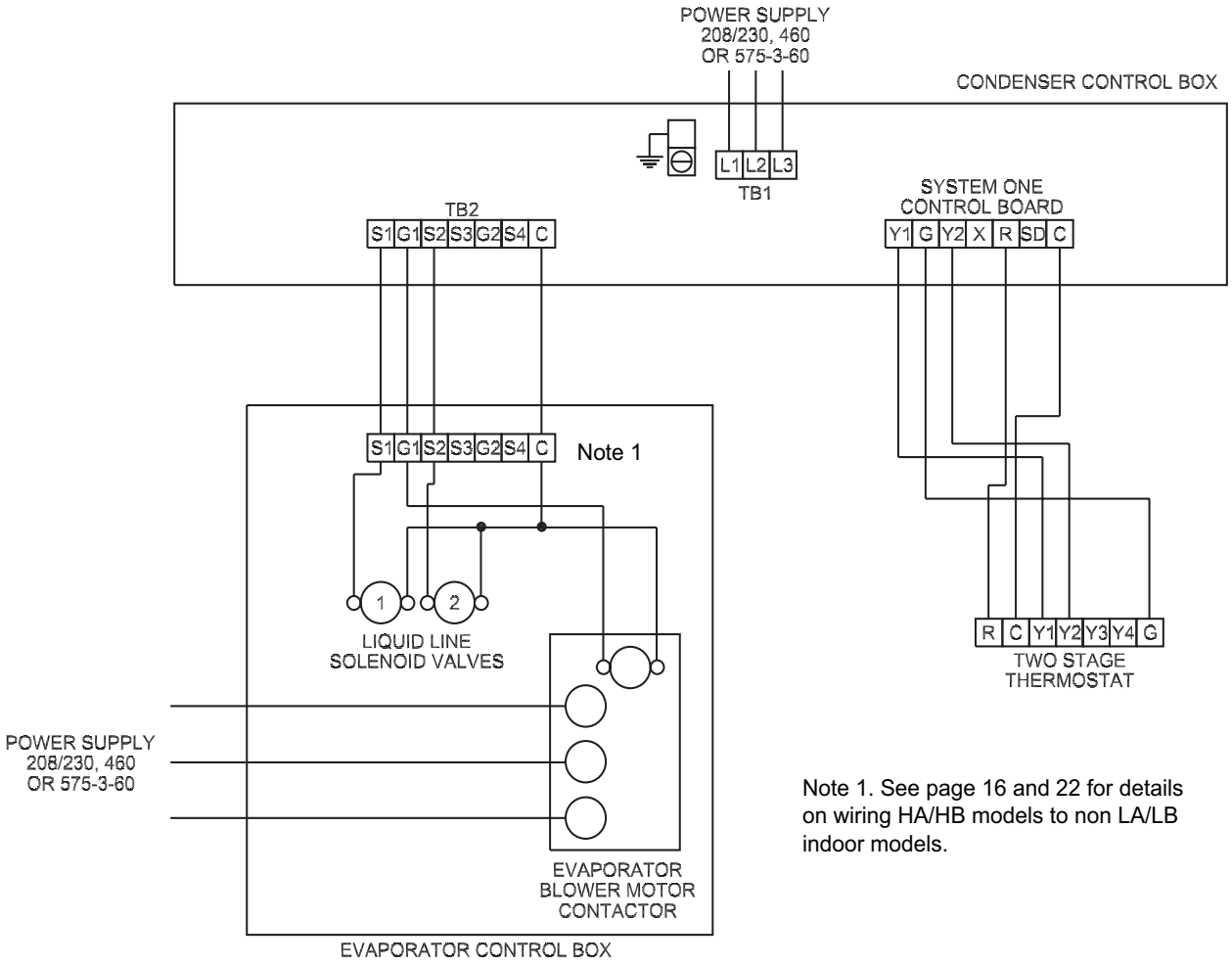
[2]These ratings include condenser fan motors and the compressor motors but not the supply blower motor.

TABLE 13: COOLING CAPACITY 50 TON UNIT - HB600 CONDENSING UNIT MATCHED WITH LB600 EVAPORATOR UNIT

AIR ON EVAP. COIL		TEMPERATURE OF AIR ON CONDENSER COIL 85ºF									AIR ON EVAP. COIL		TEMPERATURE OF AIR ON CONDENSER COIL 95ºF								
CFM	WB (ºF)	GROSS CAPACITY (MBH)	TOTAL INPUT (Kw)	GROSS SENSIBLE CAPACITY (MBh) RETURN DRY BULB (ºF)							CFM	WB (ºF)	GROSS CAPACITY (MBH)	TOTAL INPUT (Kw)	GROSS SENSIBLE CAPACITY (MBh) RETURN DRY BULB (ºF)						
				86	83	80	77	74	71	68					86	83	80	77	74	71	68
15000	72	728.4	42.69	453.2	404.6	356.0	307.4	258.8	#N/A	#N/A	15000	72	649.8	55.19	415.6	367.0	318.4	269.8	221.2	#N/A	#N/A
	67	633.9	49.43	526.2	477.6	429.0	380.4	331.8	283.2	234.6		67	609.1	54.35	513.9	465.3	416.7	368.1	319.5	270.9	222.3
	62	592.2	48.61	592.2	578.8	530.2	481.6	433.0	384.4	335.8		62	569.9	53.61	569.9	559.3	510.7	462.1	413.5	364.9	316.3
	57	617.2	49.06	617.2	617.2	570.2	521.6	473.0	424.4	375.8		57	595.3	54.16	595.3	593.3	544.7	496.1	447.5	398.9	350.3
17500	72	745.7	42.94	493.2	436.5	379.8	323.1	266.4	#N/A	#N/A	17500	72	665.3	55.44	454.9	398.2	341.5	284.8	228.1	#N/A	#N/A
	67	648.9	49.73	571.0	514.3	457.6	400.9	344.2	287.5	230.8		67	623.7	54.60	560.3	503.6	446.9	390.2	333.5	276.8	220.1
	62	606.2	48.90	606.2	599.5	565.6	508.9	452.2	395.5	338.8		62	583.5	53.86	583.5	578.2	547.8	491.1	434.4	377.7	321.0
	57	631.8	49.36	631.8	631.8	608.3	551.6	494.9	438.2	381.5		57	609.6	54.41	609.6	608.6	584.3	527.6	470.9	414.2	357.5
20000	72	762.9	43.20	533.2	468.4	403.6	338.8	274.0	#N/A	#N/A	20000	72	680.9	55.70	494.2	429.4	364.6	299.8	235.0	#N/A	#N/A
	67	663.8	50.03	615.9	551.1	486.3	421.5	356.7	291.9	227.1		67	638.3	54.86	606.8	542.0	477.2	412.4	347.6	282.8	218.0
	62	620.2	49.20	620.2	620.2	601.0	536.2	471.4	406.6	341.8		62	597.1	54.11	597.1	597.1	584.9	520.1	455.3	390.5	325.7
	57	646.4	49.66	646.4	646.4	646.4	581.6	516.8	452.0	387.2		57	623.8	54.66	623.8	623.8	623.8	559.0	494.2	429.4	364.6
22500	72	775.9	43.36	574.0	501.1	428.2	355.3	282.4	#N/A	#N/A	22500	72	692.0	55.90	532.2	459.3	386.4	313.5	240.6	#N/A	#N/A
	67	675.1	50.20	651.2	588.8	515.9	443.0	370.1	297.2	224.3		67	648.7	55.05	632.9	578.6	505.7	432.8	359.9	287.0	214.1
	62	630.8	49.37	630.8	630.8	621.2	548.3	475.4	402.5	329.6		62	606.9	54.30	606.9	606.9	600.7	527.8	454.9	382.0	309.1
	57	657.4	49.83	657.4	657.4	657.4	584.5	511.6	438.7	365.8		57	634.0	54.86	634.0	634.0	634.0	561.1	488.2	415.3	342.4
25000	72	788.9	43.51	614.8	533.8	452.8	371.8	290.8	#N/A	#N/A	25000	72	703.1	56.10	570.2	489.2	408.2	327.2	246.2	#N/A	#N/A
	67	686.4	50.38	686.4	626.6	545.6	464.6	383.6	302.6	221.6		67	659.1	55.25	659.1	615.3	534.3	453.3	372.3	291.3	210.3
	62	641.4	49.54	641.4	641.4	641.4	560.4	479.4	398.4	317.4		62	616.6	54.49	616.6	616.6	616.6	535.6	454.6	373.6	292.6
	57	668.4	50.01	668.4	668.4	668.4	587.4	506.4	425.4	344.4		57	644.2	55.05	644.2	644.2	644.2	563.2	482.2	401.2	320.2
TEMPERATURE OF AIR ON CONDENSER COIL 105ºF											TEMPERATURE OF AIR ON CONDENSER COIL 115ºF										
15000	72	622.8	61.34	405.7	357.1	308.5	259.9	211.3	#N/A	#N/A	15000	72	595.7	67.50	395.8	347.2	298.6	250.0	201.4	#N/A	#N/A
	67	583.9	60.46	503.5	454.9	406.3	357.7	309.1	260.5	211.9		67	558.6	66.57	493.1	444.5	395.9	347.3	298.7	250.1	201.5
	62	562.1	59.99	562.1	556.3	507.7	459.1	410.5	361.9	313.3		62	554.4	66.37	554.4	553.2	504.6	456.0	407.4	358.8	310.2
	57	574.7	60.26	574.7	573.1	524.5	475.9	427.3	378.7	330.1		57	554.0	66.35	554.0	552.9	504.3	455.7	407.1	358.5	309.9
17500	72	636.7	61.63	444.2	387.5	330.8	274.1	217.4	#N/A	#N/A	17500	72	608.1	67.81	433.5	376.8	320.1	263.4	206.7	#N/A	#N/A
	67	596.9	60.74	548.9	492.4	435.7	379.0	322.3	265.6	208.9		67	570.1	66.88	537.4	481.1	424.4	367.7	311.0	254.3	197.6
	62	574.7	60.27	574.7	571.8	544.4	487.7	431.0	374.3	317.6		62	565.9	66.68	565.9	565.3	541.0	484.3	427.6	370.9	314.2
	57	587.5	60.54	587.5	586.7	562.4	505.7	449.0	392.3	335.6		57	565.5	66.66	565.5	564.9	540.6	483.9	427.2	370.5	313.8
20000	72	650.6	61.91	482.7	417.9	353.1	288.3	223.5	#N/A	#N/A	20000	72	620.4	68.12	471.2	406.4	341.6	276.8	212.0	#N/A	#N/A
	67	610.0	61.02	594.2	529.9	465.1	400.3	335.5	270.7	205.9		67	581.7	67.18	581.7	517.8	453.0	388.2	323.4	258.6	193.8
	62	587.2	60.55	587.2	587.2	581.1	516.3	451.5	386.7	321.9		62	577.3	66.98	577.3	577.3	577.3	512.5	447.7	382.9	318.1
	57	600.4	60.82	600.4	600.4	600.4	535.6	470.8	406.0	341.2		57	576.9	66.97	576.9	576.9	576.9	512.1	447.3	382.5	317.7
22500	72	661.4	62.11	520.5	447.6	374.7	301.8	228.9	#N/A	#N/A	22500	72	630.7	68.32	508.9	436.0	363.1	290.2	217.3	#N/A	#N/A
	67	620.0	61.22	612.2	566.5	493.6	420.7	347.8	274.9	202.0		67	591.4	67.38	591.4	554.4	481.5	408.6	335.7	262.8	189.9
	62	596.9	60.74	596.9	596.9	593.9	521.0	448.1	375.2	302.3		62	587.0	67.18	587.0	587.0	587.0	514.1	441.2	368.3	295.4
	57	610.3	61.01	610.3	610.3	610.3	537.4	464.5	391.6	318.7		57	586.5	67.16	586.5	586.5	586.5	513.6	440.7	367.8	294.9
25000	72	672.1	62.31	558.4	477.4	396.4	315.4	234.4	#N/A	#N/A	25000	72	641.1	68.52	546.6	465.6	384.6	303.6	222.6	#N/A	#N/A
	67	630.1	61.41	630.1	603.1	522.1	441.1	360.1	279.1	198.1		67	601.1	67.58	601.1	591.0	510.0	429.0	348.0	267.0	186.0
	62	606.6	60.93	606.6	606.6	606.6	525.6	444.6	363.6	282.6		62	596.6	67.37	596.6	596.6	596.6	515.6	434.6	353.6	272.6
	57	620.2	61.21	620.2	620.2	620.2	539.2	458.2	377.2	296.2		57	596.1	67.36	596.1	596.1	596.1	515.1	434.1	353.1	272.1
TEMPERATURE OF AIR ON CONDENSER COIL 125ºF																					
15000	72	568.7	73.6	385.9	337.3	288.7	240.1	191.5	#N/A	#N/A											
	67	533.3	72.7	482.7	434.1	385.5	336.9	288.3	239.7	191.1											
	62	546.7	72.7	546.7	546.7	501.6	453.0	404.4	355.8	307.2											
	57	533.3	72.5	533.3	532.7	484.1	435.5	386.9	338.3	289.7											
17500	72	579.4	74.0	422.8	366.1	309.4	252.7	196.0	#N/A	#N/A											
	67	543.3	73.0	525.9	469.9	413.2	356.5	299.8	243.1	186.4											
	62	557.1	73.1	557.1	557.1	537.6	480.9	424.2	367.5	310.8											
	57	543.4	72.8	543.4	543.1	518.8	462.1	405.4	348.7	292.0											
20000	72	590.1	74.3	459.7	394.9	330.1	265.3	200.5	#N/A	#N/A											
	67	553.4	73.3	553.4	505.7	440.9	376.1	311.3	246.5	181.7											
	62	567.5	73.4	567.5	567.5	567.5	508.8	444.0	379.2	314.4											
	57	553.5	73.1	553.5	553.5	553.5	488.7	423.9	359.1	294.3											
22500	72	600.1	74.5	497.2	424.3	351.4	278.5	205.6	#N/A	#N/A											
	67	562.7	73.5	562.7	542.3	469.4	396.5	323.6	250.7	177.8											
	62	577.0	73.6	577.0	577.0	577.0	507.2	434.3	361.4	288.5											
	57	562.8	73.3	562.8	562.8	562.8	489.9	417.0	344.1	271.2											
25000	72	610.0	74.7	534.8	453.8	372.8	291.8	210.8	#N/A	#N/A											
	67	572.0	73.7	572.0	572.0	497.9	416.9	335.9	254.9	173.9											
	62	586.6	73.8	586.6	586.6	586.6	505.6	424.6	343.6	262.6											
	57	572.1	73.5	572.1	572.1	572.1	491.1	410.1	329.1	248.1											

[1]These capacities are gross ratings. For net capacity, deduct air blower motor, MBH - 3.415 X kW. Refer to the appropriate Blower Performance Table for the kW of the supply air blower motor.

[2]These ratings include condenser fan motors and the compressor motors but not the supply blower motor.



Note 1. See page 16 and 22 for details on wiring HA/HB models to non LA/LB indoor models.

FIGURE 1 - TYPICAL FIELD WIRING FOR HA300 & LA300

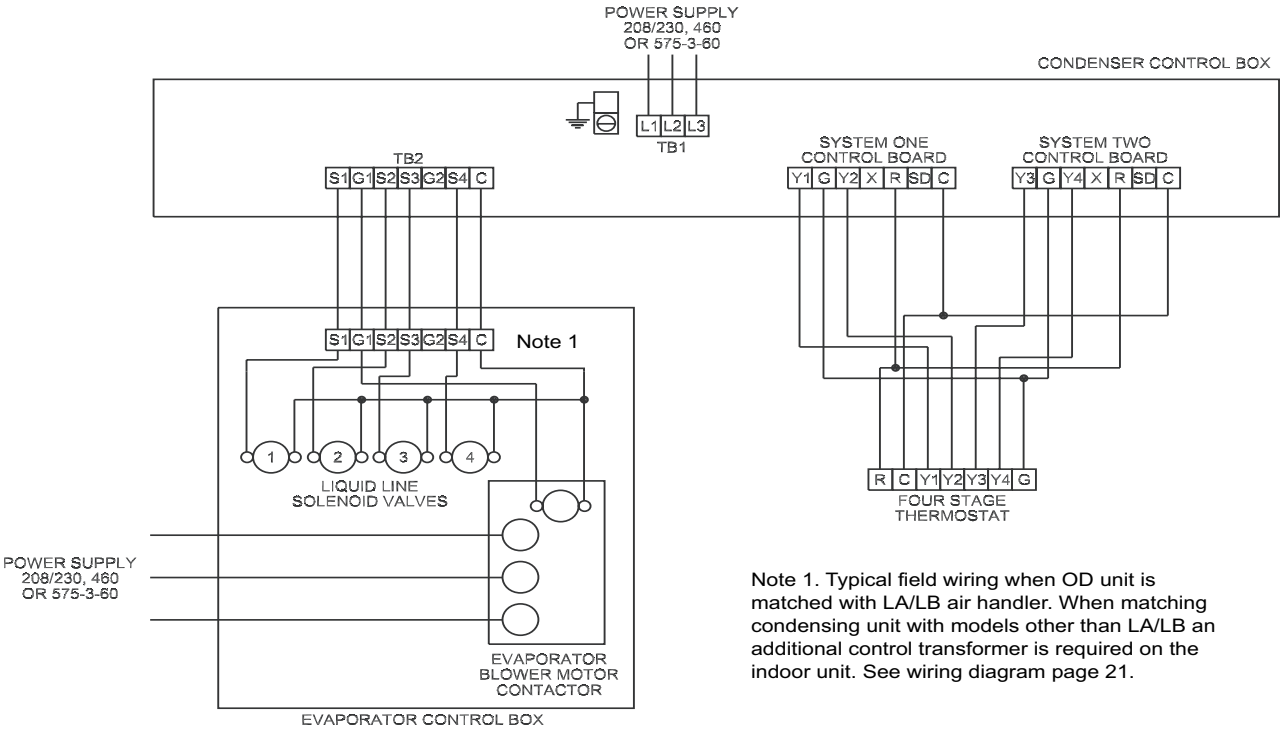


FIGURE 2 - TYPICAL FIELD WIRING FOR HB360, 480, 600 & LB360, 480, 600

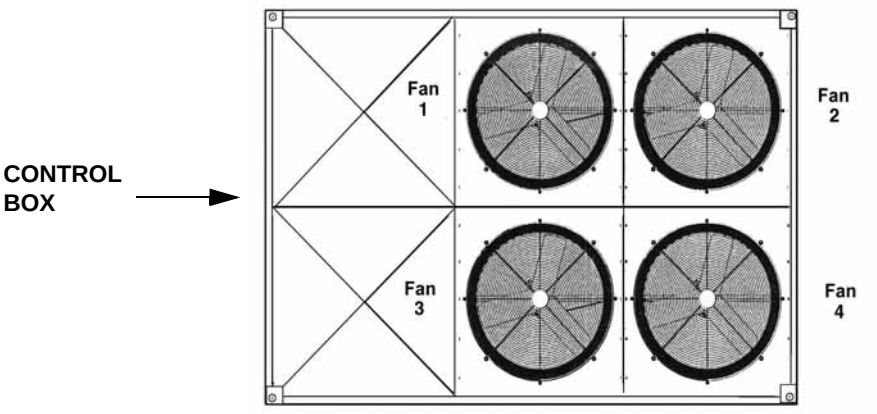


FIGURE 3 - FAN ORIENTATION CONTROL BOX END

See Fan Operation on page 23 of Installation Instruction.

TABLE 14: CORNER WEIGHTS & CENTER OF GRAVITY (INCHES)

Unit Model	Unit Weight (Lbs.)		Unit Dimensions (Inches)		A	B	C	D	Dim X	Dim Y	Weight A to D	Weight B to C
	Shipping	Operation	Length	Width								
HA300	1608	1658	110.46	88.46	337	412	472	386	49.7	47.7	723.5	884.5
HB360	1730	1790	110.46	88.46	363	531	497	339	44.8	42.8	701.6	1028.4
HB480	1961	2037	128.46	88.46	393	598	585	385	51.0	43.8	778.5	1182.5
HB600	2470	2563	128.46	88.46	470	757	767	476	49.2	44.5	946.0	1524.0

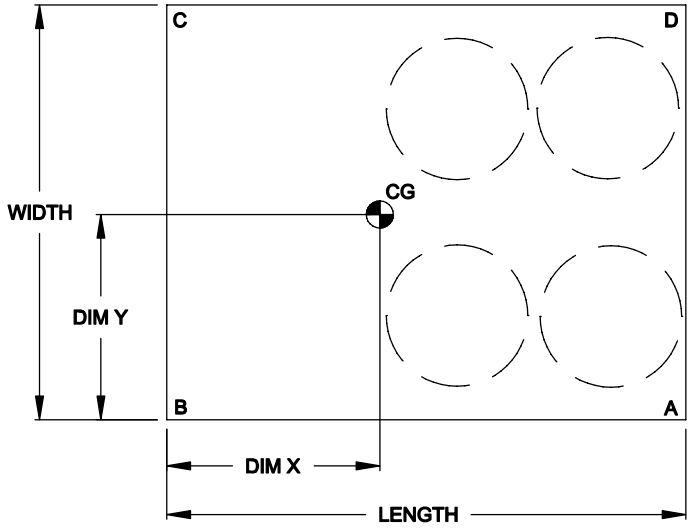


FIGURE 4 - CORNER WEIGHTS & CENTER OF GRAVITY

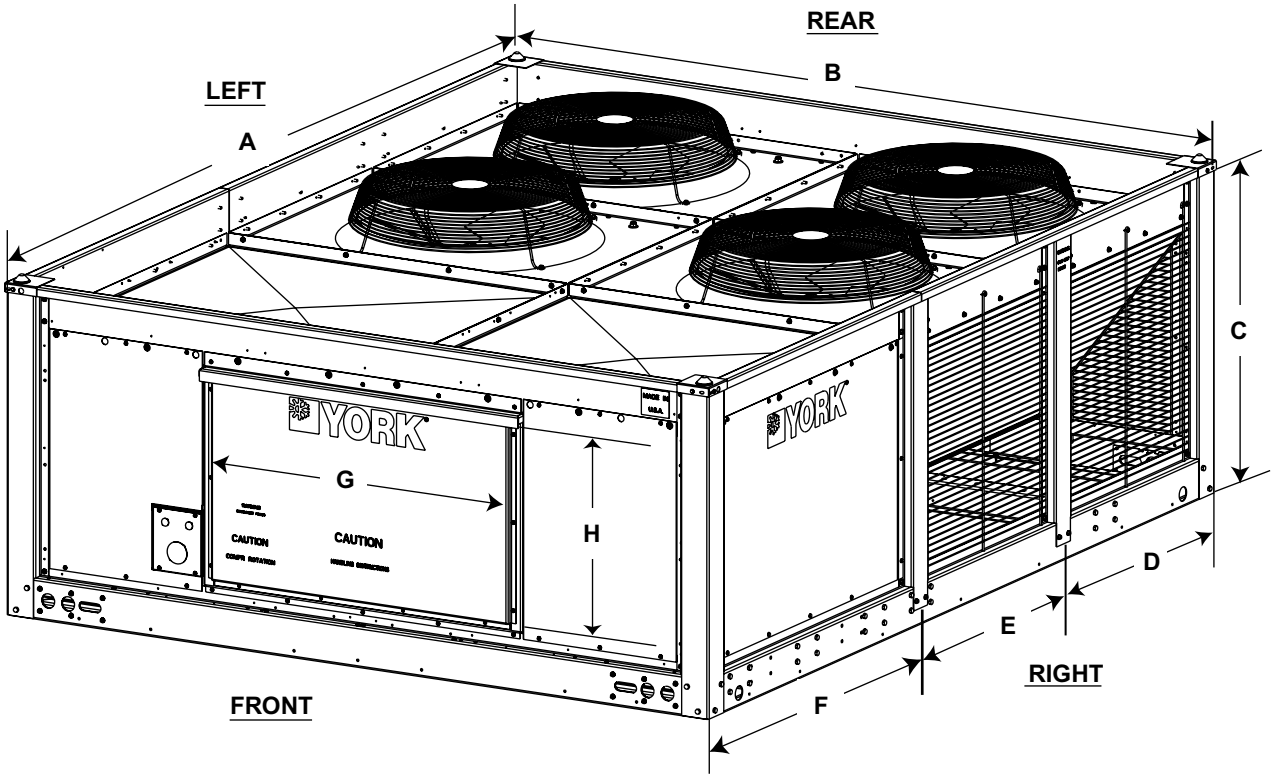


FIGURE 5 - HA/HB UNIT DIMENSIONS

TABLE 15: UNIT DIMENSIONS (INCHES)

MODEL	A	B	C	D	E	F	G	H
HA300	110.5	88.5	37.5	32.8	31.0	46.1	37.1	23.6
HB360	110.5	88.5	37.5	32.8	31.0	46.1	37.1	23.6
HB480	128.5	88.5	37.5	41.8	40.0	46.1	37.1	23.6
HB600	128.5	88.5	57.7	41.8	40.0	46.1	37.1	23.6

PIPING AND ELECTRICAL CONNECTIONS

Piping connections are made from the rear of the unit. Connections can be made directly to the suction and liquid piping or if so equipped to the optional suction and liquid line service valves.

With the piping connections being made at the rear of the unit, piping can be routed to the unit from the left or right side.

Electrical connections for power and control wiring is made from the front of the unit, left of the electrical control box access. See Tables 17, 18 and 19 and Figures 6 thru 10 for piping sizes and electrical knockout details.

TABLE 16: UNIT CLEARANCES

Location	Dimensions
Overhead (Top)*	120”
Front access panels	36”
Left Side	30”
Right Side	30”
Rear	24”
Bottom†	0”

* Units must be installed outdoors. Overhanging structures or shrubs should not obstruct condenser air discharge.

† Adequate snow clearance must be provided if winter operation is expected.

TABLE 17: PIPING AND ELECTRICAL CONNECTION SIZES (25T) (INCHES)

CONNECTION ENTRY	SIZE
SUCTION LINE SYS #1	1-5/8 OD
LIQUID LINE SYS #1	7/8 OD
POWER WIRING KNOCKOUT	SEE TABLE 12
CONTROL WIRING	7/8 HOLE

TABLE 18: PIPING AND ELECTRICAL CONNECTION SIZES (30/40/50T) (INCHES)

CONNECTION ENTRY	SIZE
SUCTION LINE SYS #1	1-5/8 OD
LIQUID LINE SYS #1	7/8 OD
SUCTION LINE SYS #2	1-5/8 OD
LIQUID LINE SYS #2	7/8 OD
POWER WIRING KNOCKOUT	SEE TABLE 12
CONTROL WIRING	7/8 HOLE

TABLE 19: ELECTRICAL POWER KNOCKOUT SIZES (INCHES)

CONNECTION ENTRY		25T/230V	25T/460-575V	30-40-50T/230V	30-40-50T/460-575V
E	POWER WIRING	2”	1-1/2”	2-1/2”	1-1/2”

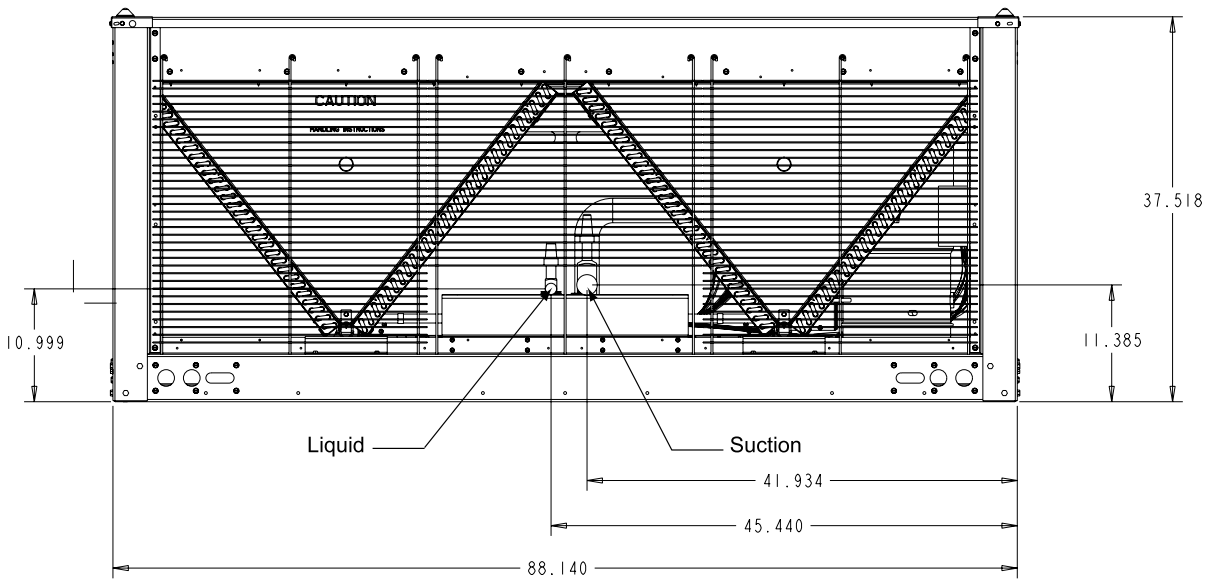


FIGURE 6 - 25 TON PIPING CONNECTIONS

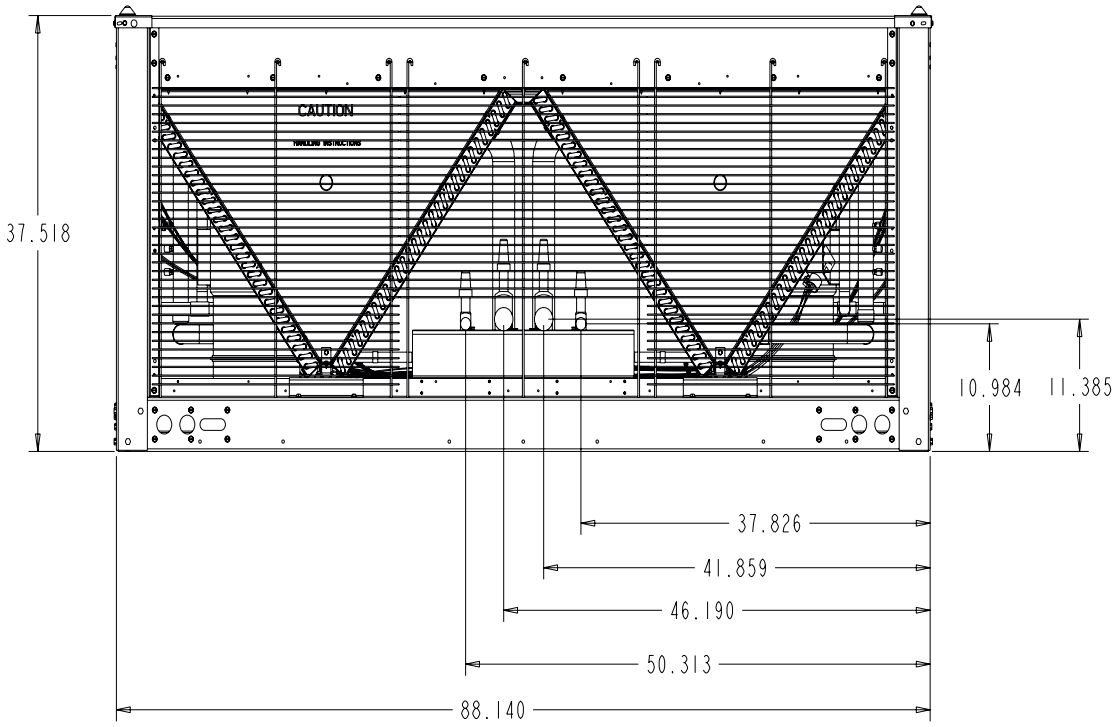


FIGURE 7 - 30 & 40 TON PIPING CONNECTIONS

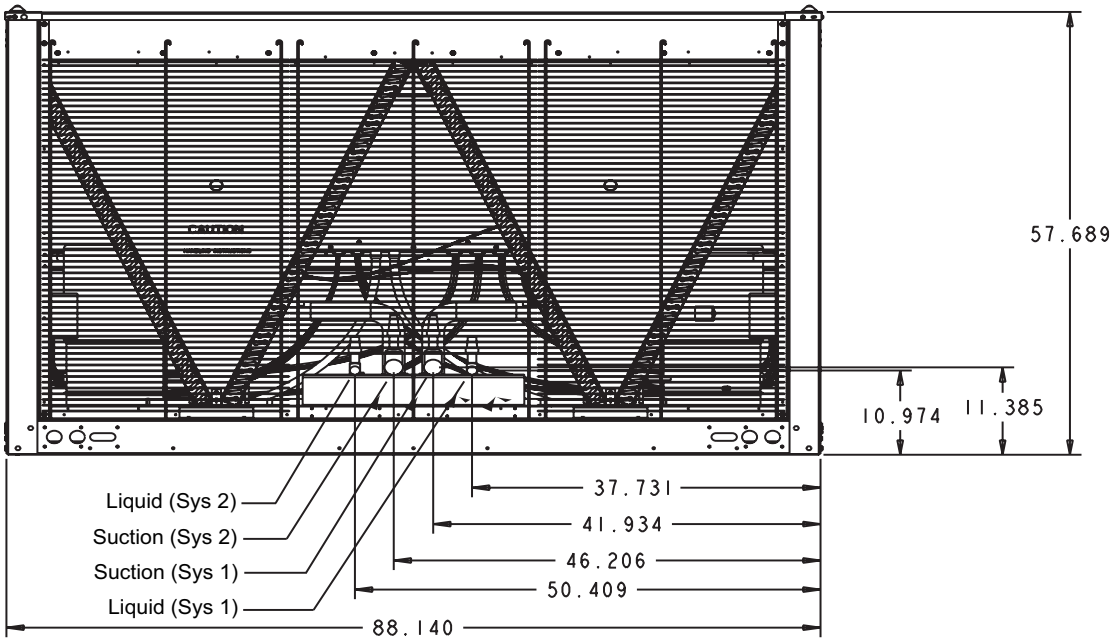


FIGURE 8 - 50 TON PIPING CONNECTIONS

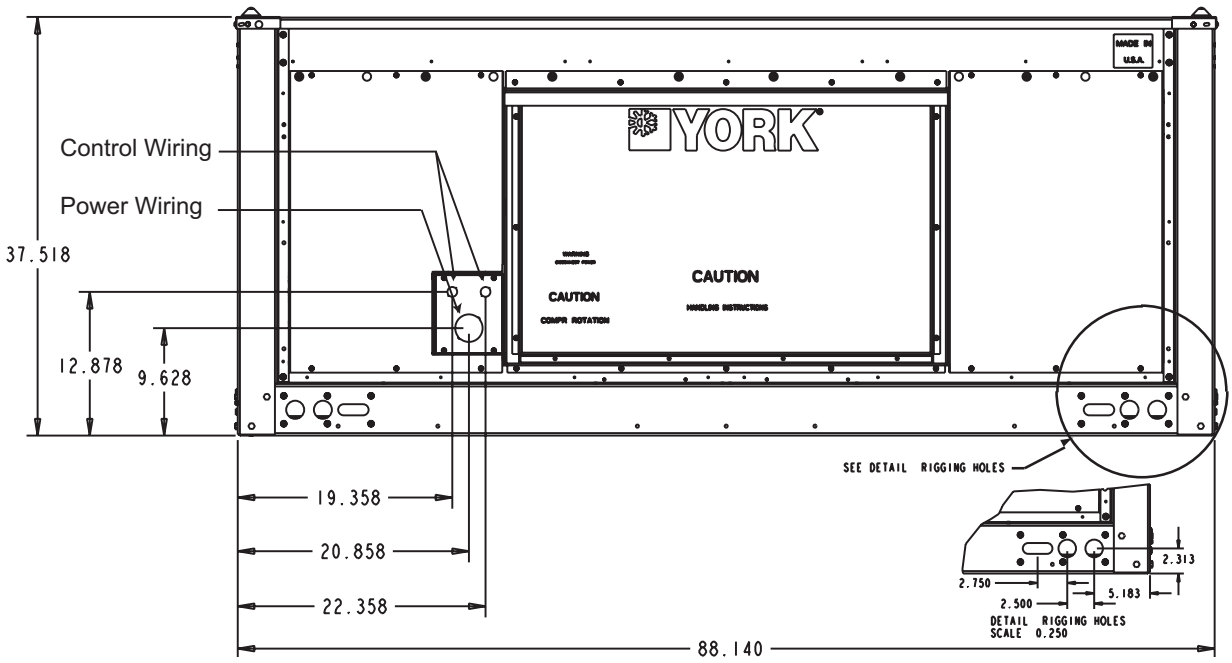


FIGURE 9 - 25, 30 & 40 TON POWER AND CONTROL WIRING CONNECTIONS

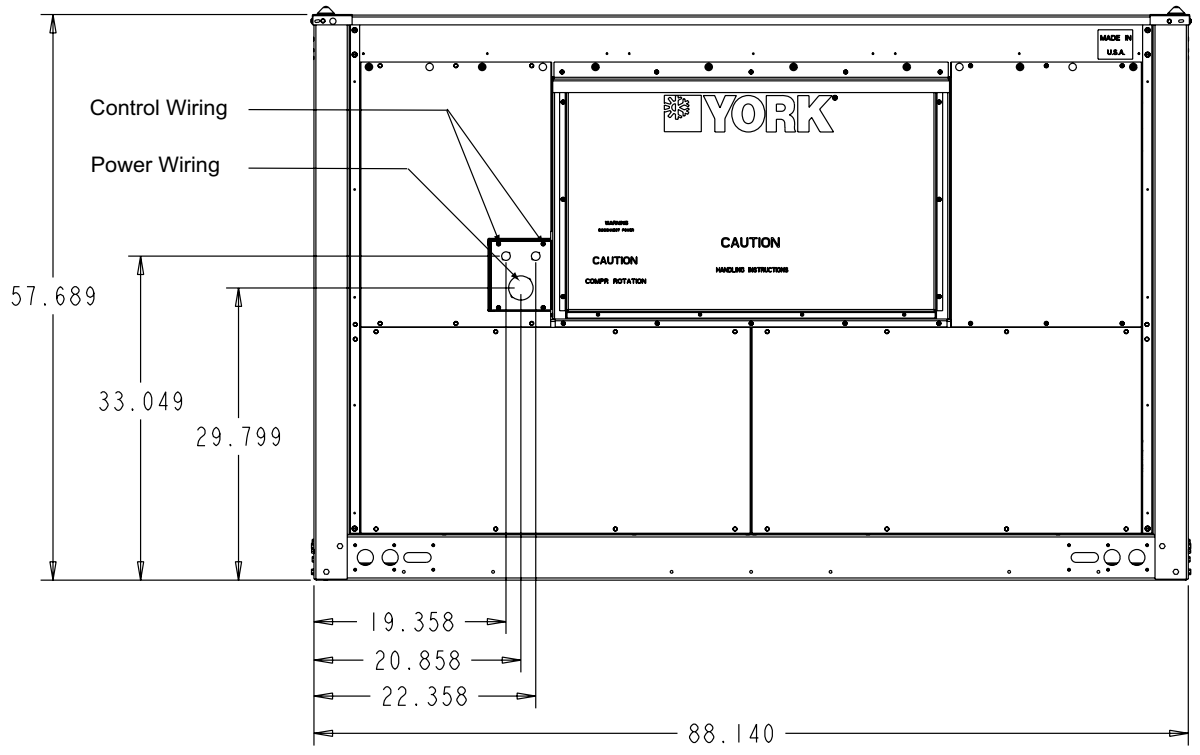
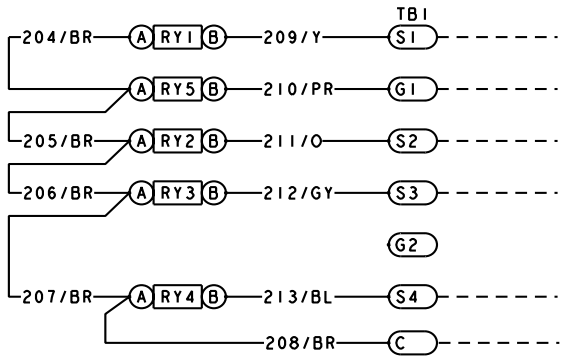
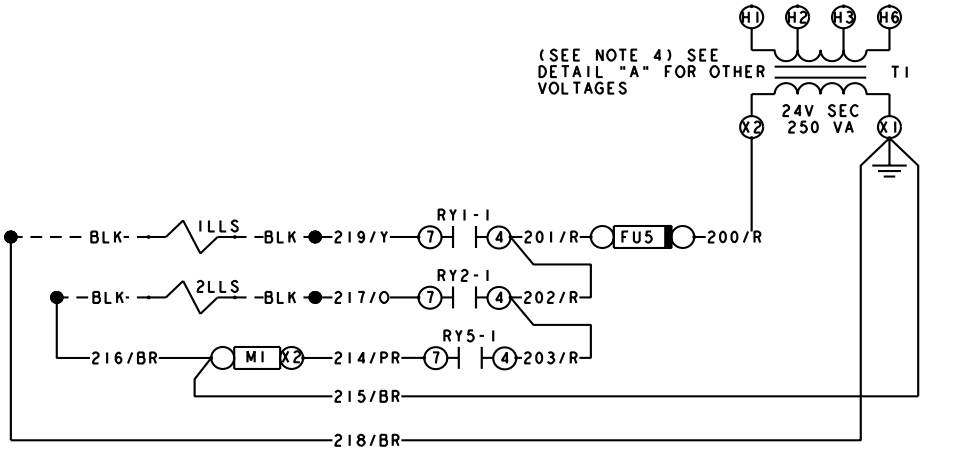


FIGURE 10 - 50 TON POWER AND CONTROL WIRING CONNECTIONS

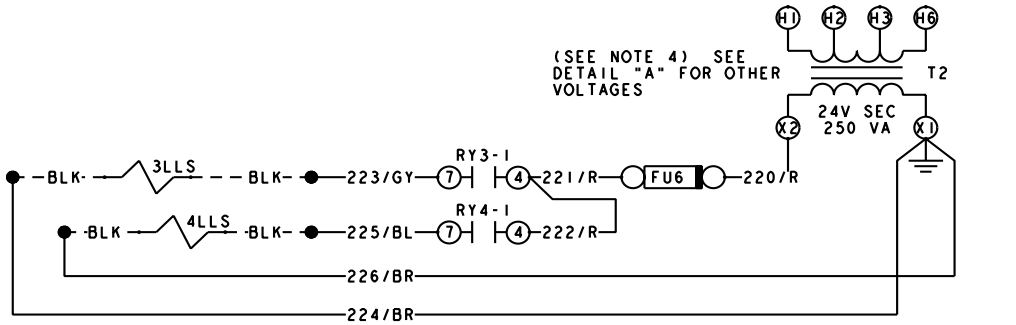


Standard Terminal Block on LA/LB models. On non LA/LB models isolation relays must be installed to avoid overloading on 75 VA transformer on condensing unit.

Primary side of transformer connect to line side of power



Primary side of transformer connect to line side of power



Non LA/LB units may not include any or all of the components required to wire the unit use the diagram as general reference only.

FIGURE 11 - TYPICAL LIQUID LINE SOLENOID WIRING

GUIDE SPECIFICATIONS
MODELS HA300, HB360, HB480 and HB600
CONDENSING UNITS

THE INSTALLER SHALL:

- Furnish York® air-cooled condensing units or equivalent in accordance with the performance schedule shown on the plans, and
- Install each unit as shown on the plans in accordance with:
    - The manufacturers recommendations and
    - All applicable national and local codes

EACH UNIT SHALL be:

- ETL and cETL approved.
- Completely assembled for one-piece shipping and rigging.
- Leak pressure and functionally tested at the factory to assure a trouble-free start-up after installation.
- Covered by a 1-year limited parts warranty on the complete unit.
- In current production with published literature available to check performance, limitations, specifications, power requirements, dimensions, operation and appearance.

EACH UNIT SHALL HAVE:

- A steel angle frame to provide the rigid support required for shipping, rigging and years of dependable operation.
- Zinc-coated steel that has been finished by a powder paint process to provide a long lasting, quality appearance.
- Removable panels for easy access to all internal components during maintenance and service.

THE DIMENSIONS OF EACH UNIT shall not exceed those specified on the plans.

EACH COMPRESSOR shall be mounted on isolators to minimize the transmission of vibration.

ALL CONDENSER COILS SHALL:

- Be draw thru
- Be constructed of copper tubes arranged in staggered rows and mechanically expanded into aluminum fins.

THE CONDENSER FAN MOTOR(S) SHALL:

- Be directly connected to the condenser fans.
- Have permanently lubricated ball bearings.
- Have inherent overload protection.
- Motors shall be three phase.
- The propeller-type condenser fans shall be arranged for vertical discharge of the condenser air.

THE WIRING FOR EACH UNIT SHALL INCLUDE:

- A crankcase heater (one per compressor)
- All 24-volt temperature control circuit.
- Both high and low pressure cutouts.
- Solid-state or internal line break compressor motor protection.
- Condenser fan motor control to assure stable operation at ambient temperatures down to 40ºF.

THE REFRIGERANT PIPING of each system shall include:

- A filter-drier shipped for field installation.
- A liquid line, moisture-indicating, sight glass shipped for field installation.

036-21328-003-D-0206
Supersedes: 036-21328-003-C-1004

Unitary Products Group
5005 York Drive
Norman OK 73069