Product Catalog

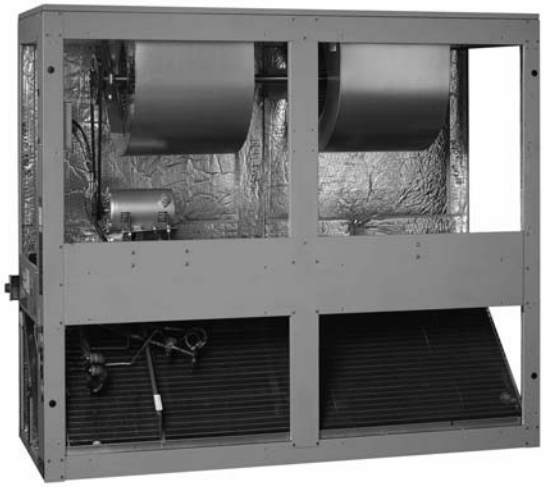
Split System Air Conditioners
Odyssey™

R-22 Dry Charge
Cooling Condenser — 7.5, 10, 15 and 20 Tons — 60 Hz

May 2014

SS-PRC037C-EN

Introduction



Trane's reputation for providing quality comfort solutions continues with the development of the next generation Light Commercial Odyssey Split Systems.

With wide network availability, flexible applications, installation ease, built-in reliability and easy servicing, Odyssey will meet any number of customer applications. Add to that Trane's outstanding customer service and you have the formula to make Odyssey the clear choice for continued customer satisfaction.

Wide network availability

A broad distribution network provides owners, maintenance personnel, contractors, etc., the means to get their hands on equipment when they need it. Whether it's an emergency replacement or a new construction project in its infancy stages, Odyssey products meet an array of needs at the right time and right price.

Flexible applications

No matter what the application, Odyssey provides the solution. A broad array of models and tonnages are available with single or dual compressors, single or dual circuits and numerous accessories. Condensing units can be installed on the ground or on a rooftop along with extended piping runs, while air handlers can be free discharge on the ground or horizontally suspended with long duct runs from a ceiling. Should application challenges arise, Odyssey delivers.

Easy to install

Small footprints and low weights combined with factory installed components like TXVs, filter driers, etc., reduce installation time and cost. Colored and numbered wiring and factory tested units make Odyssey the right choice.

Built-in reliability

Keeping in mind that productivity only occurs when equipment is operational,Trane has taken the steps to ensure that Odyssey is up and running. Early indicators such as phase/reversal monitors and loss of charge protection provide diagnostics which prevent failure and provide years of worry-free service and operation.

Easy to service

When preventive maintenance or service is required, technicians will find efficient access to both air handlers and condensers. Panels provide complete, easy access coupled with standardized cabinets in which all components are located in proximity. Odyssey's improved design results in minimum service times and costs.

With these capabilities, Odyssey provides customers high efficiency and superior performance for the best all-around value in the market today.

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Table of Contents

Accessories

Cooling Condenser

Table 1. TTA Accessories

Model	Used With
Coil (Hail/Vandal) Guard	
BAYGARD058A	TTA090A
BAYGARD059A	TTA120A
BAYGARD061A	TTA180B, TTA240B
BAYHGBP010B	All models
Rubber Isolators	
BAYISLT004A (blue)	TTA090A
BAYISLT005A (black)	TTA120A
BAYISLT009A (red)	TTA180B
BAYISLT010A (green)	TTA240B
Steel Spring Isolators	
BAYISLT023A (red)	TTA090A, TTA120A
BAYISLT024A (black)	TTA180B
BAYISLT025A (yellow)	TTA240B
Low Ambient — On/Off Fan Control (External mount, small cabinets)[a] [b] [c]	
BAYLOAMU01B (External Mount, small cabinets)[d]	(all voltages) TTA090A
BAYLOAMU02B (Internal mount, large cabinets)	(all voltages) TTA120A, TTA180B, TTA240B

[a] Cycles fan on/off, (no modulating).
[b] Quantity of 1 required for each fan (2 total for).
[c] ReliaTel™ requires onboard EDC function to be disabled when BAYLOAM is used, remove OA sensor from terminal J8-1&2
[d] Kit mounts external to the outdoor unit and operates by sensing ambient and liquid line temperatures.

Model Number Description

Cooling Condenser

TTA	120	A	3	00	*	*
1 2 3	4 5 6	7	8	9 10	11	12

All products are identified by a multiple-character model number that precisely identifies a particular type of unit. An explanation of the alphanumeric identification code is provided. Its use will enable the owner/operator, installing contractors, and service engineers to define the operation, specific components, and other options for any specific unit. When ordering replacement parts or requesting service, be sure to refer to the specific model number, serial number, and DL number (if applicable) stamped on the unit nameplate.

DIGITS 1 - 3: Product Type

TTA = Split System Cooling

DIGITS 4 - 6: Nominal Gross Cooling Capacity (MBh)

090 = 7.5 Tons (60Hz)
120 = 10 Tons (60Hz)
180 = 15 Tons (60Hz)
240 = 20 Tons (60Hz)

DIGIT 7: Major Development Sequence

A = Single Compressor, Single Circuit, R-22
B = Dual Compressor, Dual Circuit, R-22

DIGIT 8: Electrical Characteristics

3 = 208–230/60/3
4 = 460/60/3

DIGITS 9 - 10: Factory Installed Options

00 = Packed Stock

DIGITS 11: Minor Design Sequence

* = Current Design Sequence[1]

DIGITS 12: Service Digit

* = Current Design Sequence[1]

1. * = *sequential alpha character*

General Data

Table 2. General Data – 7.5 to 20 ton

	7.5 Tons	10 Tons	15 Tons	20 Tons
	Single Compressor TTA090A3, A4	Single Compressor TTA120A3, A4	Dual Compressor TTA180B3, B4	Dual Compressor TTA240B3, B4
Compressor				
Type	Scroll	Scroll	Scroll	Scroll
No./Tons	1/6.9	1/8.6	2/6.9	2/8.6
System Data				
No. Refrigerant Circuits	1	1	2	2
Suction Line (in.) OD	1.38	1.38	1.38	1.38
Liquid Line (in.) OD	5/8	1/2	1/2	1/2
Outdoor Coil				
Type	Lanced	Lanced	Lanced	Lanced
Tube Size (in.) OD	0.38	0.38	0.38	0.38
Face Area (sq ft)	19.2	24.0	24.0	24.0
Rows/FPI (Fins per inch)	2/18	2/18	2/18	2/18
Outdoor Fan				
Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter (in.)	1/26	1/28	2/28	2/28
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM	6530	9600	19500	19500
No. Motor/HP	1/0.5	1/1	2/1	2/1
Motor RPM	1100	1100	1100	1100
Refrigerant Charge (Field Supplied)				
lbs of R-22	17.6	22.5	39.0	43.8
Shipping Dimensions				
HxWxD (in.)	43.54″ x 43″ x 36.5″	43.5″ x 53″ x 40.5″	49.5" x 94.8" x 47"	49.5" x 94.8" x 47"

Performance Data

Table 3. Gross cooling capacities (MBH) 7.5 tons TTA090A condensing unit only (IP)

Outdoor Temp (°F)		Suction Temperature (°F)					
		30	35	40	45	50	55
65	Head Press (psig)	161.3	172.4	178.7	185.3	192.4	199.8
	Capacity (Btuh/1000)	76.9	84.9	93.7	102.9	112.5	122.3
	Unit Power (kW)	4.9	5.0	5.2	5.3	5.5	5.7
75	Head Press (psig)	190.9	197.1	203.6	210.4	217.7	225.4
	Capacity (Btuh/1000)	73.0	81.0	89.4	98.1	107.2	116.6
	Unit Power (kW)	5.3	5.5	5.7	5.8	6.0	6.2
85	Head Press (psig)	217.8	224.3	231.1	238.3	246.0	254.0
	Capacity (Btuh/1000)	69.4	77.0	85.0	93.3	102.0	110.9
	Unit Power (kW)	5.9	6.0	6.2	6.4	6.6	6.8
95	Head Press (psig)	247.6	254.3	261.5	269.0	276.9	285.2
	Capacity (Btuh/1000)	65.7	73.0	80.6	88.5	96.7	105.2
	Unit Power (kW)	6.4	6.6	6.8	7.0	7.2	7.4
105	Head Press (psig)	280.1	287.1	294.6	302.4	310.6	319.1
	Capacity (Btuh/1000)	61.9	68.9	76.1	83.7	91.5	99.5
	Unit Power (kW)	7.1	7.3	7.5	7.7	7.9	8.1
115	Head Press (psig)	315.3	322.7	330.5	338.6	347.1	355.9
	Capacity (Btuh/1000)	58.1	64.7	71.6	78.8	86.2	93.8
	Unit Power (kW)	7.8	7.9	8.1	8.3	8.6	8.8
125	Head Press (psig)	353.4	361.2	369.3	377.7	386.4	395.4
	Capacity (Btuh/1000)	54.2	60.5	67.1	73.9	80.9	88.1
	Unit Power (kW)	8.5	8.7	8.9	9.1	9.3	9.5

Note: Performance data calculated at 15°F subcooling and 15°F superheat and does not include capacity loss due to refrigerant lines.

Figure 1. TTA090A capacity curves

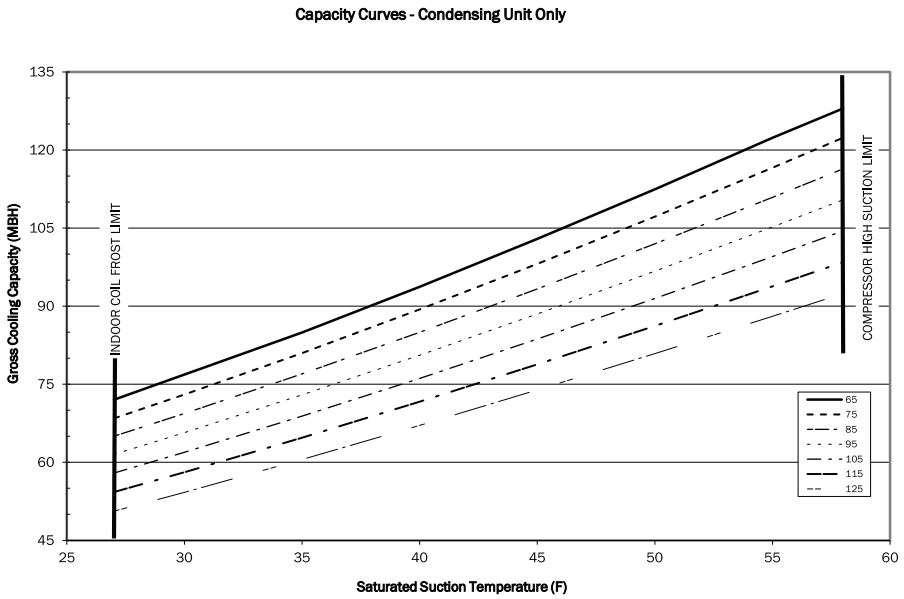


Table 4. Gross cooling capacities (MBH) 10 tons TTA120A condensing unit only (IP)

Outdoor Temp (°F)		Suction Temperature (°F)					
		30	35	40	45	50	55
65	Head Press (psig)	161.5	166.6	172.0	177.9	184.0	190.6
	Capacity (Btuh/1000)	98.2	108.8	120.0	131.8	144.0	157.0
	Unit Power (kW)	7.1	7.3	7.5	7.8	8.0	8.2
75	Head Press (psig)	185.0	190.2	195.9	201.8	208.2	215.0
	Capacity (Btuh/1000)	94.1	104.2	115.1	126.5	138.4	150.9
	Unit Power (kW)	7.6	7.8	8.0	8.2	8.5	8.7
85	Head Press (psig)	210.8	216.2	222.0	228.3	234.9	241.9
	Capacity (Btuh/1000)	89.6	99.4	109.8	120.8	132.3	144.3
	Unit Power (kW)	8.2	8.4	8.6	8.8	9.1	9.3
95	Head Press (psig)	239.3	245.0	251.0	257.4	264.2	271.4
	Capacity (Btuh/1000)	84.8	94.2	104.2	114.7	125.8	137.3
	Unit Power (kW)	8.9	9.1	9.3	9.5	9.7	10.0
105	Head Press (psig)	270.5	276.4	282.6	289.2	296.2	303.6
	Capacity (Btuh/1000)	79.7	88.8	98.3	108.3	118.9	129.9
	Unit Power (kW)	9.6	9.9	10.1	10.3	10.5	10.7
115	Head Press (psig)	304.3	310.4	316.8	323.6	330.7	338.3
	Capacity (Btuh/1000)	74.4	83.0	92.1	101.6	111.6	122.1
	Unit Power (kW)	10.5	10.7	10.9	11.1	11.4	11.6
125	Head Press (psig)	340.9	347.2	353.8	360.7	368.0	375.7
	Capacity (Btuh/1000)	68.9	77.0	85.6	94.6	104.0	113.9
	Unit Power (kW)	11.4	11.6	11.9	12.1	12.3	12.5

Note: Performance data calculated at 15°F subcooling and 15°F superheat and does not include capacity loss due to refrigerant lines.

Figure 2. TTA120A capacity curves

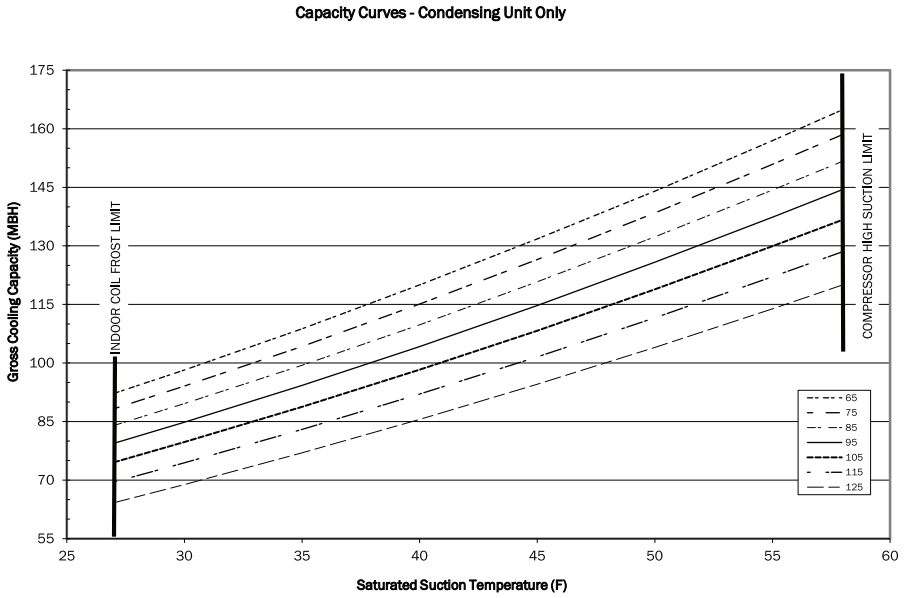


Table 5. Gross cooling capacities (MBH) 15 tons TTA180B condensing unit only (IP)

Outdoor Temp (°F)		Suction Temperature (°F)					
		30	35	40	45	50	55
65	Head Press (psig)	147.1	151.0	155.3	159.8	164.5	169.6
	Capacity (Btuh/1000)	151.2	169.1	188.5	208.9	230.0	252.5
	Unit Power (kW)	10.1	10.3	10.5	10.7	10.9	11.1
75	Head Press (psig)	169.9	174.0	178.3	182.9	187.8	192.9
	Capacity (Btuh/1000)	143.8	160.9	179.2	198.7	219.1	240.4
	Unit Power (kW)	10.9	11.1	11.4	11.6	11.9	12.1
85	Head Press (psig)	195.2	199.4	203.8	208.5	213.5	218.7
	Capacity (Btuh/1000)	136.3	152.6	169.9	188.4	207.9	228.2
	Unit Power (kW)	11.9	12.1	12.4	12.6	12.9	13.2
95	Head Press (psig)	223.1	227.5	232.0	236.9	242.0	247.4
	Capacity (Btuh/1000)	128.6	144.2	160.7	178.1	196.7	216.0
	Unit Power (kW)	12.9	13.2	13.5	13.7	14.1	14.4
105	Head Press (psig)	253.8	258.3	263.1	268.1	273.3	278.9
	Capacity (Btuh/1000)	120.7	135.6	151.4	167.9	185.4	203.8
	Unit Power (kW)	14.1	14.4	14.7	15.0	15.3	15.6
115	Head Press (psig)	287.3	292.0	296.9	302.0	307.4	313.1
	Capacity (Btuh/1000)	112.8	127.0	141.9	157.7	174.2	191.5
	Unit Power (kW)	15.4	15.7	15.9	16.2	16.6	16.9
125	Head Press (psig)	323.7	328.6	333.6	338.9	344.4	350.1
	Capacity (Btuh/1000)	104.7	118.2	132.4	147.3	162.9	179.1
	Unit Power (kW)	16.8	17.0	17.3	17.6	17.9	18.3

Note: Performance data calculated at 15°F subcooling and 15°F superheat and does not include capacity loss due to refrigerant lines.

Figure 3. TTA180B capacity curves

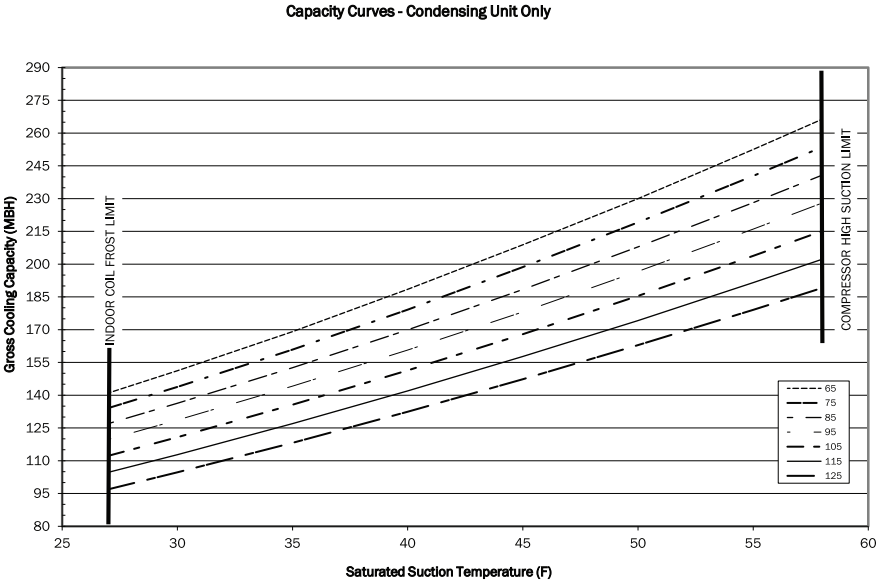
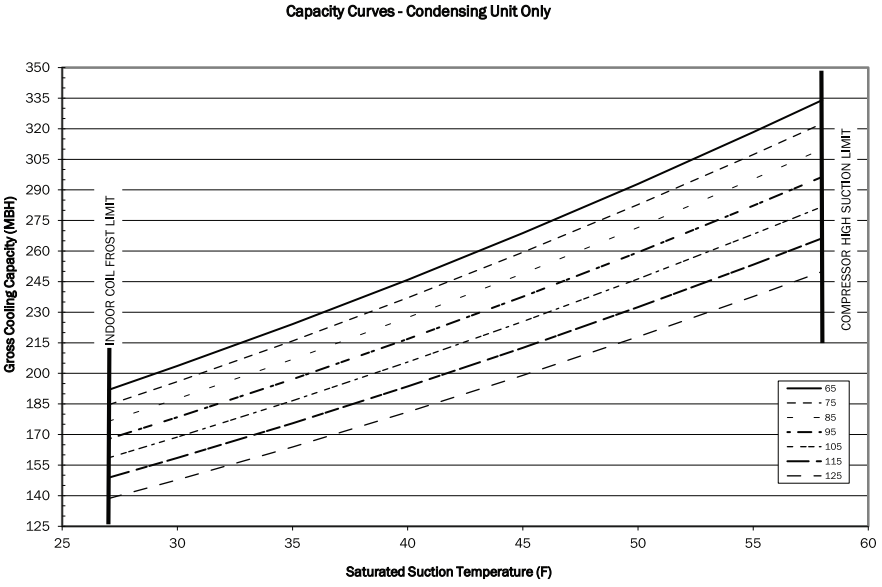


Table 6. Gross cooling capacities (MBH) 20 tons TTA240B condensing unit only (IP)

Outdoor Temp (°F)		Suction Temperature (°F)					
		30	35	40	45	50	55
65	Head Press (psig)	161.1	166.0	171.2	176.7	182.6	188.8
	Capacity (Btuh/1000)	203.6	224.1	245.9	268.8	293.0	318.3
	Unit Power (kW)	14.2	14.6	15.1	15.5	16.0	16.5
75	Head Press (psig)	185.1	190.2	195.6	201.4	207.4	213.8
	Capacity (Btuh/1000)	196.0	215.9	237.1	259.4	282.8	307.3
	Unit Power (kW)	15.3	15.7	16.1	16.5	17.0	17.5
85	Head Press (psig)	211.4	216.8	222.5	228.5	234.9	241.6
	Capacity (Btuh/1000)	187.5	206.9	227.3	248.9	271.6	295.3
	Unit Power (kW)	16.5	16.9	17.3	17.7	18.2	18.7
95	Head Press (psig)	240.6	246.2	252.1	258.4	265.0	271.9
	Capacity (Btuh/1000)	178.5	197.1	216.8	237.6	259.4	282.2
	Unit Power (kW)	17.9	18.3	18.7	19.1	19.6	20.0
105	Head Press (psig)	272.3	278.2	284.4	290.9	297.7	304.9
	Capacity (Btuh/1000)	168.7	186.6	205.5	225.4	246.3	268.2
	Unit Power (kW)	19.5	19.9	20.3	20.7	21.1	21.6
115	Head Press (psig)	306.8	312.9	319.3	326.0	333.1	340.4
	Capacity (Btuh/1000)	158.5	175.5	193.5	212.5	232.5	253.3
	Unit Power (kW)	21.2	21.6	22.0	22.4	22.9	23.3
125	Head Press (psig)	344.0	350.3	356.9	363.9	371.1	378.7
	Capacity (Btuh/1000)	147.8	163.9	181.0	199.0	217.9	237.7
	Unit Power (kW)	23.1	23.5	23.9	24.4	24.8	25.2

Note: Performance data calculated at 15°F subcooling and 15°F superheat and does not include capacity loss due to refrigerant lines.

Figure 4. TTA240B capacity curves



Electrical Data

Table 7. Electrical characteristics — compressor and condenser fan motors — 60 Hz

Tons	Unit Model Number	Compressor Motor					Condenser Fan Motor				
					Amps					Amps	
		No.	Volts	Phase	RLA (Ea.)	LRA (Ea.)	No.	Volts	Phase	FLA (Ea.)	LRA (Ea.)
7.5	TTA090A3	1	208-230	3	22.4	164	1	208-230	1	3.1	8.1
	TTA090A4	1	460	3	10.9	100	1	460	1	1.6	3.8
10	TTA120A3	1	208-230	3	30.1	225	1	208-230	1	5.0	14.4
	TTA120A4	1	460	3	15.5	114	1	460	1	2.5	5.8
15	TTA180B3	2	208-230	3	22.4	164	2	208-230	2	5.0	14.4
	TTA180B4	2	460	3	10.9	100	2	460	2	2.5	5.8
20	TTA240B3	2	208-230	3	30.1	225	2	208-230	2	5.0	14.4
	TTA240B4	2	460	3	15.5	114	2	460	2	2.5	5.8

Note: Electrical characteristics reflect nameplate values and are calculated in accordance with cULus and ARI specifications.

Table 8. Unit wiring — condensing units — 60 Hz

Tons	Unit Model Number	Unit Operating Voltage Range	Minimum Circuit Ampacity	Maximum Fuse or HACR Circuit Breaker Size
7.5	TTA090A3	187-253	31.1	45
	TTA090A4	414-506	15.2	25
10	TTA120A3	187-253	42.6	60
	TTA120A4	414-506	21.9	30
15	TTA180B3	187-253	60.4	80
	TTA180B4	414-506	29.5	40
20	TTA240B3	187-253	77.7	100
	TTA240B4	414-506	39.9	50

Note: HACR type circuit breaker per NEC.

Dimensional Data

Cooling Condenser

Figure 5. 7.5 ton condensing unit, single compressor

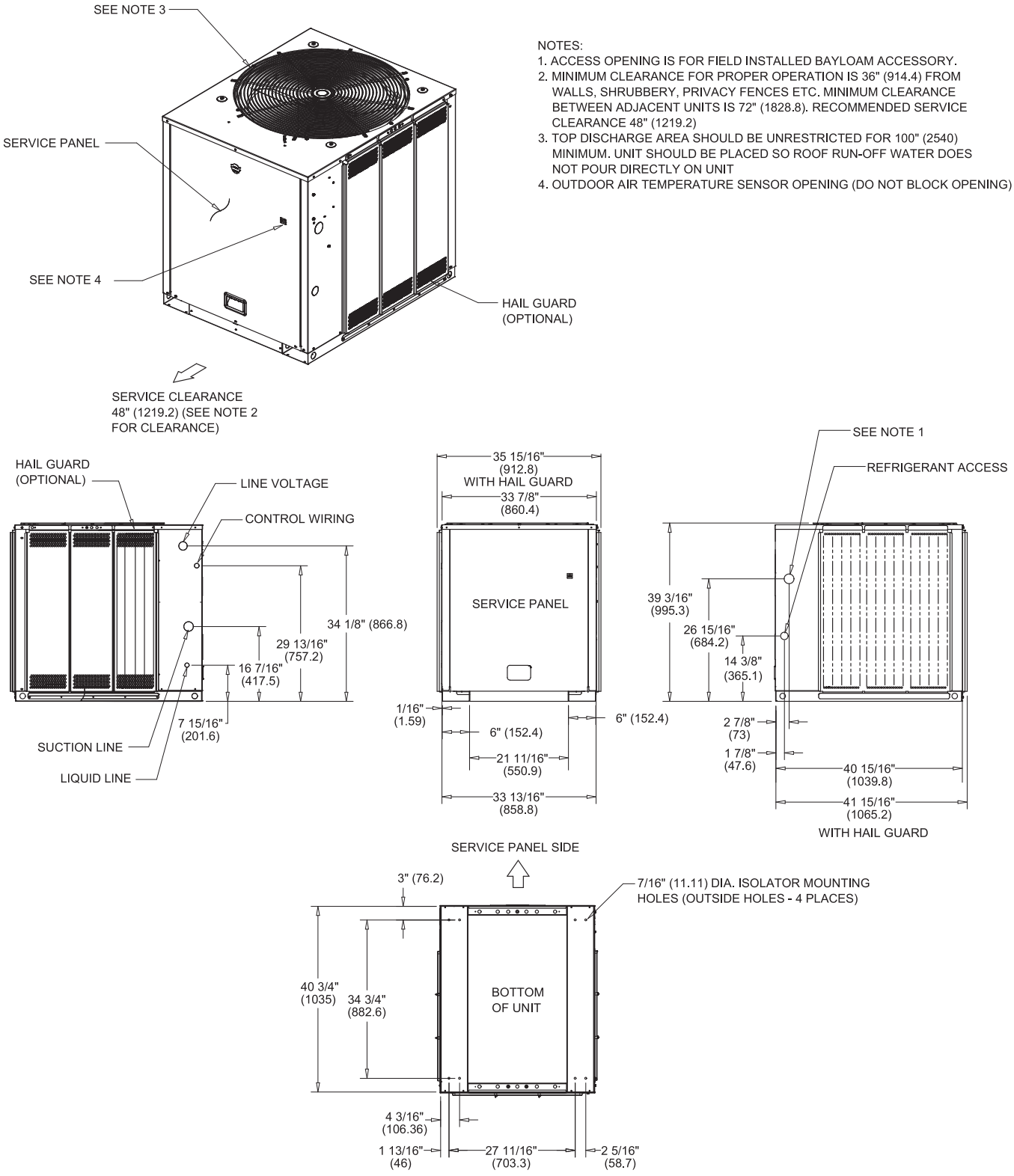
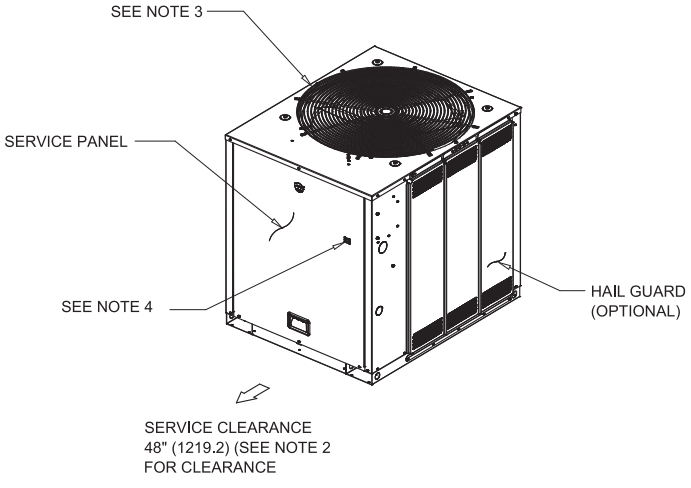


Figure 6. 10 ton condensing unit, single compressor



NOTES:
1. ACCESS OPENING IS FOR FIELD INSTALLED BAYLOAM ACCESSORY.
2. MINIMUM CLEARANCE FOR PROPER OPERATION IS 36" (914.4) FROM WALLS, SHRUBBERY, PRIVACY FENCES ETC. MINIMUM CLEARANCE BETWEEN ADJACENT UNITS IS 72" (1828.8). RECOMMENDED SERVICE CLEARANCE 48" (1219.2)
3. TOP DISCHARGE AREA SHOULD BE UNRESTRICTED FOR 100" (2540) MINIMUM. UNIT SHOULD BE PLACED SO ROOF RUN-OFF WATER DOES NOT POUR DIRECTLY ON UNIT
4. OUTDOOR AIR TEMPERATURE SENSOR OPENING (DO NOT BLOCK OPENING)

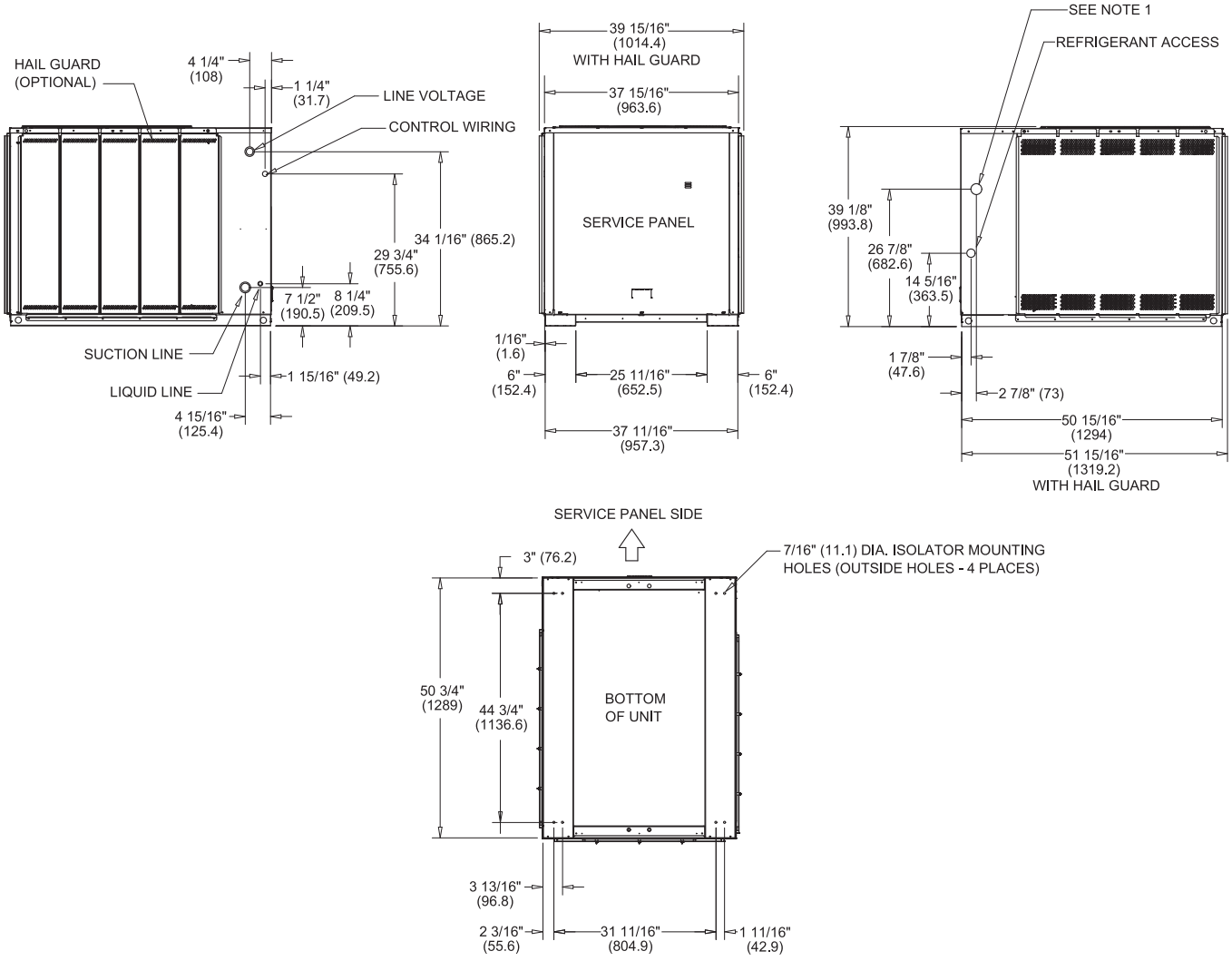
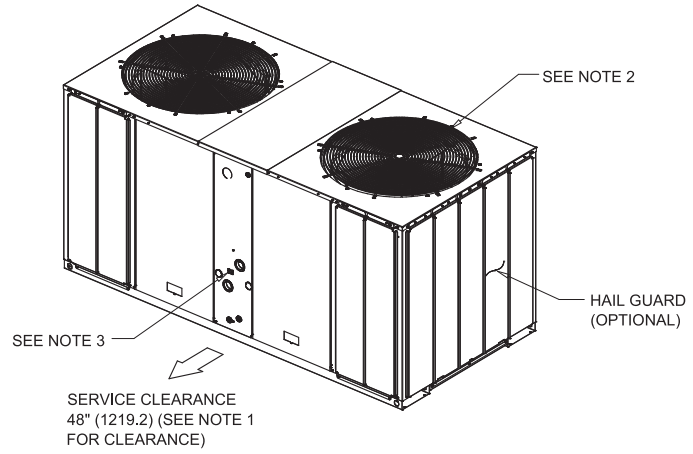


Figure 7. 15-20 ton condensing unit, dual compressor



NOTES:
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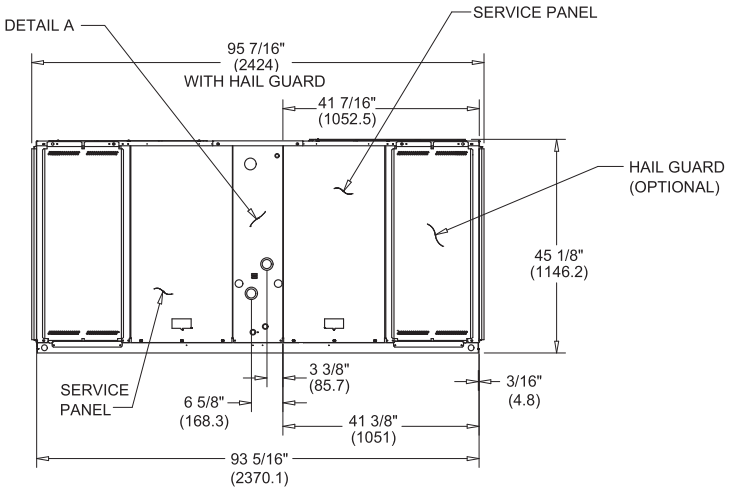
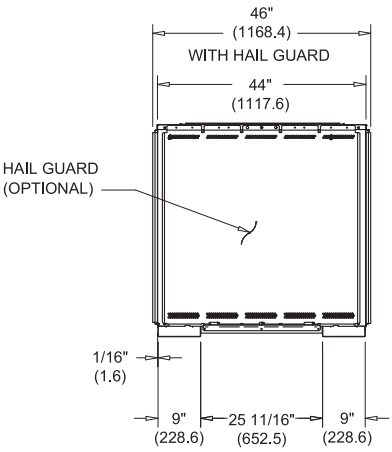
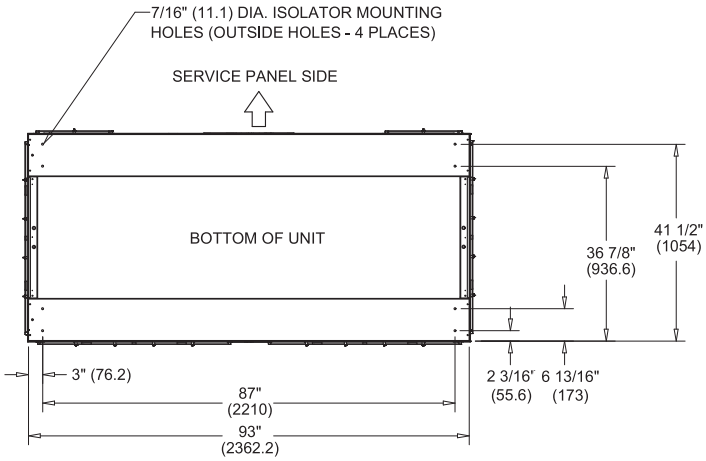
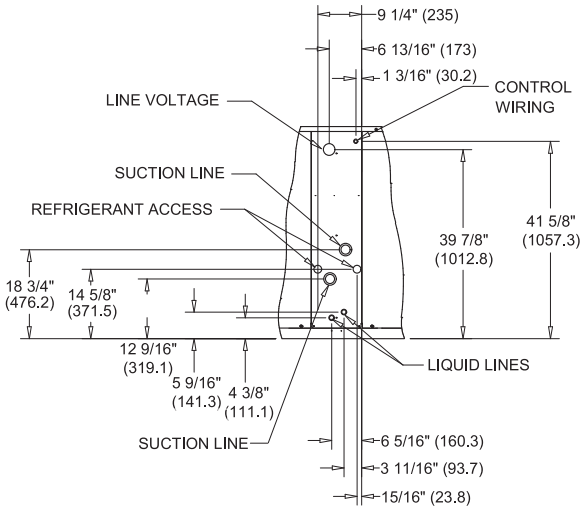








FRONT DETAIL A
DIMENSIONAL DETAIL

Weights

Cooling Condenser

Table 9. TTA unit and corner weights — lbs (60 Hz)

Tons	Model No.	Shipping Max (lbs)	Net Max (lbs)	Corner Weights			
				1	2	3	4
7.5	TTA090A	363	298	84	89	44	81
10	TTA120A	467	395	133	103	70	89
15	TTA180B	850	723	207	204	151	161
20	TTA240B	970	837	262	240	164	171

Figure 8. TTA090A, 120A

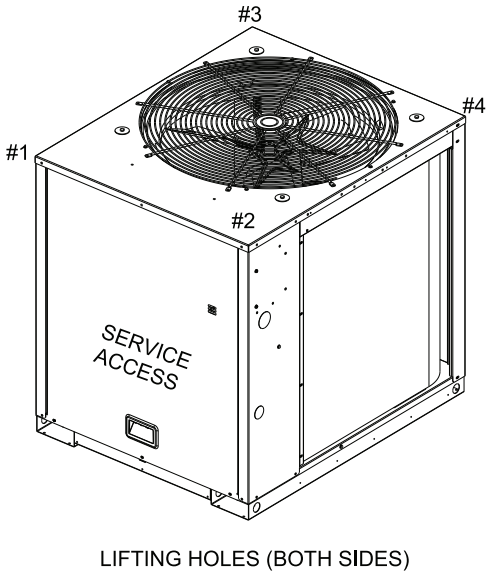
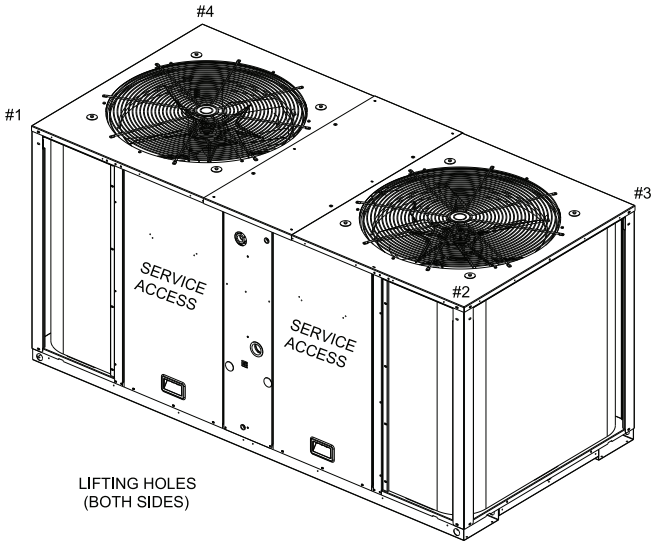


Figure 9. TTA180B, 240B



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