



TRANE®

Split Systems

Cooling Units - 7½ - 20 Tons (60 Hz)

Air Handlers - 5-20 Tons (60 Hz)

Cooling Coils - 10 Tons





Introduction

Split System Cooling Condenser units designed with your needs in mind...

The Trane reputation for quality and reliability in air conditioning is apparent with Odyssey™ light commercial split systems. These Trane systems are designed to meet your job requirements every time...and at a competitive price.

Odyssey has Trane quality and reliability built-in; couple that with outstanding efficiency, flexibility and installation ease and you have an unbeatable combination for years of worry-free service and operation.

Manufacturing Control

Trane's exclusive control over the design and manufacturing of all major components is unique in the industry. This approach assures us total control over both the quality and reliability of these components. And allows us to custom match components to deliver the best in split system performance.

Designing the Details

Careful attention was given to designing the details — from control wiring to the access panels. Odyssey units feature time-saving colored and numbered wiring and removable panels which allow complete access to all major components and controls. All outdoor units feature external high and low pressure switches for easy diagnosing and servicing of the unit. Service valves with gauge ports are provided on all units.



Standardized Cabinets

In addition, all cabinets have been standardized. When you are servicing an outdoor unit or an air handler, all components are in the same location from unit to unit.

Filters

The 5, 7½ and 10 ton air handlers are supplied with 1" throwaway filters as standard. The filter racks were designed to easily convert for installation of 2" filters. The 15 and 20 ton air handlers have 2" filters as standard.

UL Listed and ARI Certified

Trane meets or exceeds all nationally recognized agency safety and design standards. Each condensing unit is UL designed, approved and labeled in accordance to UL Standards: UL 1995 for central cooling air conditioners, refrigeration and air conditioning condensing and compressor units. Each air handler is designed, approved and labeled in accordance to UL 465 and UL 1995 standard for heat pumps. Each unit is certified in accordance with ARI Standard 340/360 or 365.

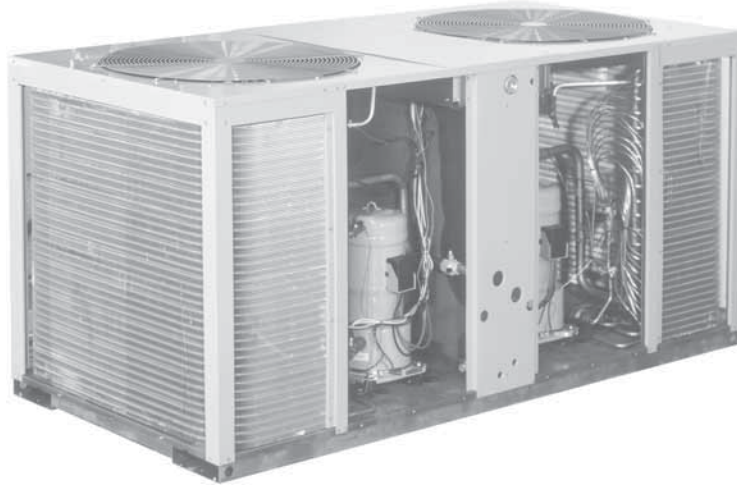


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Features and Benefits



Condensing Units Options

The Odyssey split system product line includes condensing units in single, unloading and dual compressor options.

The 7½ and 10-ton single compressor models feature single refrigeration circuitry lowering job installation costs by requiring only one set of refrigerant lines. These units are ideal for the low cost, new construction job as well as renovation and replacement buildings.

Equally important, Odyssey offers a single refrigerant circuit/capacity unloading option in 10, 15 and 20-ton condensing units. These unloading units feature dual manifolded scroll compressors. They offer an excellent opportunity for both new construction and replacement jobs with two stages of capacity modulation and a single refrigeration circuit.

In addition, Odyssey includes a 10, 12½, 15 and 20-ton dual scroll compressor unit to give true stand-by protection; if one compressor fails, the second will automatically start-up. Also, the first compressor can be serviced without shutting down the unit since refrigerant circuits are independent. Dual compressors are not just for protection, they also save energy costs. Most buildings are designed

for the peak load requirements yet the building usually operates at less than peak load. During light load conditions only one compressor functions to maintain the space comfort thus reducing the need for energy. For instance, the EER of the 10-ton unit at ARI conditions is 10.3 and at part load conditions it is 11.2.

Trane split systems have been specified in thousands of applications and you'll find Odyssey will win you even more jobs with its smaller, more manageable cabinet. This lighter, compact design will save time and money for rigging and installation. And the compactness will permit Trane's unit to replace almost any unit — effortlessly.

Low Ambient Cooling Operation

Each cooling unit can operate to 50° F as standard. An accessory Head Pressure Control gives you the capability to operate to 0° F. All condensing units offer these accessories:

- Head Pressure Control
- Coil Guard Kits
- Isolators both Rubber-in-Shear and Spring Type
- Anti-Short-Cycle Kit
- Time Delay Relay
- Black Epoxy Coated Coil

Air Handlers Offer More Flexibility

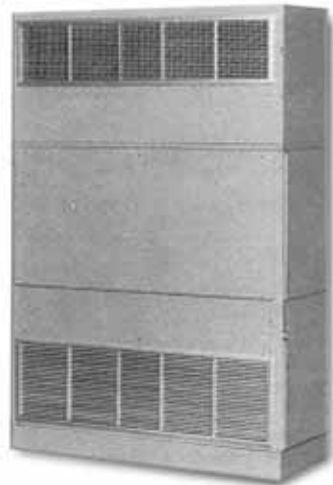
Flexibility is a key to meeting changing market requirements. Odyssey split systems offer not only heat pumps but also convertible air handlers. The air handlers can be installed either vertically in a mechanical room or horizontally above a ceiling. And it doesn't require any removal of panels to make either airflow application work. These air handlers have a double sloped condensate drain pan that allows for either airflow configuration. And the drain pan can easily be removed for cleaning. All the air handlers feature factory installed belt drive and ball bearing evaporator fans with adjustable sheaves for maximum airflow performance. In fact, the standard motor on the 10-ton air handler will deliver 4000 cfm at 1.4" ESP. Plus oversized motors are available for higher static applications.



Features and Benefits

Odyssey air handler versatility is further increased by a complete line of accessories designed to match and install smoothly:

- Discharge Plenum and Grille
- Return Grille
- Subbase
- Electric Heaters
- High Static Evaporator Motor
- Isolators both Rubber-in-Shear and Spring Type
- A Full Line of Thermostats
- Outdoor Thermostat



Odyssey — A Complete Split System

Odyssey delivers the flexibility to select a complete system that meets your particular job requirements. Air handlers are designed, tested, and rated with outdoor units to let you select the proper match between capacity and load. Heat pumps can also be matched with these same air handlers. Also, these matched systems can be quickly engineered for specific applications using Trane's computerized selection and load programs.

Odyssey Lowers Installation Costs

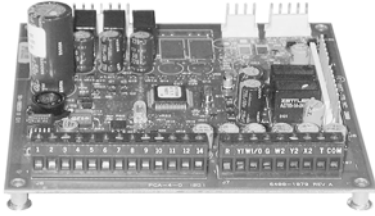
Your installation costs are reduced with Odyssey. Both outdoor units and air handlers are factory packaged and assembled so jobsite installation is quick and easy. You get a complete unit with all the components, controls and the internal wiring factory ready for a smooth jobsite start-up.

Unlike some competitive models the following components are factory-installed in Trane air handlers:

- Single Point Power Entry
- Blower wheel and housing
- Evaporator motor with sheaves and pulleys
- Low Voltage Terminal Board Transformer
- Contactor
- Fan relay
- DX Coil with complete refrigeration circuitry
- Expansion Valve and Check Valves

There's no need to install components and put together the air handler on the job. This provides you with less labor cost and fewer chances for installation errors which cause callbacks. All this means saving you money both in replacement and new construction applications.





Micro Controls

Several years ago, Trane was the first to introduce microprocessor controls into the Light Commercial Market. That design, along with immeasurable experience, has provided the technology for Trane's ReliaTel™ microprocessor controls in Odyssey split unit systems — the first in the industry.

ReliaTel™ Controls:

- Provides unit control for heating and cooling, by utilizing input from sensors that measure indoor temperature.
 - Improves quality and reliability through the use of time-tested microprocessor controls and logic.
 - Prevents the unit from short cycling, considerably improving compressor life.
 - Ensures that the compressor will run for a specific amount of time, which allows oil to return for better lubrication, enhancing the reliability of the compressor.
 - Reduces the number of components required to operate the unit, thereby reducing possibilities for component failure.
- Eliminates the need for field-installed components with its built-in anti-short-cycle timer, time delay relay and minimum "on" time controls. These controls are factory tested to ensure proper operation.
 - Requires no special tools to run the unit through its paces during testing. Simply place a jumper between Test 1 and Test 2 terminals on the Low Voltage Terminal Board and the unit will walk through its operational steps. The unit automatically returns control to the zone sensor after stepping through the test mode a single time, even if the jumper is left on the unit.
 - As long as the unit has power and the LED is lit, ReliaTel™ is operational and functioning properly.
 - Features expanded diagnostic capabilities when used with Trane's Integrated Comfort™ Systems.
 - As an energy benefit, softens electrical "spikes" by staging on fans, compressors and heaters.
 - The Intelligent Fallback or Adaptive Control is a benefit to the building occupant. If a component goes astray, the unit will continue to operate at predetermined temperature set points.
 - Intelligent Anticipation is a standard feature of ReliaTel™. Functioning constantly, ReliaTel™ and zone sensors work together in harmony to provide tight comfort control.

Electromechanical Controls

For the simpler job that does not require a building automation system, or expanded diagnostics capabilities, the unit offers electromechanical controls. This 24-volt control includes the control transformer with contactor pressure lugs for power wiring.

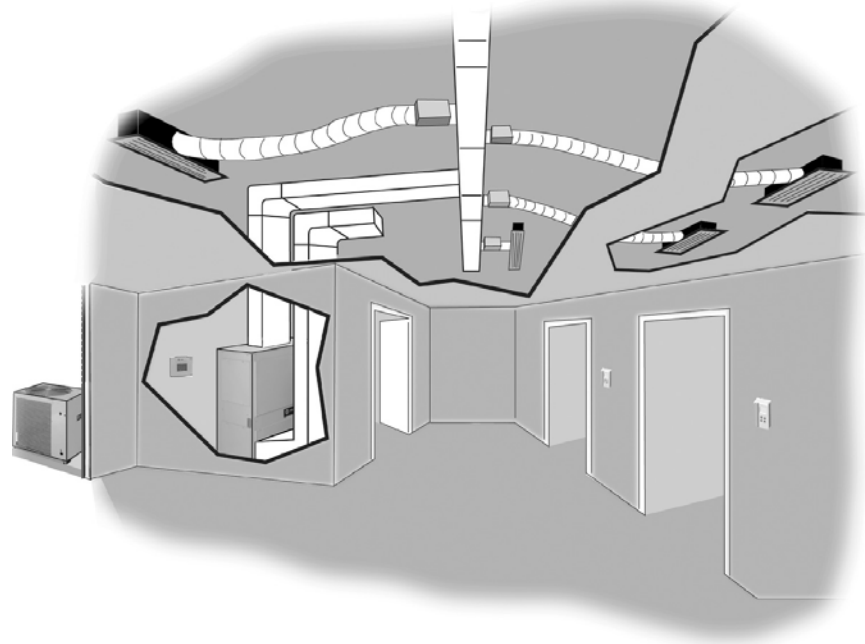
Quality and Reliability Testing

- All units were rigorously rain tested at the factory to ensure water integrity.
- Actual shipping tests were performed to determine packaging requirements. Units were test shipped around the country to determine the best packaging.
- Factory shake and drop tests were used as part of the package design process to help ensure that the unit arrives at the job site in top condition.
- Rigging tests include lifting a unit into the air and letting it drop one foot, ensuring that the lifting lugs and rails hold up under stress.
- We perform a 100% coil leak test at the factory. The evaporator and condenser coils are leak tested at 375 psig and pressure tested to 660 psig.
- All parts are inspected at the point of final assembly. Sub-standard parts are identified and rejected immediately.
- Every unit receives a 100% unit run test before leaving the production line to make sure it lives up to rigorous Trane requirements.

We test designs at our factory not on our customers!

VariTrac

When American Standard's changeover VAV System for light commercial applications is coupled with split unit systems, it provides the latest in technological advances for comfort management systems and can allow thermostat control in every zone served by VariTrac.



Application Considerations

Application of this product should be within the catalogued airflow and performance considerations.

Clearance Requirements

The recommended clearances identified with unit dimensions should be maintained to assure adequate serviceability, maximum capacity and peak operating efficiency. Actual clearances which appear inadequate should be reviewed with the local Trane Representative.

180° Blower Rotation

The 5, 7½, and 10 ton air handler blower section can be rotated 180° to change the discharge pattern. This modification must be done in the field and requires an additional kit. See unit installer's guide.

Low Ambient Cooling

As manufactured, these units can operate to 50° F in the cooling mode of operation. An accessory head pressure control will allow operation to 0° F outdoor ambient. When using these units with control systems such as bypass changeover Variable Air Volume, make sure you consider the requirement for a head pressure control to allow low ambient cooling.

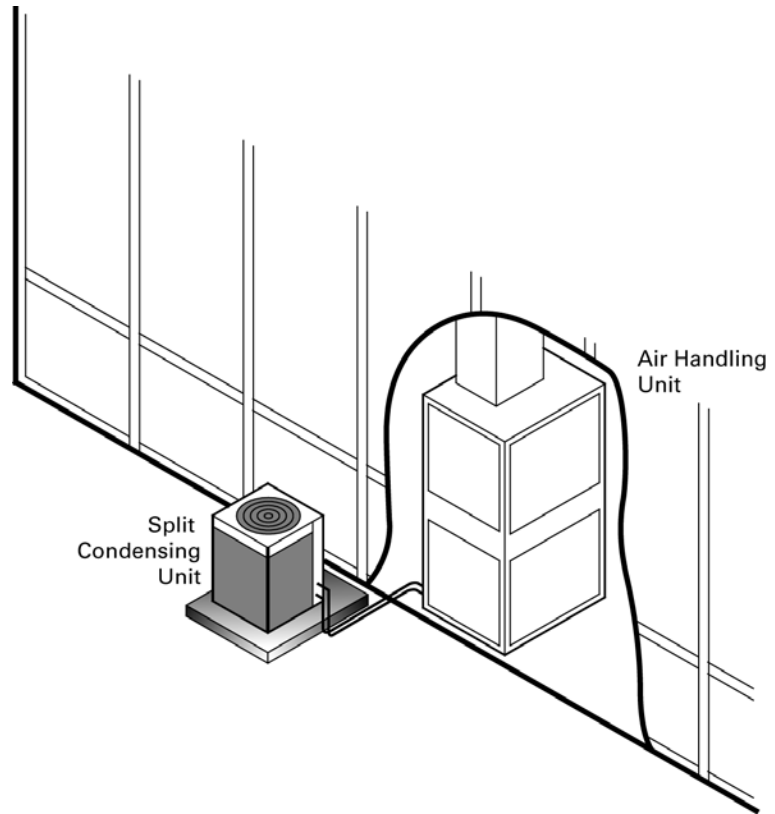


Figure 2. Typical Split System Application

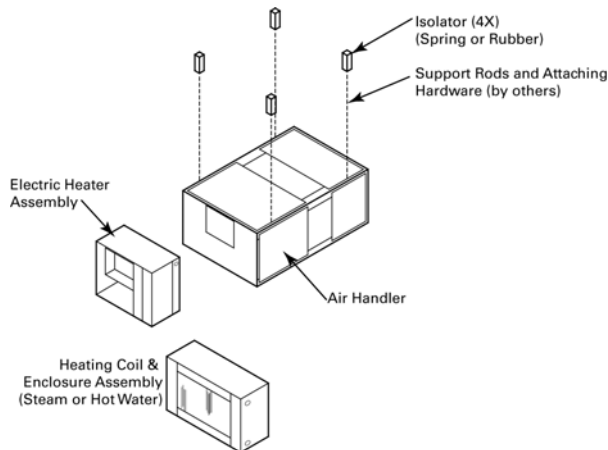


Figure 1. Typical Horizontal Air Handler Application

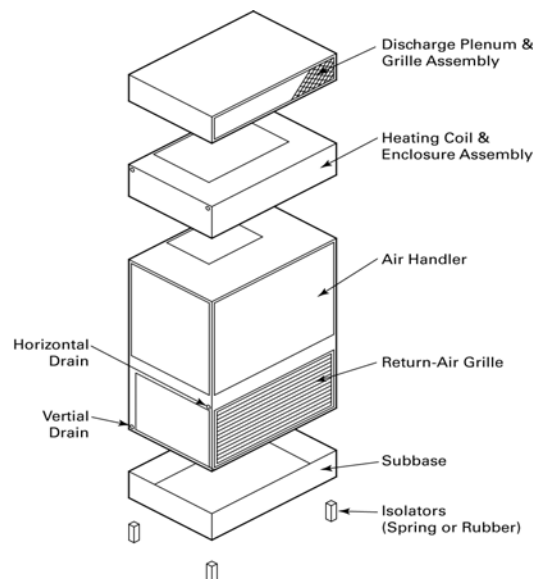


Figure 3. Typical Vertical Air Handler Application



Selection Procedure

Cooling Capacity

1. Calculate the building's total and sensible cooling loads at design conditions. Use the Trane calculation form or any other standard accepted method.
2. Size the equipment using [Table 4](#) - [Table 16](#). Match the cooling loads at design conditions.

Example: The following are the building cooling requirements:

1. Electrical Characteristics:
460/60/3
2. Summer Design Conditions:
Entering Evaporator Coil:
80° F DB/67° F WB
Outdoor Ambient: 95° F
3. Total Cooling Load: 88MBh
4. Sensible Cooling Load: 64 MBh
5. Airflow: 3000 cfm
External Static Pressure:
0.77 inches of water gauge

[Table 4](#) shows that TTA090A4 with TWE090A has a gross cooling capacity of 92.0 MBh and 65.5 MBh sensible capacity at 95° F DB ambient and 3000 cfm with 80° F DB/67° F WB air entering the evaporator.

To find the net cooling capacities, fan motor heat must be subtracted. Determine the total unit static pressure:

External Static: 0.77 in.
Standard Filter: 0.10 in.
Supplementary Electric Heat:
0.23 in.
Total Static Pressure 1.10 in.

Note: *The Evaporator Fan Performance Table has included the effect of a 1 in. filter already. Therefore, the actual Total Static Pressure is $1.10 - 0.10 = 1.00$ in. With 3000 cfm and 1.00 inches, [Table 30](#) shows 1.17 Bhp.*

Note: *The formula below the table can be used to calculate Fan Motor Heat:*
 $3.5 \times \text{Bhp} = \text{MBh}$
 $3.5 \times 1.17 = 4.09 \text{ MBh}$
Net Total Cooling Capacity = $92.0 \text{ MBh} - 4.09 = 87.91 \text{ MBh}$
Net Sensible Cooling Capacity = $65.5 \text{ MBh} - 4.09 = 61.41 \text{ MBh}$

Heating Capacity

1. Calculate the building heating load using the Trane calculation form or any other standard accepted method.
2. Size the system heating capacity to match the calculated building heating load. The following are building heating requirements:
 - a. Total Heating Load: 97.0 MBh
 - b. 3000 cfm
 - c. Electric Supplementary Heaters

From [Table 45](#), the 34.88 Kw heater has a capacity of 119,045 Btuh. From [Table 54](#), the 34.88 Kw at 460v indicates the heater model number is BAYHTRL435A. This heater will adequately cover the building's heating requirement.

Air Delivery Selection

External static pressure drop through the air distribution system has been calculated to be 0.77 inches of water gauge. From [Table 44](#) static pressure drop through the electric heater is 0.23 inches of water ($0.77 + 0.23 = 1.00$ in.). Enter [Table 30](#) for TWE090A4 at 3000 cfm and 1.00 static pressure. The standard motor at 821 RPM will give the desired airflow.



Model Number Description

Split System Cooling Model Nomenclature

T T A	120	A	4	0 0	A	A
1 2 3	4 5 6	7	8	9 10	11	12

Digits 1,2,3 - Product Type

TTA = Split System Cooling

Digits 4,5,6 - Nominal Gross Cooling Capacity (MBh)

090 = 7½ Tons

120 = 10 Tons

150 = 12½ Tons

180 = 15 Tons

240 = 20 Tons

Digits 7 - Major Development Sequence

A = 1 Refrigerant Circuit (R22)

B = 2 Refrigerant Circuit (R22)

C = Manifold Scroll Compressors (R22)

D = 1 Refrigerant Circuit (R410A)

E = 2 Refrigerant Circuit (R410A)

F = Manifolded Scroll Compressors (R410A)

Digits 8 - Electrical Characteristics

3 = 208-230/60/3

4 = 460/60/3

W = 575/60/3

D = 380-415/50/3

K = 380/60/3

Digits 9,10 - Factory Installed Options

00 = Packed Stock

0S = Black Epoxy Coated Coil

0R = ReliaTel Controls

0T = ReliaTel Controls with Black Epoxy Coated Coil

0U = ReliaTel Controls with LonTalk Communications Interface (RLCI)

0W = ReliaTel Controls with LonTalk Communications Interface (RLCI) and Black Epoxy Coated Coil

Digits 11 - Minor Design Sequence

A = Current Design Sequence

Digits 12 - Service Digit

A = Current Service Digit

Air Handler Model Nomenclature

T W E	0 9 0	A	1	0 0	A	A
1 2 3	4 5 6	7	8	9 10	11	12

Digits 1,2,3 - Product Type

TWE = Split System Heat Pump/Cooling Air Handler

Digits 4,5,6 - Nominal Gross Cooling Capacity (MBh)

060 = 5 Tons

090 = 7 1/2 Tons

120 = 10 Tons

180 = 15 Tons

240 = 20 Tons

Digits 7 - Refrigerant Circuit

A = 1 Refrigerant Circuit (R22)

B = 2 Refrigerant Circuit (R22)

D = 1 Refrigerant Circuit (R410A)

E = 2 Refrigerant Circuit (R410A)

Digits 8 - Electrical Characteristics

1 = 208-230/60/1

3 = 208-230/60/3

4 = 460/60/3

W = 575/60/3

K = 380/60/3

Digits 9,10 - Factory Installed Options

00 = Packed Stock

Digits 11 - Minor Design Sequence

A = Current Design Sequence

Digits 12 - Service Digit

A = Current Service Digit



General Data

Table 1. General Data - 7½, 10 Ton Condensing Units

	7½ Tons		10 Tons	
	Single Compressor TTA090A3, A4, AW	Single Compressor TTA120A3, A4, AW	Dual Compressor TTA120B3, B4, BW	Modified Compressor TTA120C3, C4, CW
Cooling Performance⁽ⁱ⁾				
Gross Cooling Capacity				
Matched Air Handler	92,000	128,000	126,000	126,000
Condensing Unit Only ⁽ⁱⁱ⁾	92,000	128,000	126,000	126,000
ARI Net Cooling Capacity ⁽ⁱⁱⁱ⁾	89,000	124,000	122,000	122,000
EER ^(iv)				
Matched Air Handler	10.3	10.3	10.3	10.3
Condensing Unit Only	11.6	11.3	11.5	11.4
System Integrated Part Load Value ^(v)	-	-	11.2	12.8
Condensing Unit Only IPLV ^(v)	-	-	14.0	14.8
System kW/Condensing Unit kW	8.61/7.90	12.11/11.25	11.89/10.94	11.9/11.1
Compressor				
No./Type	1/Trane 3-D™ Scroll	1/Trane 3-D™ Scroll	2/Trane Climatuff™ Scrolls	2/Manifolded Scrolls
No. Motors/HP	1/7.5	1/10	2/5.0	2/5.0
Motor RPM	3450	3450	3450	3450
Sound Rating (BELS)^(vi)	8.6	8.9	8.9	8.9
System Data^(vii)				
No. Refrigerant Circuits	1	1	2	1
Suction Line (in.) OD	1 3/8	1 3/8	1 1/8	1 3/8
Liquid Line (in.) OD	1/2	1/2	3/8	1/2
Outdoor Coil - Type				
	Plate Fin	Plate Fin	Plate Fin	Plate Fin
Tube Size (in.) OD	.375	.375	.375	.375
Face Area (sq ft)	19.25	24.0	24.0	18.4
Rows/FPI	2/18	2/20	2/20	2/20
Outdoor Fan - Type				
	Propellor	Propellor	Propellor	Propellor
No. Used/Diameter (in.)	1/26	1/28	1/28	1/28
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM	5670	8120	8120	8120
No. Motor/HP	1/.50	1/1.00	1/1.00	1/1.00
Motor RPM	1100	1100	1100	1100
Refrigerant Charge (Field Supplied) (lbs of R-22) ^(viii)	16.00	19.0	21.00	20.50

⁽ⁱ⁾ Cooling Performance is rated at 95° F ambient, 80° F entering dry bulb, 67° F entering wet bulb. Gross capacity does not include the effect of fan motor heat. ARI capacity is net and includes the effect of fan motor heat. Certified in accordance with the Unitary Large Equipment certification program, which is based on ARI Standard 340/360-00 or 365-00.

⁽ⁱⁱ⁾ Condensing unit only gross cooling capacity rated at 45° F saturated suction temperature and at 95° F ambient.

⁽ⁱⁱⁱ⁾ ARI net cooling capacity is calculated with matched blower coil and 25 feet of 1 3/8" or 1/2" OD interconnecting tubing.

^(iv) EER is rated at ARI conditions and in accordance with DOE test procedures.

^(v) Integrated part load value is based on ARI Standard 340/360-00 or 365-00. Units are rated at 80° F ambient, 80° F entering dry bulb (DB), and 67° F entering wet bulb (WB) at ARI rated cfm.

^(vi) Sound rating shown is tested in accordance with ARI Standard 270 or 370.

^(vii) Refer to refrigerant piping applications manual for line sizing and line length.

^(viii) Refrigerant (operating) charge is for condensing unit (all circuits) with matching blower coils and 25 feet of interconnecting refrigerant lines. All units are supplied with a small nitrogen holding charge only.



General Data

Condensing Units

Table 2. General Data - 12½, 15 and 20 Ton Condensing Units

	12½ Tons	15 Tons		20 Tons	
	Dual Compressor TTA150B3, B4, BW	Dual Compressor TTA180B3, B4, BW	Manifolded Compressor TTA180C3, C4, CW	Dual Compressor TTA240B3, B4, BW	Manifolded Compressor TTA240F3, F4, FW
Cooling Performance⁽ⁱ⁾					
Gross Cooling Capacity					
Matched Air Handler	148,000	182,000	182,000	246,000	246,000
Condensing Unit Only ⁽ⁱⁱ⁾	148,000	182,000	182,000	246,000	246,000
ARI Net Cooling Capacity ⁽ⁱⁱⁱ⁾	144,000	176,000	176,000	238,000	247,000
EER ^(iv)					
Matched Air Handler	9.8	9.7	9.7	9.7	10.1
Condensing Unit Only	11.0	11.1	11.1	11.1	12.0
System Integrated Part Load Value ^(v)	11.0	10.9	13.0	10.9	13.0
Condensing Unit Only IPLV ^(v)	13.7	14.0	15.0	14.0	15.0
System kW/Condensing Unit kW	14.70/13.43	18.18/16.43	18.16/16.35	24.61/22.17	24.36/20.5
Compressor No./Type					
	2/Trane Climatuff™ Scroll	2/Trane 3-D™ Scroll	2/Trane 3-D™ Scrolls	2/Trane 3-D™ Scrolls	2/Copeland™ Scrolls
No. Motors/HP	2/6.25	2/7.50	2/7.50	2/10.0	2/10.1
Motor RPM	3450	3450	3450	3450	3500
Sound Rating (BELS)^(vi)					
	8.6	8.9	8.9	8.9	9.2
System Data^(vii)					
No. Refrigerant Circuits	2	2	1	2	1
Suction Line (in.) OD	1 1/8	1 3/8	1 5/8	1 3/8	1 5/8
Liquid Line (in.) OD	3/8	1/2	5/8	1/2	5/8
Outdoor Coil - Type					
	Plate Fin	Plate Fin	Plate Fin	Plate Fin	Plate Fin
Tube Size (in.) OD	.375	.375	.375	.375	.375
Face Area (sq ft)	24.0	33.3	30.7	50.2	52.9
Rows/FPI	2/18	2/20	2/20	2/18	2/18
Outdoor Fan - Type					
	Propellor	Propellor	Propellor	Propellor	Propellor
No. Used/Diameter (in.)	1/28	2/26	2/26	2/28	2/28
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1	Direct/1
CFM	8120	10900	11340	16120	14600
No. Motor/HP	1/1.00	2/.50	2/.50	2/1.00	2/1.00
Motor RPM	1100	1100	1100	1100	1100
Refrigerant Charge (Field Supplied)					
(lbs of R-22) ^(viii)	23.6	30.0	28.00	40.0	-
(lbs of R-410A) ^(viii)	-	-	-	-	41.3

⁽ⁱ⁾ Cooling Performance is rated at 95° F ambient, 80° F entering dry bulb, 67° F entering wet bulb. Gross capacity does not include the effect of fan motor heat. ARI capacity is net and includes the effect of fan motor heat. Certified in accordance with the Unitary Large Equipment certification program, which is based on ARI Standard 340/360-00 or 365-00.

⁽ⁱⁱ⁾ Condensing unit only gross cooling capacity rated at 45° F saturated suction temperature and at 95° F ambient.

⁽ⁱⁱⁱ⁾ ARI net cooling capacity is calculated with matched blower coil and 25 feet of 1 3/8" or 1/2" OD (1 5/8" and 5/8" on TTA240F) interconnecting tubing.

^(iv) EER is rated at ARI conditions and in accordance with DOE test procedures.

^(v) Integrated part load value is based on ARI Standard 340/360-00 or 365-00. Units are rated at 80° F ambient, 80° F entering dry bulb (DB), and 67° F entering wet bulb (WB) at ARI rated cfm.

^(vi) Sound rating shown is tested in accordance with ARI Standard 270.

^(vii) Refer to refrigerant piping applications manual for line sizing and line length.

^(viii) Refrigerant (operating) charge is for condensing unit (all circuits) with matching blower coils and 25 feet of interconnecting refrigerant lines. All units are supplied with a small nitrogen holding charge only.



General Data

Air Handlers

Table 3. General Data - Air Handlers

	5 Tons		7½ Tons		10 Tons	
	Single Circuit TWE060A1 ⁽ⁱ⁾ , A3, A4, AW	Dual Circuit TWE060B1, B3, B4	Single Circuit TWE090A1, A3 ⁽ⁱⁱ⁾ , AW	Dual Circuit TWE090B1, B3 ⁽ⁱⁱⁱ⁾	Single Circuit TWE120A1 ⁽ⁱⁱⁱ⁾	Single Circuit TWE120A3 ⁽ⁱⁱⁱ⁾ , AW
System Data						
No. Refrigerant Circuits	1	2	1	2	1	1
Suction Line (in.) OD	1 1/8	3/4	1 3/8	1 1/8	1 3/8	1 3/8
Liquid Line (in.) OD	3/8	5/16	1/2	3/8	1/2	1/2
Indoor Coil - Type						
	Plate Fin	Plate Fin	Plate Fin	Plate Fin	Plate Fin	Plate Fin
Tube Size (in.)	.375	.375	.375	.375	.375	.375
Face Area (sq. ft.)	5.0	5.0	8.1	8.1	11.2	11.2
Rows/FPI	3/12	3/12	3/12	3/12	4/12	4/12
Refrigerant Control	Expansion Valve	Expansion Valve	Expansion Valve	Expansion Valve	Expansion Valve	Expansion Valve
Drain Connection Size (in.)	1 PVC	1 PVC	1 PVC	1 PVC	1 PVC	1 PVC
Indoor Fan - Type						
	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal
No. Used/Diameter x Width (in.)	1/12 x 12	1/12 x 12	1/15 x 15	1/15 x 15	1/15 x 15	1/15 x 15
Drive Type/No. Speeds	Belt/Adjustable	Belt/Adjustable	Belt/Adjustable	Belt/Adjustable	Belt/Adjustable	Belt/Adjustable
CFM	2000	2000	3000	3000	4000	4000
No. Motors	1	1	1	1	1	1
Motor HP - Standard/Oversized	.75/1.00	.75/1.00	1.50/2.00	1.50/2.00	2.00	2.00/3.00
Motor RPM	1725	1725	1725	1725	1725	1725
Motor Frame Size	56	56	56H	56H	56HZ	56HZ
Filters - Type/Furnished						
(No.)/Size Recommended	Throwaway/Yes (1) 16x20x1 (1) 20x20x1	Throwaway/Yes (1) 16x20x1 (1) 20x20x1	Throwaway/Yes (3) 16x25x1	Throwaway/Yes (3) 16x25x1	Throwaway/Yes (4) 16x25x1	Throwaway/Yes (4) 16x25x1

	10 Tons			15 Tons	20 Tons
	Dual Circuit TWE120B1 ^(iv)	Dual Circuit TWE120B3 ⁽ⁱⁱ⁾ , B4, BW	Dual Circuit TXE120B500B	Dual Circuit TWE180B3, B4, BW	Dual Circuit TWE240B3, B4, BW, E3, E4, EW
System Data					
No. Refrigerant Circuits	2	2	2	2	2
Suction Line (in.) OD	1 1/8	1 1/8	1 1/8	1 3/8	1 3/8
Liquid Line (in.) OD	3/8	3/8	3/8	1/2	1/2
Indoor Coil - Type					
	Plate Fin	Plate Fin	Plate Fin	Plate Fin	Plate Fin
Tube Size (in.)	.375	.375	.375	.375	.375
Face Area (sq. ft.)	11.2	11.2	11.2	16.3	21.6
Rows/FPI	4/12	4/12	4/12	3/12	3/12
Refrigerant Control	Expansion Valve	Expansion Valve	Expansion Valve	Expansion Valve	Expansion Valve
Drain Connection Size (in.)	1 PVC	1 PVC	1 PVC	1 PVC	1 PVC
Indoor Fan - Type					
	Centrifugal	Centrifugal	-	Centrifugal	Centrifugal
No. Used/Diameter x Width (in.)	1/15x15	1/15x15	-	2/15x15	2/15x15
Drive Type/No. Speeds	Belt/Adjustment	Belt/Adjustment	-	Belt/Adjustment	Belt/Adjustment
CFM	4000	4000	-	6000	8000
No. Motors	1	1	-	1	1
Motor HP - Standard/Oversized	2.00/-	2.00/3.00	-	3.00/5.00	5.00/7.50
Motor RPM	1725	1725	-	1735/1750	1750/3470
Motor Frame Size	56HZ	56HZ	-	145T	184T
Filters - Type/Furnished					
(No.)/Size Recommended	Throwaway/Yes (4) 16x25x1	Throwaway/Yes (4) 16x25x1	Throwaway/Yes ^(v) (4) 16x25x1	Throwaway/Yes (8) 15x20x2	Throwaway/Yes (4) 16x25x2 (4) 16x20x2

⁽ⁱ⁾ TWE60A1 has motor RPM of 3450 for oversized motor.

⁽ⁱⁱ⁾ Ships wired for 208-230/60/3. Field convertible to 460/60/3.

⁽ⁱⁱⁱ⁾ TWE120A1 does not have an oversized motor option.

^(iv) TWE120B1 does not have an oversized motor option.

^(v) Coil has filter rack as standard, but no filters. When using this coil as a duct coil, use below size recommended. Filters for coil not recommended when using coil with upflow gas furnaces.



Performance Data

Table 4. Gross Cooling Capacities (MBh) 7½ Tons TTA090A Condensing Unit with 7½ Tons TWE090A Air Handler

Air Ent Flow DB		Ambient Temperature																							
		85			95			105			115														
		Entering Wet Bulb																							
CFM (°F)	61	67	73	61	67	73	61	67	73	61	67	73													
	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC									
2700	75	85	66.9	93.8	56.6	103.2	38.1	81.8	65.3	90.3	55.2	99.3	36.8	78.3	63.5	86.4	53.6	95.2	35.3	74.5	61.7	82.3	52	90.7	33.8
	80	85.4	77.9	94.1	64.4	103.2	49.8	82.3	76.4	90.5	62.9	99.4	48.3	78.9	74.7	86.7	61.2	95.2	46.8	75.3	72.8	82.5	59.3	90.8	45.1
	85	87.1	87.1	94.2	75.3	103.4	61.2	84.5	84.5	90.7	73.7	99.6	59.7	81.6	81.6	86.8	72	95.4	58.2	78.4	78.4	82.7	70.2	91	56.5
	90	91.5	91.5	94.6	86.4	103.6	72.5	88.8	88.8	91.3	84.9	99.6	70.9	85.8	85.8	87.6	83.2	95.5	69.3	82.5	82.5	83.7	81.5	91.1	67.5
3000	75	86.7	69.9	95.5	54.9	104.9	38.8	83.3	68.3	91.9	53.3	100.9	37.5	79.7	66.5	87.9	51.7	96.6	35.9	75.8	64.6	83.6	49.9	92	34.3
	80	87.3	82	95.7	67.2	104.9	51.4	84.1	80.4	92	65.5	100.9	49.9	80.6	78.7	88	63.8	96.7	48.3	77	76.9	83.8	61.9	92.1	46.7
	85	89.9	89.9	95.9	79	105.1	63.8	87.2	87.2	92.2	77.4	101.1	62.3	84.1	84.1	88.3	75.7	96.9	60.8	80.8	80.8	84.2	73.9	92.4	59.1
	90	94.5	94.5	96.6	91.2	105.2	75.9	91.6	91.6	93.1	89.7	101.2	74.3	88.4	88.4	89.4	88.0	97.0	72.7	85.0	85.0	85.1	85.1	92.5	70.9
3300	75	88.1	72.7	96.9	56.6	106.2	39.5	84.6	71.1	93.1	55.1	102.1	38	80.9	69.3	89.1	53.4	97.7	36.4	76.9	67.4	84.7	51.7	93	34.7
	80	88.9	85.9	97	69.7	106.3	52.9	85.7	84.3	93.3	68.1	102.2	51.4	81.8	81.8	89.2	66.3	97.9	49.8	78.4	78.4	84.9	64.5	93.2	48.2
	85	92.4	92.4	97.3	82.6	106.5	66.3	89.5	89.5	93.6	81	102.4	64.8	86.3	86.3	89.6	79.3	98.1	63.2	82.8	82.8	85.4	77.4	93.3	61.3
	90	97.0	97.0	98.4	95.9	106.6	79.2	94.0	94.0	94.9	94.3	102.6	77.6	90.8	90.8	90.8	90.8	98.2	75.9	87.2	87.2	87.3	87.3	93.6	74.2
3600	75	89.2	75.5	98.0	58.3	107.4	40.0	85.8	73.8	94.2	56.7	103.2	38.5	82.0	72.0	90.1	55.1	98.7	36.9	77.9	70.0	85.6	53.3	93.9	35.2
	80	90.5	89.7	98.2	72.2	107.5	54.3	86.8	86.8	94.4	70.5	103.3	52.8	83.6	83.6	90.3	68.8	98.9	51.2	80.1	80.1	85.9	66.9	94.2	49.6
	85	94.5	94.5	98.5	86.0	107.7	68.6	91.5	91.5	94.8	84.4	103.5	67.2	88.2	88.2	90.8	82.7	99.0	65.3	84.6	84.6	86.5	80.8	94.3	63.5
	90	99.3	99.3	99.3	99.3	107.8	82.4	96.2	96.2	96.3	96.3	103.7	80.8	92.8	92.8	92.9	92.9	99.3	79.1	89.2	89.2	89.2	89.2	94.6	77.3

Notes:

1. Equal MBH and SHC values constitute dry coil condition. Total Gross Cooling Capacity (MBh) shown to the left is not applicable. In this case the Sensible Heat Capacity (SHC) is the total capacity.
2. All capacities shown are gross and have not considered indoor fan heat.
3. To obtain net cooling capacities, subtract indoor fan heat.
4. MBH = Total Gross Cooling Capacity
5. SHC = Sensible Heat Capacity

Table 5. Gross Cooling Capacities (MBh) 7 1/2 Tons TTA090A Condensing Unit with 10 Tons TWE120A Air Handler

Air Ent Flow DB		Ambient Temperature																							
		85			95			105			115														
		Entering Wet Bulb																							
CFM (°F)	61	67	73	61	67	73	61	67	73	61	67	73													
	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC									
3100	75	90.8	73.8	99.9	61.9	109.7	40.7	87.4	72.1	96.2	60.4	105.6	39.3	83.4	70.2	92.1	58.8	101.2	37.8	79.2	68.2	87.7	57.1	96.5	36.2
	80	91.4	86.7	100.2	70.8	109.7	54	88.1	85.1	96.4	69.3	105.7	52.5	84.4	83.3	92.3	67.4	101.4	50.9	80.3	80.3	87.9	65.5	96.7	49.2
	85	94.5	94.5	100.3	83.5	109.9	67.2	91.6	91.6	96.6	81.9	105.9	65.7	88.4	88.4	92.5	80.1	101.6	64.1	84.9	84.9	88.2	78.3	97	62.4
	90	99.2	99.2	101	96.5	110.1	80.3	96.2	96.2	97.5	95	106	78.6	92.9	92.9	93.6	93.3	101.7	76.9	89.4	89.4	89.6	89.6	97.1	75.1
3400	75	92.2	76.8	101.4	59.5	111.1	41.3	88.7	75.1	97.6	58	106.9	39.8	84.7	73.2	93.4	56.3	102.4	38.2	80.4	71.2	88.9	54.5	97.6	36.5
	80	93.1	90.9	101.6	73.7	111.2	55.6	89.7	89.3	97.7	71.9	107.1	54.1	85.9	85.9	93.5	70.1	102.6	52.5	82.3	82.3	89.1	68.2	97.9	50.8
	85	97.0	97.0	101.7	87.3	111.4	69.8	94.0	94.0	98.0	85.7	107.2	68.3	90.7	90.7	93.9	83.9	102.9	66.7	87.1	87.1	89.5	82.0	98.1	65.1
	90	101.8	101.8	102.8	101.5	111.4	83.6	98.8	98.8	98.9	98.9	107.3	82.1	95.4	95.4	95.5	95.5	103	80.4	91.8	91.8	91.9	91.9	98.3	78.6
3700	75	93.4	79.8	102.6	61.3	112.2	41.8	89.8	78	98.7	59.7	108	40.3	85.8	76.1	94.4	58	103.4	38.7	81.5	74.1	89.9	56.2	98.5	37
	80	94.2	94.2	102.7	76.2	112.4	57.1	91.2	91.2	98.8	74.5	108.2	55.6	87.8	87.8	94.6	72.7	103.7	54	84.2	84.2	90.1	70.8	98.9	52.3
	85	99.2	99.2	103	91.0	112.6	72.3	96.1	96.1	99.2	89.4	108.4	70.8	92.7	92.7	95.1	87.6	103.9	69.3	89.0	89.0	90.7	85.7	99.0	67.2
	90	104.2	104.2	104.3	104.3	112.7	87.0	101	101	101.1	101.1	108.5	85.4	97.6	97.6	97.6	97.6	104	83.8	93.8	93.8	93.9	93.9	99.3	82.0
4000	75	94.5	82.6	103.6	63	113.2	42.3	90.8	80.8	99.7	61.4	108.9	40.7	86.8	78.9	95.3	59.7	104.2	39.2	82.5	76.9	90.7	57.9	99.3	37.5
	80	96.1	96.1	103.8	78.7	113.4	58.5	93.0	93.0	99.8	77.1	109.1	57.0	89.5	89.5	95.5	75.3	104.6	55.5	85.8	85.8	90.9	73.3	99.7	53.8
	85	101.2	101.2	104.2	94.5	113.6	74.8	98.0	98.0	100.4	92.9	109.2	73.0	94.5	94.5	96.2	91.1	104.7	71.3	90.7	90.7	91.8	89.3	99.9	69.5
	90	106.3	106.3	106.4	106.4	113.7	90.3	103.0	103.0	103.1	103.1	109.4	88.7	99.5	99.5	99.6	99.6	105	87.0	95.6	95.6	95.7	95.7	100.2	85.3

Notes:

1. Equal MBH and SHC values constitute dry coil condition. Total Gross Cooling Capacity (MBh) shown to the left is not applicable. In this case the Sensible Heat Capacity (SHC) is the total capacity.
2. All capacities shown are gross and have not considered indoor fan heat.
3. To obtain net cooling capacities, subtract indoor fan heat.
4. MBH = Total Gross Cooling Capacity
5. SHC = Sensible Heat Capacity



Performance Data

10 Tons

Table 6. Gross Cooling Capacities (MBh) 10 Tons TTA120A Condensing Unit with 10 Tons TWE120A Air Handler

Air Ent Flow DB		Ambient Temperature																							
		85						95						105						115					
		Entering Wet Bulb						Entering Wet Bulb						Entering Wet Bulb						Entering Wet Bulb					
CFM (°F)	61	67	73	61	67	73	61	67	73	61	67	73	61	67	73	61	67	73							
	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC					
3600 75	117.7	91.3	129.9	77.1	143.5	52.5	113.3	89.0	125.4	75.2	138.4	50.8	108.8	86.7	120.5	73.3	133.1	48.9	104.0	84.3	115.3	71.2	127.4	47.0	
80	118.1	105.8	130.3	87.6	143.5	68.3	114.0	103.7	125.8	85.6	138.5	66.4	109.6	101.5	120.9	83.6	133.2	64.4	105.0	99.2	115.8	81.4	127.6	62.3	
85	119.6	119.6	130.4	102.4	143.8	83.5	116.2	116.2	125.9	100.4	138.8	81.6	112.5	112.5	121.1	98.2	133.5	79.6	108.6	108.6	116.0	95.9	127.9	77.5	
90	125.6	125.6	131.0	117.2	144.0	98.6	122.1	122.1	126.6	115.2	139.1	96.7	118.4	118.4	122.0	113.1	133.8	94.7	114.4	114.4	117.1	110.9	128.3	92.7	
4000 75	119.9	95.2	132.4	75.0	145.9	53.6	115.6	93.0	127.7	73.0	140.8	51.8	111.0	90.7	122.7	70.9	135.2	49.9	106.0	88.3	117.4	68.7	129.4	47.8	
80	120.8	111.3	132.8	91.5	146.0	70.4	116.6	109.2	128.1	89.5	140.9	68.5	112.2	107.0	123.1	87.4	135.4	66.5	107.4	104.7	117.8	85.2	129.6	64.4	
85	123.5	123.5	132.9	107.5	146.3	87.0	120.0	120.0	128.2	105.4	141.2	85.1	116.2	116.2	123.3	103.2	135.8	83.1	112.1	112.1	118.0	100.9	130.0	81.0	
90	129.9	129.9	133.9	123.7	146.6	103.5	126.2	126.2	129.4	121.7	141.5	101.6	122.3	122.3	124.7	119.5	136.1	99.6	118.1	118.1	119.7	117.3	130.1	97.0	
4400 75	121.9	99.0	134.5	77.3	148.0	54.6	117.5	96.8	129.6	75.3	142.7	52.7	112.7	94.5	124.5	73.2	137.0	50.6	107.6	92.1	119.0	71.0	130.9	48.5	
80	123.1	116.6	134.8	95.2	148.1	72.5	118.9	114.5	130.0	93.1	142.8	70.6	114.4	112.3	124.8	91.0	137.2	68.5	108.9	108.9	119.2	88.4	131.3	66.4	
85	127.0	127.0	135.0	112.3	148.4	90.4	123.4	123.4	130.2	110.2	143.2	88.4	119.4	119.4	125.2	108.0	137.6	86.4	115.1	115.1	119.9	105.7	131.7	84.3	
90	133.6	133.6	136.4	129.9	148.7	108.2	129.7	129.7	131.9	127.9	143.3	105.8	125.7	125.7	127.1	125.8	137.7	103.7	121.3	121.3	121.4	121.4	131.9	101.4	
4800 75	123.6	102.7	136.2	79.6	149.7	55.3	119.1	100.5	131.2	77.6	144.2	53.3	114.3	98.2	126.0	75.5	138.4	51.3	109.2	95.7	120.4	73.2	132.2	49.1	
80	125.2	121.6	136.5	98.7	149.9	74.4	121.0	119.5	131.4	96.3	144.5	72.5	115.7	115.7	126.2	94.0	138.7	70.5	111.4	111.4	120.7	91.7	132.7	68.3	
85	130.2	130.2	136.9	116.9	150.2	93.6	126.3	126.3	132.0	114.8	144.8	91.6	122.2	122.2	127.0	112.6	139.1	89.6	117.8	117.8	121.6	110.3	133.1	87.5	
90	136.9	136.9	138.8	136.0	150.3	112.2	132.9	132.9	134.2	133.9	145.0	110.1	128.7	128.7	128.8	128.8	139.3	108.0	124.1	124.1	124.3	124.3	133.3	105.7	

- Notes:**
1. Equal MBH and SHC values constitute dry coil condition. Total Gross Cooling Capacity (MBh) shown to the left is not applicable. In this case the Sensible Heat Capacity (SHC) is the total capacity.
 2. All capacities shown are gross and have not considered indoor fan heat.
 3. To obtain net cooling capacities, subtract indoor fan heat.
 4. MBH = Total Gross Cooling Capacity
 5. SHC = Sensible Heat Capacity

Table 7. Gross Cooling Capacities (MBh) 10 Tons TTA120B Condensing Unit with 10 Tons TWE120B Air Handler

Air Ent Flow DB		Ambient Temperature																							
		85						95						105						115					
		Entering Wet Bulb						Entering Wet Bulb						Entering Wet Bulb						Entering Wet Bulb					
CFM (°F)	61	67	73	61	67	73	61	67	73	61	67	73	61	67	73	61	67	73							
	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC					
3600 75	114.9	89.9	127.2	76.2	140.5	52.0	111.2	88.0	123.1	74.5	135.7	50.3	107.3	86.0	118.5	72.7	130.2	48.5	103.1	83.8	113.6	70.7	124.1	46.2	
80	115.6	104.7	127.9	87.2	141.1	68.0	112.0	102.8	123.8	85.5	136.5	66.2	108.2	100.8	118.9	82.9	131.3	64.3	104.1	98.7	114.0	80.7	125.4	62.1	
85	117.8	117.8	128.2	101.6	141.8	83.4	114.7	114.7	124.2	99.7	137.2	81.6	111.5	111.5	119.7	97.6	132.1	79.7	107.9	107.9	114.8	95.4	126.3	77.5	
90	124.0	124.0	129.0	116.5	142.3	98.7	120.9	120.9	125.0	114.6	137.4	96.4	117.4	117.4	120.7	112.6	132.3	94.3	113.6	113.6	115.9	110.3	126.6	91.9	
4000 75	117.3	93.9	129.8	74.5	142.8	52.9	113.5	92.0	125.5	72.7	137.7	51.2	109.4	89.9	120.7	70.7	132.1	49.3	105.0	87.7	115.6	68.6	125.7	47.1	
80	118.3	110.2	130.0	90.6	143.7	70.2	114.6	108.2	125.8	88.7	138.9	68.5	110.6	106.2	121.1	86.5	133.5	66.5	106.4	104.0	116.0	84.2	127.3	64.2	
85	121.8	121.8	130.8	106.7	144.4	87.0	118.6	118.6	126.6	104.7	139.7	85.3	115.1	115.1	121.9	102.6	134.4	83.3	111.2	111.2	116.8	100.2	128.3	81.0	
90	128.3	128.3	131.9	123.0	144.6	102.9	125.0	125.0	127.9	121.1	140.0	101.0	121.4	121.4	123.4	119.0	134.7	98.9	117.2	117.2	118.4	116.7	128.7	96.4	
4400 75	119.3	97.7	131.8	76.9	144.5	53.9	115.3	95.7	127.4	75.1	139.4	52.1	111.2	93.6	122.5	73.1	133.6	50.2	106.6	91.3	117.1	70.9	127.0	47.9	
80	120.6	115.4	132.2	94.1	145.8	72.3	116.9	113.4	127.8	92.1	140.9	70.5	112.9	111.4	123.0	89.9	135.3	68.5	108.0	108.0	117.7	87.5	128.9	66.3	
85	125.3	125.3	133.0	111.4	146.6	90.5	122.0	122.0	128.7	109.5	141.8	88.7	118.3	118.3	123.9	107.3	136.2	86.7	114.2	114.2	118.6	104.9	129.5	83.4	
90	132.1	132.1	134.5	129.2	146.9	107.4	128.7	128.7	130.4	127.3	142.2	105.5	124.8	124.8	125.9	125.2	136.7	103.2	120.4	120.4	120.5	120.5	130.5	100.7	
4800 75	121.0	101.4	133.6	79.2	146.1	54.8	117.0	99.3	129.0	77.4	140.9	52.9	112.7	97.2	124.0	75.3	134.9	50.8	108.0	94.8	117.8	72.3	128.1	48.5	
80	122.8	120.4	134.1	97.4	147.6	74.3	119.0	118.5	129.6	95.4	142.6	72.5	114.5	114.5	124.6	93.2	136.8	70.5	110.4	110.4	119.1	90.7	130.3	68.2	
85	128.5	128.5	134.9	116.0	148.4	93.7	125.0	125.0	130.5	114.1	143.0	91.2	121.1	121.1	125.6	111.8	137.4	88.9	116.7	116.7	120.2	109.4	131.0	86.3	
90	135.5	135.5	137.0	135.2	148.8	111.6	131.9	131.9	132.0	132.0	144.0	109.7	127.8	127.8	127.9	127.9	138.4	107.4	123.2	123.2	123.3	123.3	132.0	104.9	

- Notes:**
1. Equal MBH and SHC values constitute dry coil condition. Total Gross Cooling Capacity (MBh) shown to the left is not applicable. In this case the Sensible Heat Capacity (SHC) is the total capacity.
 2. All capacities shown are gross and have not considered indoor fan heat.
 3. To obtain net cooling capacities, subtract indoor fan heat.
 4. MBH = Total Gross Cooling Capacity
 5. SHC = Sensible Heat Capacity



Performance Data

10 Tons

Table 8. Gross Cooling Capacities (MBh) Both Compressors - 10 Tons TTA120C Condensing Unit with 10 Tons TWE120A Air Handler

		Ambient Temperature																							
		85						95						105						115					
Air Ent Flow DB	CFM (°F)	Entering Wet Bulb																							
		61		67		73		61		67		73		61		67		73		61		67		73	
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC
3600	75	115.5	90.4	127.7	76.4	140.9	51.9	111.8	88.5	123.6	74.8	136.3	50.4	107.9	86.5	119.1	73.0	131.1	48.6	103.7	84.4	114.2	71.0	125.1	46.6
	80	116.2	105.2	128.3	87.3	141.1	67.9	112.6	103.4	124.2	85.6	136.7	66.2	108.8	101.4	119.7	83.7	131.6	64.3	104.7	99.3	114.8	81.6	125.8	62.1
	85	118.3	118.3	128.5	102.0	141.5	83.2	115.2	115.2	124.5	100.1	137.1	81.6	112.0	112.0	120.0	98.1	132.2	79.7	108.3	108.3	115.1	95.8	126.4	77.5
	90	124.4	124.4	129.3	116.9	141.9	98.5	121.2	121.2	125.4	115.0	137.6	96.8	117.8	117.8	121.0	113.0	132.6	95.0	113.9	113.9	116.3	110.8	126.6	92.2
4000	75	117.9	94.5	130.2	74.6	143.1	53.0	114.0	92.5	126.0	72.8	138.4	51.4	110.0	90.5	121.3	70.8	133.0	49.5	105.5	88.2	116.1	68.7	126.7	47.4
	80	118.9	110.7	130.7	91.3	143.5	70.1	115.2	108.8	126.5	89.5	139.0	68.4	111.3	106.8	121.5	87.0	133.7	66.4	107.0	104.7	116.4	84.7	127.7	64.3
	85	122.2	122.2	131.0	107.0	144.0	86.8	119.0	119.0	126.8	105.1	139.5	85.1	115.6	115.6	122.2	103.0	134.3	83.2	111.7	111.7	117.1	100.7	128.3	81.0
	90	128.6	128.6	132.1	123.3	144.4	103.4	125.3	125.3	128.1	121.5	139.6	101.2	121.6	121.6	123.7	119.5	134.5	99.1	117.5	117.5	118.8	117.2	128.6	96.7
4400	75	119.9	98.3	132.2	77.0	145.0	54.0	115.9	96.3	127.9	75.2	140.1	52.3	111.7	94.2	123.0	73.2	134.5	50.3	107.1	91.9	117.7	71.0	128.1	48.0
	80	121.3	116.0	132.5	94.5	145.5	72.1	117.5	114.1	128.1	92.6	140.8	70.4	113.5	112.0	123.3	90.4	135.4	68.5	108.5	108.5	118.0	88.0	129.2	66.3
	85	125.7	125.7	133.0	111.8	146.1	90.2	122.4	122.4	128.8	109.9	141.4	88.5	118.7	118.7	124.1	107.8	136.0	86.5	114.5	114.5	118.9	105.4	129.9	84.3
	90	132.2	132.2	134.6	129.6	146.2	107.4	128.8	128.8	130.7	127.8	141.6	105.6	125.0	125.0	126.1	125.7	136.3	103.5	120.6	120.6	120.7	120.7	130.2	101.0
4800	75	121.6	102.0	133.9	79.3	146.6	54.7	117.6	100.0	129.5	77.5	141.5	52.9	113.2	97.8	124.5	75.5	135.8	50.9	108.6	95.5	119.0	73.3	129.2	48.7
	80	123.4	121.1	134.2	97.8	147.2	74.1	119.6	119.2	129.8	95.9	142.4	72.4	115.0	115.0	124.9	93.7	136.9	70.4	110.9	110.9	119.4	91.2	130.5	68.2
	85	128.8	128.8	134.9	116.4	147.8	93.4	125.3	125.3	130.7	114.5	143.0	91.7	121.4	121.4	125.8	112.4	137.5	89.7	117.1	117.1	120.5	110.0	130.9	86.7
	90	135.5	135.5	137.0	135.6	148.1	111.7	131.9	131.9	132.0	132.0	143.3	109.8	127.9	127.9	128.0	128.0	137.8	107.7	123.3	123.3	123.4	123.4	131.6	105.2

Notes:

1. Equal MBH and SHC values constitute dry coil condition. Total Gross Cooling Capacity (MBh) shown to the left is not applicable. In this case the Sensible Heat Capacity (SHC) is the total capacity.
2. All capacities shown are gross and have not considered indoor fan heat.
3. To obtain net cooling capacities, subtract indoor fan heat.
4. MBH = Total Gross Cooling Capacity
5. SHC = Sensible Heat Capacity

Table 9. Gross Cooling Capacities (MBh) One Compressor - 10 Tons TTA120C Condensing Unit with 10 Tons TWE120A Air Handler

		Ambient Temperature																							
		85						95						105						115					
Air Ent Flow DB	CFM (°F)	Entering Wet Bulb																							
		61		67		73		61		67		73		61		67		73		61		67		73	
		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC
3600	75	72.7	70.1	79.6	51.9	87.2	33.9	70.0	68.9	76.5	50.6	83.8	32.6	67.0	67.0	73.3	49.3	80.2	31.5	64.2	64.2	69.9	47.8	76.3	30.2
	80	76.3	76.3	80.0	66.7	87.7	48.5	73.8	73.8	76.9	65.4	84.4	47.4	71.2	71.2	73.7	64.1	80.7	45.8	68.4	68.4	70.4	62.7	77.0	44.4
	85	80.7	80.7	80.8	80.8	88.0	63.1	78.2	78.2	78.3	78.3	84.6	61.9	75.5	75.5	75.5	75.5	81.2	60.6	72.6	72.6	72.6	72.6	77.5	59.3
	90	85.2	85.2	85.3	85.3	88.3	78.1	82.6	82.6	82.7	82.7	85.0	76.9	79.8	79.8	79.9	79.9	81.7	75.6	76.8	76.8	76.9	76.9	78.1	74.3
4000	75	73.6	73.6	80.5	54.0	88.0	33.7	71.1	71.1	77.4	52.7	84.5	32.6	68.5	68.5	74.1	51.3	80.8	31.4	65.6	65.6	70.6	49.9	76.9	30.1
	80	78.1	78.1	80.9	70.2	88.6	50.5	75.6	75.6	77.8	68.9	85.2	49.4	72.8	72.8	74.6	67.6	81.7	48.2	69.9	69.9	71.2	66.2	77.9	47.0
	85	82.7	82.7	82.8	82.8	88.9	66.3	80.1	80.1	80.1	80.1	85.5	65.1	77.2	77.2	77.3	77.3	82.0	63.8	74.2	74.2	74.3	74.3	78.2	62.4
	90	87.3	87.3	87.4	87.4	89.4	82.6	84.6	84.6	84.7	84.7	86.1	81.4	81.7	81.7	81.8	81.8	82.7	80.2	78.6	78.6	78.7	78.7	79.2	78.9
4400	75	75.0	75.0	81.3	56.0	88.7	34.3	72.5	72.5	78.1	54.7	85.1	33.2	69.8	69.8	74.8	53.3	81.3	32.0	66.9	66.9	71.2	51.8	77.3	30.7
	80	79.7	79.7	81.8	73.5	89.4	52.4	77.0	77.0	78.7	72.3	85.9	51.3	74.2	74.2	75.4	70.9	82.3	50.1	71.2	71.2	72.0	69.5	78.5	48.9
	85	84.4	84.4	84.5	84.5	89.7	69.3	81.7	81.7	81.7	81.7	86.2	68.1	78.7	78.7	78.8	78.8	82.6	66.8	75.6	75.6	75.7	75.7	78.9	65.4
	90	89.2	89.2	89.2	89.2	90.4	87.1	86.3	86.3	86.4	86.4	87.1	85.8	83.3	83.3	83.4	83.4	83.4	83.4	80.1	80.1	80.2	80.2	80.2	80.2
4800	75	76.3	76.3	81.9	57.9	89.2	34.9	73.7	73.7	78.7	56.6	85.6	33.7	70.9	70.9	75.3	55.2	81.7	32.5	67.9	67.9	71.8	53.7	77.6	31.2
	80	81.1	81.1	82.5	76.8	90.0	54.3	78.3	78.3	79.4	75.5	86.5	53.1	75.4	75.4	76.2	74.1	82.9	52.0	72.4	72.4	72.8	72.7	79.0	50.7
	85	85.9	85.9	85.9	85.9	90.3	72.3	83.0	83.0	83.1	83.1	86.8	71.0	80.1	80.1	80.1	80.1	83.2	69.7	76.9	76.9	76.9	76.9	79.4	68.3
	90	90.7	90.7	90.8	90.8	91.4	91.3	87.8	87.8	87.9	87.9	87.9	87.9	84.7	84.7	84.8	84.8	84.8	84.8	81.4	81.4	81.5	81.5	81.6	81.6

Notes:

1. Equal MBH and SHC values constitute dry coil condition. Total Gross Cooling Capacity (MBh) shown to the left is not applicable. In this case the Sensible Heat Capacity (SHC) is the total capacity.
2. All capacities shown are gross and have not considered indoor fan heat.
3. To obtain net cooling capacities, subtract indoor fan heat.
4. MBH = Total Gross Cooling Capacity
5. SHC = Sensible Heat Capacity



Performance Data

12½, 15 Tons

Table 10. Gross Cooling Capacities (MBh) 12½ Tons TTA150B Condensing Unit with 15 Tons TWE180B Air Handler

Air Ent Flow DB		Ambient Temperature																							
		85						95						105						115					
		61		67		73		61		67		73		61		67		73		61		67		73	
CFM (°F)	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	
4500	75	137.6	109.2	151.2	92.0	165.6	61.5	132.5	106.7	145.7	89.8	159.5	59.4	127.1	103.9	139.8	87.4	152.9	57.1	121.2	101.0	133.6	84.9	146.0	54.8
	80	138.3	127.6	151.5	104.9	166.0	81.0	133.3	125.1	146.0	102.4	160.1	78.8	128.1	122.5	140.2	99.8	153.7	76.4	122.5	119.6	134.1	97.0	147.1	74.0
	85	141.8	141.8	152.1	123.2	166.6	100.2	137.5	137.5	146.6	120.7	160.7	97.9	133.0	133.0	140.8	118.0	154.4	95.6	128.2	128.2	134.7	115.3	147.5	92.6
	90	148.8	148.8	152.9	141.7	166.9	118.3	144.5	144.5	147.6	139.3	161.0	115.9	139.8	139.8	142.0	136.7	154.8	113.4	134.9	134.9	136.2	134.1	148.3	110.8
5000	75	140.2	114.2	153.8	89.5	168.0	62.5	134.9	111.6	148.1	87.2	161.7	60.3	129.4	108.8	142.0	84.7	155.0	58.1	123.3	105.8	135.7	82.1	148.0	55.6
	80	141.2	134.4	154.2	109.4	168.7	83.7	136.1	131.8	148.5	106.9	162.5	81.5	130.8	129.2	142.5	104.2	156.1	79.1	125.0	125.0	136.3	101.4	149.2	76.7
	85	146.2	146.2	154.8	129.4	169.3	104.6	141.8	141.8	149.1	126.8	162.8	101.7	137.0	137.0	143.2	124.1	156.4	99.2	132.0	132.0	137.0	121.4	149.7	96.5
	90	153.5	153.5	155.9	149.7	169.6	124.1	149.0	149.0	150.6	147.3	163.6	121.6	144.1	144.1	145.0	144.7	157.2	119.1	139.0	139.0	139.2	139.2	150.5	116.4
5500	75	142.3	118.9	155.9	92.5	170.0	63.6	136.9	116.2	150.1	90.1	163.5	61.3	131.2	113.4	143.9	87.6	156.7	58.9	125.2	110.4	137.0	84.2	149.5	56.4
	80	143.8	140.9	156.4	113.7	170.8	86.3	138.7	138.3	150.6	111.1	164.6	84.0	133.2	133.2	144.5	108.4	157.9	81.6	128.1	128.1	138.1	105.5	151.0	79.2
	85	150.1	150.1	157.0	135.3	171.2	108.0	145.5	145.5	151.3	132.7	164.9	105.6	140.5	140.5	145.2	130.0	158.4	103.0	135.3	135.3	139.0	127.3	151.6	100.2
	90	157.6	157.6	158.8	157.4	171.9	129.6	152.9	152.9	153.0	153.0	165.7	127.1	147.9	147.9	148.0	148.0	159.2	124.5	142.6	142.6	142.7	142.7	152.4	121.8
6000	75	144.2	123.4	157.7	95.3	171.6	64.4	138.7	120.7	151.4	92.3	165.1	62.1	132.9	117.8	145.1	89.5	158.1	59.7	126.8	114.8	138.5	86.6	150.8	57.2
	80	145.8	145.8	158.3	117.8	172.7	88.7	141.1	141.1	152.4	115.2	166.3	86.4	136.1	136.1	146.1	112.4	159.5	84.1	130.9	130.9	139.7	109.5	152.4	81.6
	85	153.5	153.5	159.0	141.0	173.1	111.7	148.7	148.7	153.2	138.4	166.8	109.2	143.6	143.6	147.1	135.7	160.1	106.6	138.3	138.3	140.8	132.9	153.2	103.8
	90	161.3	161.3	161.4	161.4	173.9	134.8	156.4	156.4	156.5	156.5	167.5	132.4	151.2	151.2	151.3	151.3	160.9	129.8	145.7	145.7	145.9	145.9	154.0	127.0

- Notes:**
1. Equal MBH and SHC values constitute dry coil condition. Total Gross Cooling Capacity (MBh) shown to the left is not applicable. In this case the Sensible Heat Capacity (SHC) is the total capacity.
 2. All capacities shown are gross and have not considered indoor fan heat.
 3. To obtain net cooling capacities, subtract indoor fan heat.
 4. MBH = Total Gross Cooling Capacity
 5. SHC = Sensible Heat Capacity

Table 11. Gross Cooling Capacities (MBh) 15 Tons TTA180B Condensing Unit with 15 Tons TWE180B Air Handler

Air Ent Flow DB		Ambient Temperature																							
		85						95						105						115					
		61		67		73		61		67		73		61		67		73		61		67		73	
CFM (°F)	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	
5400	75	168.8	132.7	186.2	112.4	204.7	75.9	162.4	129.4	179.0	109.5	196.7	73.1	155.3	125.8	171.2	106.4	187.9	70.1	147.7	121.9	162.9	103.1	178.5	66.9
	80	169.8	154.7	186.5	127.9	205.2	99.4	163.5	151.4	179.4	124.6	197.4	96.4	156.6	147.9	171.7	121.1	188.9	93.3	149.3	144.2	163.5	117.3	179.9	90.0
	85	173.3	173.3	187.4	149.7	206.0	122.3	167.9	167.9	180.4	146.4	198.2	119.4	162.0	162.0	172.7	142.9	189.8	116.2	155.6	155.6	164.5	139.2	180.9	112.9
	90	182.1	182.1	188.4	171.8	206.3	144.2	176.6	176.6	181.5	168.6	198.6	141.0	170.5	170.5	174.1	165.1	190.3	137.6	164.0	164.0	166.3	161.5	181.5	134.0
6000	75	172.2	138.6	189.6	109.4	207.9	77.2	165.5	135.2	182.1	106.3	199.5	74.3	158.2	131.5	174.1	103.0	190.5	71.2	150.3	127.6	165.5	99.5	180.9	67.9
	80	173.4	162.7	190.0	133.3	208.7	102.7	167.0	159.4	182.7	129.9	200.6	99.7	160.0	155.8	174.8	126.3	191.8	96.5	152.6	152.0	166.3	122.5	182.6	93.1
	85	178.9	178.9	191.0	157.1	209.5	127.6	173.3	173.3	183.6	153.7	201.4	124.6	167.1	167.1	175.7	150.1	192.3	120.6	160.4	160.4	167.3	146.3	183.2	116.9
	90	188.1	188.1	192.4	181.3	209.9	151.0	182.3	182.3	185.4	178.0	202.0	147.8	176.0	176.0	177.9	174.6	193.4	144.3	169.1	169.1	169.3	169.3	184.3	140.6
6600	75	175.0	144.2	192.4	113.0	210.4	78.6	168.1	140.7	184.7	109.8	201.9	75.6	160.6	137.0	176.5	106.5	192.7	72.3	152.5	133.0	167.0	102.0	182.9	68.9
	80	176.7	170.4	193.0	138.4	211.5	105.7	170.1	167.0	185.4	135.0	203.2	102.7	162.3	162.3	177.3	131.3	194.2	99.5	155.6	155.6	168.6	127.4	184.8	96.1
	85	183.8	183.8	193.9	164.1	211.8	131.9	177.9	177.9	186.4	160.7	203.6	128.6	171.5	171.5	178.3	157.1	194.9	125.1	164.5	164.5	169.8	153.2	185.6	121.3
	90	193.3	193.3	196.0	190.4	213.0	157.5	187.3	187.3	188.9	187.1	204.8	154.2	180.6	180.6	180.8	180.8	196.0	150.7	173.5	173.5	173.7	173.7	186.7	147.0
7200	75	177.4	149.5	194.7	116.3	212.6	79.6	170.3	146.0	186.9	113.2	203.9	76.5	162.6	142.2	177.9	108.9	194.5	73.3	154.5	138.2	169.0	104.9	184.5	69.8
	80	179.7	177.7	195.5	143.2	213.9	108.6	172.5	172.5	187.8	139.8	205.4	105.6	166.0	166.0	179.5	136.1	196.3	102.3	159.0	159.0	170.6	132.1	186.6	99.0
	85	188.2	188.2	196.4	170.8	214.4	136.3	182.0	182.0	188.8	167.4	206.0	133.0	175.3	175.3	180.7	163.7	197.1	129.4	168.1	168.1	172.1	159.9	187.6	125.6
	90	198.0	198.0	199.4	199.2	215.7	163.8	191.7	191.7	191.8	191.8	207.1	160.4	184.8	184.8	185.0	185.0	198.2	156.9	177.4	177.4	177.6	177.6	188.8	153.1

- Notes:**
1. Equal MBH and SHC values constitute dry coil condition. Total Gross Cooling Capacity (MBh) shown to the left is not applicable. In this case the Sensible Heat Capacity (SHC) is the total capacity.
 2. All capacities shown are gross and have not considered indoor fan heat.
 3. To obtain net cooling capacities, subtract indoor fan heat.
 4. MBH = Total Gross Cooling Capacity
 5. SHC = Sensible Heat Capacity



Performance Data

15 Tons

Table 12. Gross Cooling Capacities (MBh) 15 Tons TTA180B Condensing Unit with 20 Tons TWE240B Air Handler

Air Ent Flow DB		Ambient Temperature																							
		85						95						105						115					
		Entering Wet Bulb																							
CFM (°F)	61	67	73	61	67	73	61	67	73	61	67	73	61	67	73	61	67	73	61	67	73	61	67	73	
6400	75	179.7	148.2	197.6	124.2	216.0	80.8	172.5	144.6	189.7	121.1	207.2	77.8	164.8	140.8	181.3	117.7	197.6	74.7	156.5	136.6	171.5	112.9	187.5	71.3
	80	181.5	175.1	198.2	142.2	217.5	108.7	174.7	171.7	190.5	138.7	208.9	105.6	166.7	166.7	182.1	134.9	199.8	102.3	159.8	159.8	173.2	130.9	190.1	98.9
	85	188.9	188.9	199.2	168.7	218.4	136.4	182.8	182.8	191.5	165.2	209.5	132.2	176.1	176.1	183.2	161.5	200.5	128.6	169.0	169.0	174.4	157.6	190.9	124.7
	90	198.7	198.7	201.3	195.8	219.0	162.0	192.4	192.4	194.0	192.5	210.7	158.7	185.6	185.6	185.9	185.9	201.7	155.1	178.4	178.4	178.6	178.6	192.2	151.3
6700	75	181.1	151.2	199.0	117.9	217.3	81.2	173.8	147.6	191.1	114.7	208.5	78.2	166.0	143.7	182.5	111.2	198.9	74.9	157.6	139.5	172.6	106.2	188.6	71.3
	80	183.1	179.3	199.7	144.9	218.9	110.3	176.3	175.8	191.8	141.4	210.3	107.2	168.8	168.8	183.4	137.6	201.0	103.9	161.7	161.7	174.4	133.6	191.2	100.5
	85	191.4	191.4	200.6	172.4	219.9	139.1	185.2	185.2	192.9	169.0	210.9	134.6	178.4	178.4	184.6	165.3	202.3	132.7	171.1	171.1	175.7	161.3	192.5	129.3
	90	201.4	201.4	203.2	200.8	220.5	165.5	195.0	195.0	195.2	195.2	212.1	162.1	188.1	188.1	188.3	188.3	203.0	158.5	180.7	180.7	180.8	180.8	193.4	154.7
7000	75	182.3	154.1	200.3	119.8	218.5	81.9	175.0	150.5	192.3	116.5	209.5	78.7	167.1	146.6	183.6	113.1	199.8	75.4	158.7	142.4	174.3	109.4	189.4	71.8
	80	184.8	183.4	201.0	147.6	220.2	111.9	177.5	177.5	193.1	144.0	211.5	108.8	170.8	170.8	184.5	140.2	202.1	105.5	163.6	163.6	175.4	136.1	192.2	102.1
	85	193.7	193.7	202.0	176.2	221.3	141.7	187.4	187.4	194.2	172.7	212.2	137.0	180.5	180.5	185.8	168.9	203.4	135.4	173.1	173.1	177.0	165.0	193.6	131.9
	90	203.9	203.9	204.0	204.0	221.9	168.9	197.4	197.4	197.6	197.6	213.3	165.6	190.4	190.4	190.5	190.5	204.2	161.9	182.8	182.8	183.0	183.0	194.5	158.1
7300	75	183.5	157.0	201.5	121.6	219.5	82.4	176.1	153.3	193.3	118.3	210.5	79.2	168.2	149.4	184.6	114.9	200.7	75.9	159.7	145.2	175.2	111.2	190.2	72.3
	80	185.7	185.7	202.2	150.2	221.4	113.5	179.4	179.4	194.2	146.6	212.6	110.4	172.6	172.6	185.6	142.8	203.2	107.1	165.3	165.3	176.4	138.7	193.1	103.6
	85	195.9	195.9	203.3	179.8	222.5	144.3	189.5	189.5	195.5	176.3	213.8	141.2	182.5	182.5	187.0	172.6	204.5	138.0	175.0	175.0	178.1	168.6	194.6	134.5
	90	206.2	206.2	206.4	206.4	223.1	172.3	199.6	199.6	199.8	199.8	214.5	168.9	192.5	192.5	192.7	192.7	205.3	165.3	184.8	184.8	185.0	185.0	195.5	161.4

- Notes:**
1. Equal MBH and SHC values constitute dry coil condition. Total Gross Cooling Capacity (MBh) shown to the left is not applicable. In this case the Sensible Heat Capacity (SHC) is the total capacity.
 2. All capacities shown are gross and have not considered indoor fan heat.
 3. To obtain net cooling capacities, subtract indoor fan heat.
 4. MBH = Total Gross Cooling Capacity
 5. SHC = Sensible Heat Capacity

Table 13. Gross Cooling Capacities (MBh) - Both Compressors - 15 Tons TTA180C Condensing Unit with 15 Tons TWE180B Air Handler

Air Ent Flow DB		Ambient Temperature																							
		85						95						105						115					
		Entering Wet Bulb																							
CFM (°F)	61	67	73	61	67	73	61	67	73	61	67	73	61	67	73	61	67	73	61	67	73	61	67	73	
5400	75	169.2	132.9	186.6	112.6	205.4	76.1	162.7	129.6	179.4	109.7	197.3	73.3	155.6	125.9	171.6	106.6	188.5	70.3	148.0	122.1	163.2	103.2	179.0	67.1
	80	170.1	154.8	187.0	128.1	205.9	99.7	163.8	151.6	179.9	124.8	198.0	96.7	156.9	148.0	172.1	121.3	189.4	93.5	149.5	144.3	163.9	117.5	180.4	90.2
	85	173.6	173.6	187.9	149.9	206.6	122.6	168.2	168.2	180.8	146.6	198.8	119.6	162.3	162.3	173.1	143.1	190.4	116.4	155.9	155.9	164.8	139.3	181.4	113.1
	90	182.5	182.5	188.9	172.0	207.0	144.5	176.9	176.9	182.0	168.8	199.2	141.3	170.9	170.9	174.5	165.3	190.9	137.8	164.3	164.3	166.7	161.7	182.0	134.2
6000	75	172.5	138.8	190.1	109.6	208.6	77.4	165.8	135.4	182.6	106.5	200.2	74.5	158.5	131.7	174.5	103.2	191.1	71.4	150.6	127.7	165.9	99.6	181.5	68.1
	80	173.8	162.9	190.5	133.5	209.3	102.9	167.3	159.5	183.2	130.1	201.2	99.9	160.3	156.0	175.2	126.5	192.4	96.7	152.9	152.2	166.7	122.7	183.1	93.3
	85	179.2	179.2	191.5	157.3	210.2	127.9	173.6	173.6	184.1	153.9	202.1	124.9	167.4	167.4	176.2	150.3	192.9	120.8	160.7	160.7	167.7	146.5	183.7	117.1
	90	188.5	188.5	192.9	181.5	210.6	151.3	182.7	182.7	185.8	178.2	202.6	148.0	176.3	176.3	178.3	174.8	194.0	144.5	169.4	169.4	169.6	169.6	184.9	140.9
6600	75	175.4	144.4	192.9	113.2	211.2	78.8	168.4	140.9	185.2	110.0	202.6	75.8	160.9	137.2	176.9	106.7	193.3	72.6	152.8	133.1	167.4	102.2	183.4	69.1
	80	177.1	170.5	193.5	138.6	212.2	106.0	170.5	167.2	185.9	135.2	203.9	102.9	162.6	162.6	177.8	131.5	194.9	99.7	155.8	155.8	169.0	127.6	185.3	96.3
	85	184.2	184.2	194.4	164.3	212.5	132.2	178.3	178.3	186.9	160.9	204.3	128.9	171.8	171.8	178.8	157.3	195.5	125.3	164.8	164.8	170.2	153.4	186.1	121.6
	90	193.8	193.8	196.5	190.6	213.7	157.8	187.7	187.7	189.4	187.4	205.5	154.5	181.0	181.0	181.2	181.2	196.6	151.0	173.9	173.9	174.1	174.1	187.3	147.2
7200	75	177.8	149.7	195.3	116.6	213.3	79.9	170.7	146.2	187.5	113.4	204.6	76.8	163.0	142.4	178.4	109.1	195.1	73.5	154.8	138.3	169.4	105.1	185.1	70.0
	80	180.1	177.9	196.0	143.5	214.6	108.9	172.8	172.8	188.3	140.0	206.1	105.8	166.3	166.3	179.9	136.3	197.0	102.6	159.2	159.2	171.0	132.3	187.2	99.2
	85	188.6	188.6	197.0	171.0	215.1	136.6	182.4	182.4	189.4	167.6	206.8	133.2	175.7	175.7	181.2	164.0	197.8	129.7	168.5	168.5	172.5	160.1	188.2	125.8
	90	198.4	198.4	199.9	199.5	216.2	164.0	192.1	192.1	192.3	192.3	207.9	160.7	185.2	185.2	185.4	185.4	198.9	157.2	177.8	177.8	178.0	178.0	189.4	153.4

- Notes:**
1. Equal MBH and SHC values constitute dry coil condition. Total Gross Cooling Capacity (MBh) shown to the left is not applicable. In this case the Sensible Heat Capacity (SHC) is the total capacity.
 2. All capacities shown are gross and have not considered indoor fan heat.
 3. To obtain net cooling capacities, subtract indoor fan heat.
 4. MBH = Total Gross Cooling Capacity
 5. SHC = Sensible Heat Capacity



Performance Data

15, 20 Tons

Table 14. Gross Cooling Capacities (MBh) - One Compressor - 15 Tons TTA180C Condensing Unit with 15 Tons TWE180B Air Handler

Air Ent Flow DB		Ambient Temperature																							
		85						95						105						115					
		61		67		73		61		67		73		61		67		73		61		67		73	
CFM (°F)	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	
5400	75	106.1	103.0	116.0	75.9	126.9	49.3	102.4	101.3	111.8	74.2	122.1	47.8	98.1	98.1	107.1	72.2	116.9	46.1	94.0	94.0	102.0	70.1	111.3	44.3
	80	111.6	111.6	116.6	97.9	127.7	70.8	108.1	108.1	112.4	96.2	123.0	69.1	104.3	104.3	107.8	94.3	118.0	67.2	100.1	100.1	102.9	92.2	112.6	65.2
	85	118.2	118.2	118.3	118.3	128.6	92.8	114.6	114.6	114.7	114.7	123.9	91.1	110.7	110.7	110.8	110.8	118.9	89.2	106.4	106.4	106.5	106.5	113.5	87.2
	90	125.0	125.0	125.1	125.1	129.3	115.1	121.2	121.2	121.4	121.4	124.7	113.4	117.2	117.2	117.3	117.3	119.8	111.5	112.8	112.8	112.9	112.9	114.5	109.6
6000	75	107.5	107.5	117.4	80.4	128.0	49.3	104.1	104.1	113.0	78.8	123.1	47.7	100.2	100.2	108.3	77.0	117.9	46.0	96.0	96.0	103.1	73.0	112.1	44.2
	80	114.2	114.2	118.0	103.0	129.3	74.4	110.6	110.6	113.7	101.3	124.5	72.8	106.7	106.7	109.1	99.3	119.3	71.1	102.3	102.3	104.1	97.2	113.9	69.4
	85	121.0	121.0	121.2	121.2	130.0	97.5	117.3	117.3	117.4	117.4	125.2	95.7	113.2	113.2	113.3	113.3	120.1	93.8	108.8	108.8	108.9	108.9	114.6	91.8
	90	128.1	128.1	128.2	128.2	130.9	121.8	124.2	124.2	124.4	124.4	126.4	120.1	120.0	120.0	120.1	120.1	121.4	118.2	115.4	115.4	115.5	115.5	115.6	115.6
6600	75	109.6	109.6	118.4	83.7	128.9	50.2	106.0	106.0	114.0	80.1	124.0	48.6	102.1	102.1	109.2	78.1	118.6	46.9	97.7	97.7	104.0	75.8	112.8	45.0
	80	116.4	116.4	119.2	108.0	130.4	77.3	112.7	112.7	114.9	106.2	125.6	75.7	108.7	108.7	110.3	104.2	120.3	74.0	104.3	104.3	105.3	102.1	114.7	72.2
	85	123.5	123.5	123.6	123.6	131.2	101.9	119.7	119.7	119.8	119.8	126.3	100.1	115.4	115.4	115.5	115.5	121.1	98.2	110.9	110.9	111.0	111.0	115.5	96.1
	90	130.8	130.8	130.9	130.9	132.4	128.3	126.8	126.8	126.9	126.9	127.9	126.6	122.4	122.4	122.5	122.5	122.6	122.6	117.7	117.7	117.8	117.8	117.9	117.9
7200	75	111.4	111.4	119.3	84.7	129.7	51.0	107.7	107.7	114.9	82.9	124.6	49.4	103.7	103.7	110.0	80.8	119.2	47.7	99.2	99.2	104.7	78.6	113.2	45.8
	80	118.4	118.4	120.4	112.7	131.3	80.1	114.6	114.6	116.0	110.9	126.4	78.5	110.5	110.5	111.4	108.9	121.1	76.7	105.9	105.9	105.9	105.9	115.4	74.9
	85	125.7	125.7	125.8	125.8	132.1	106.2	121.7	121.7	121.8	121.8	127.3	104.4	117.4	117.4	117.5	117.5	122.0	102.5	112.7	112.7	112.8	112.8	116.4	100.4
	90	133.0	133.0	133.2	133.2	133.3	133.3	129.0	129.0	129.2	129.2	129.3	129.3	124.6	124.6	124.7	124.7	124.8	124.8	119.7	119.7	119.8	119.8	119.9	119.9

- Notes:**
1. Equal MBH and SHC values constitute dry coil condition. Total Gross Cooling Capacity (MBh) shown to the left is not applicable. In this case the Sensible Heat Capacity (SHC) is the total capacity.
 2. All capacities shown are gross and have not considered indoor fan heat.
 3. To obtain net cooling capacities, subtract indoor fan heat.
 4. MBH = Total Gross Cooling Capacity
 5. SHC = Sensible Heat Capacity

Table 15. Gross Cooling Capacities (MBh) - 20 Tons TTA240B Condensing Unit with 20 Tons TWE240B Air Handler

Air Ent Flow DB		Ambient Temperature																							
		85						95						105						115					
		61		67		73		61		67		73		61		67		73		61		67		73	
CFM (°F)	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	
7200	75	227.7	179.1	251.2	151.2	276.5	102.3	219.2	174.8	241.6	147.3	265.8	98.6	210.0	170.1	231.5	143.2	254.3	94.6	200.3	165.2	220.7	138.9	242.0	90.5
	80	229.1	208.8	252.2	173.1	277.1	134.0	220.8	204.5	242.1	168.3	266.5	130.0	211.9	200.0	232.1	163.7	255.3	125.8	202.6	195.2	221.5	158.9	243.4	121.4
	85	233.8	233.8	252.7	202.0	278.0	164.9	226.7	226.7	243.3	197.7	267.5	160.9	219.0	219.0	233.3	193.1	256.4	156.7	210.9	210.9	222.7	188.3	244.6	152.4
	90	245.7	245.7	254.3	231.9	278.3	194.7	238.3	238.3	245.1	227.6	268.0	190.4	230.4	230.4	235.5	223.2	256.9	185.9	222.0	222.0	225.4	218.5	245.2	181.2
8000	75	232.2	187.1	255.8	147.5	281.0	104.1	223.3	182.7	245.9	143.3	269.8	100.3	213.9	177.9	235.4	139.0	257.9	96.3	203.9	173.0	224.4	134.5	245.2	91.8
	80	234.1	219.7	256.2	179.9	281.7	138.4	225.6	215.4	246.5	175.5	270.9	134.4	216.6	210.8	236.2	170.8	259.3	130.1	207.1	206.0	225.2	165.9	247.0	125.7
	85	241.4	241.4	257.4	212.0	282.8	172.0	233.9	233.9	247.7	207.6	272.0	168.0	225.9	225.9	237.4	203.0	260.5	163.8	217.3	217.3	226.6	198.1	247.6	158.2
	90	253.8	253.8	259.7	244.8	283.2	204.0	246.1	246.1	250.4	240.5	272.5	199.7	237.7	237.7	240.6	236.0	261.1	195.1	228.9	228.9	229.1	229.1	249.1	190.2
8800	75	236.0	194.7	259.5	152.2	284.6	106.1	226.9	190.2	249.4	148.1	273.1	102.0	217.2	185.4	238.6	143.7	260.8	97.7	207.0	180.3	227.3	139.1	247.8	93.1
	80	238.7	230.2	260.2	186.9	285.6	142.5	230.0	225.8	250.2	182.4	274.5	138.5	219.5	219.5	239.5	177.6	262.6	134.2	210.9	210.9	228.3	172.6	250.0	129.7
	85	248.0	248.0	261.4	221.5	286.7	178.8	240.2	240.2	251.5	217.1	275.6	174.8	231.8	231.8	241.0	212.4	263.2	169.2	222.8	222.8	230.0	207.5	250.8	164.3
	90	260.9	260.9	264.6	257.2	287.4	212.9	252.8	252.8	255.2	252.9	276.3	208.5	244.1	244.1	244.3	244.3	264.6	203.8	234.8	234.8	235.0	235.0	252.2	198.9
9600	75	239.3	202.0	262.8	156.8	287.6	107.5	229.9	197.4	252.4	152.6	275.8	103.3	220.0	192.5	241.4	148.2	263.3	98.9	209.7	187.4	228.9	142.3	250.0	94.4
	80	242.8	240.2	263.6	193.5	288.9	146.5	232.9	232.9	253.3	188.9	277.5	142.4	224.4	224.4	242.4	184.1	265.3	138.1	215.4	215.4	230.9	179.0	252.5	133.6
	85	253.9	253.9	265.0	230.8	289.3	184.3	245.7	245.7	254.9	226.3	278.1	179.8	237.0	237.0	244.3	221.5	266.1	175.1	227.7	227.7	233.1	216.6	253.5	170.1
	90	267.1	267.1	267.3	267.3	290.9	221.4	258.7	258.7	258.9	258.9	279.6	216.9	249.7	249.7	249.9	249.9	267.6	212.2	240.0	240.0	240.2	240.2	254.9	207.3

- Notes:**
1. Equal MBH and SHC values constitute dry coil condition. Total Gross Cooling Capacity (MBh) shown to the left is not applicable. In this case the Sensible Heat Capacity (SHC) is the total capacity.
 2. All capacities shown are gross and have not considered indoor fan heat.
 3. To obtain net cooling capacities, subtract indoor fan heat.
 4. MBH = Total Gross Cooling Capacity
 5. SHC = Sensible Heat Capacity



Performance Data

20 Tons

Table 16. Gross Cooling Capacities (MBh) - 20 Tons TTA240F Condensing Unit with 20 Tons TWE240E Air Handler

Air Ent Flow DB		Ambient Temperature																							
		85						95						105						115					
		61		67		73		61		67		73		61		67		73		61		67		73	
CFM (°F)		MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC	MBH	SHC
7200	75	238.1	201.2	260.2	144.0	284.5	83.5	227.6	196.3	248.8	138.9	271.7	78.9	216.1	191.2	236.1	134.2	257.8	73.9	203.6	185.8	222.1	128.7	242.1	68.0
	80	241.1	241.0	262.1	185.8	285.8	125.6	230.8	230.0	250.5	181.1	273.3	121.2	219.7	219.0	237.8	176.1	259.5	116.6	207.4	207.0	223.9	170.9	243.9	111.2
	85	245.4	245.0	263.9	227.8	287.5	168.1	236.7	236.0	252.6	223.5	275.0	164.5	226.9	226.0	240.2	218.8	261.0	159.0	216.0	216.0	226.3	213.8	245.6	154.2
	90	258.0	258.0	267.2	267.0	288.7	210.0	248.8	248.0	256.3	256.0	276.4	205.9	238.8	238.0	244.5	244.0	262.7	201.7	227.7	227.0	230.3	230.0	247.4	197.2
8000	75	244.0	213.9	265.9	150.7	290.1	83.8	233.1	209.1	254.0	146.0	276.9	79.2	221.1	204.0	240.8	140.9	262.4	74.3	208.1	198.2	226.4	135.4	246.0	68.7
	80	247.8	247.0	267.8	197.1	291.6	130.8	237.0	237.0	255.0	192.5	278.6	126.3	224.8	224.0	242.8	187.5	264.3	122.2	211.0	211.0	228.4	182.5	247.9	116.2
	85	254.0	254.0	270.2	244.0	293.3	177.8	244.9	244.0	258.6	239.6	280.3	173.0	234.5	234.0	245.7	234.8	265.9	169.0	223.0	223.0	231.1	229.4	250.0	164.3
	90	267.2	267.0	274.8	274.0	295.1	224.8	257.7	257.0	263.1	263.0	282.0	220.8	247.1	247.0	249.3	249.0	268.0	216.8	235.1	235.0	235.4	235.0	252.1	212.3
8800	75	249.0	226.4	270.7	157.4	294.6	83.9	237.7	221.5	258.4	152.7	281.3	79.9	225.3	216.1	244.8	147.6	266.2	74.5	212.0	210.1	229.5	141.7	249.7	69.6
	80	254.1	254.0	272.6	208.3	296.4	136.1	241.4	241.0	260.5	203.8	283.1	131.7	228.3	228.0	247.1	199.1	268.0	127.2	216.9	216.0	232.3	194.0	251.4	121.7
	85	261.7	261.0	275.7	259.8	298.2	187.8	252.0	252.0	263.5	255.2	284.9	183.5	241.3	241.0	250.3	250.1	270.1	179.1	229.2	229.0	235.7	235.0	253.7	174.5
	90	275.4	275.0	281.0	281.0	300.4	239.8	265.4	265.0	266.7	266.0	287.1	235.9	254.3	254.0	254.6	254.0	272.5	231.7	241.6	241.0	241.8	241.0	256.2	227.3
9600	75	253.3	238.6	274.9	164.1	298.7	84.8	241.8	233.5	262.2	159.5	285.0	80.8	229.2	227.8	248.1	154.2	269.0	75.8	215.7	215.0	232.7	148.6	252.7	71.0
	80	256.7	256.0	277.0	219.7	300.4	141.4	244.8	244.0	264.6	215.2	286.6	137.1	234.0	234.0	250.9	210.5	271.5	132.3	221.8	221.0	235.6	205.2	254.7	127.1
	85	268.4	268.0	280.8	275.2	302.6	197.8	258.4	258.0	268.3	268.0	288.9	193.8	247.1	247.0	254.9	254.0	273.8	189.4	234.5	234.0	240.3	240.0	256.8	185.2
	90	282.5	282.0	284.0	284.0	305.2	254.7	272.3	272.0	272.6	272.0	291.6	250.7	260.4	260.0	260.7	260.0	276.4	246.6	247.2	247.0	247.5	247.0	259.9	242.1

- Notes:
1. Equal MBH and SHC values constitute dry coil condition. Total Gross Cooling Capacity (MBh) shown to the left is not applicable. In this case the Sensible Heat Capacity (SHC) is the total capacity.
 2. All capacities shown are gross and have not considered indoor fan heat.
 3. To obtain net cooling capacities, subtract indoor fan heat.
 4. MBH = Total Gross Cooling Capacity
 5. SHC = Sensible Heat Capacity



Performance Data

7½ Tons

Table 17. Gross Cooling Capacities (MBh) - 7½ Tons TTA090A Condensing Unit Only

Outdoor Temp. in °F		Suction Temperature Degrees F					
		30	35	40	45	50	55
65	Head press PSIG	166.0	171.0	177.0	182.0	189.0	195.0
	Cap. Btuh/1000	82.0	90.1	98.6	107.3	116.3	125.4
	Unit KW	5.5	5.6	5.7	5.9	6.1	6.3
75	Head press PSIG	190.0	196.0	202.0	208.0	214.0	221.0
	Cap. Btuh/1000	78.4	86.1	94.1	102.3	110.8	119.5
	Unit KW	6.0	6.1	6.3	6.5	6.7	6.9
85	Head press PSIG	217.0	223.0	229.0	236.0	242.0	250.0
	Cap. Btuh/1000	74.4	81.7	89.2	97.1	105.2	113.5
	Unit KW	6.6	6.8	6.9	7.1	7.3	7.5
95	Head press PSIG	247.0	253.0	259.0	266.0	273.0	281.0
	Cap. Btuh/1000	70.1	77.0	84.2	91.6	99.3	107.3
	Unit KW	7.4	7.5	7.7	7.9	8.1	8.3
105	Head press PSIG	279.0	285.0	292.0	299.0	307.0	315.0
	Cap. Btuh/1000	65.4	72.0	78.8	85.9	93.3	100.9
	Unit KW	8.2	8.4	8.6	8.8	9.0	9.2
115	Head press PSIG	313.0	320.0	327.0	335.0	343.0	351.0
	Cap. Btuh/1000	60.50	66.70	73.20	80.00	87.00	94.30
	Unit KW	9.17	9.35	9.54	9.73	9.92	10.12

Notes: Performance data calculated at 15° F subcooling and 20° superheat and does not include capacity loss due to refrigerant lines.

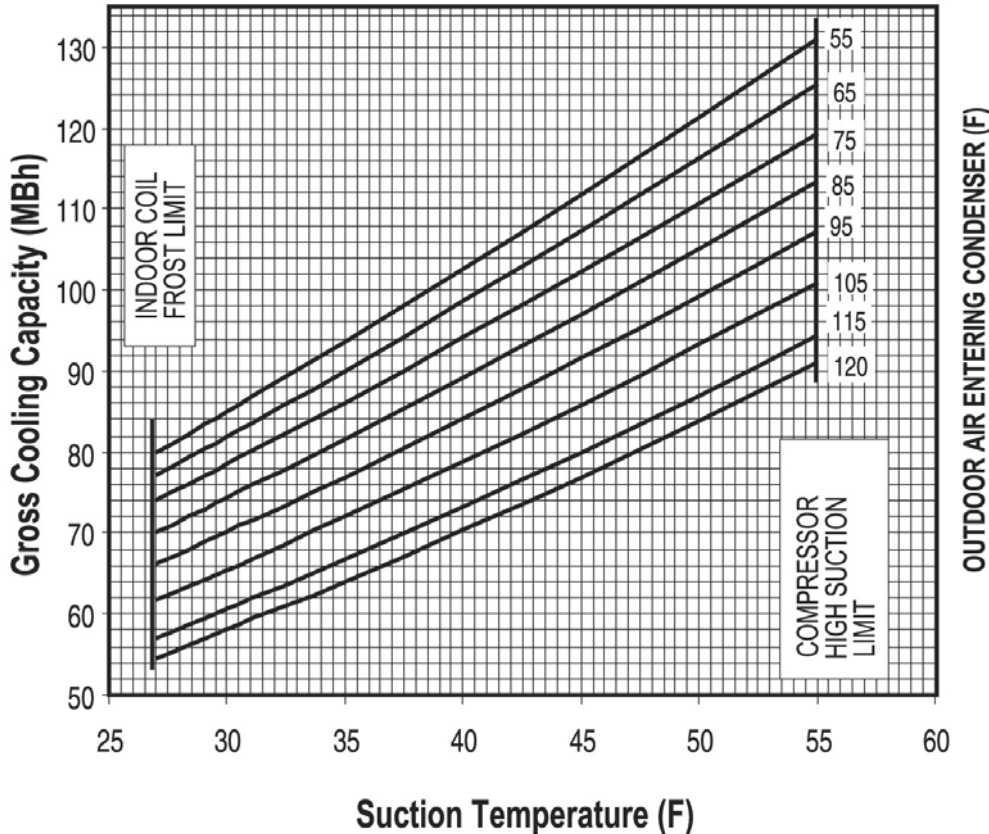


Figure 4. Capacity Curves - 7½ Tons TTA090A Condensing Unit Only

Table 18. Gross Cooling Capacities (MBh) - 10 Tons TTA120A Condensing Unit Only

Outdoor Temp. in °F		Suction Temperature Degrees F					
		30	35	40	45	50	55
65	Head press PSIG	172.0	178.0	185.0	192.0	201.0	209.0
	Cap. Btuh/1000	112.5	123.7	135.5	147.9	160.9	174.6
	Unit KW	8.0	8.2	8.4	8.7	8.9	9.2
75	Head press PSIG	196.0	203.0	210.0	218.0	226.0	235.0
	Cap. Btuh/1000	107.5	118.2	129.4	141.3	153.9	167.0
	Unit KW	8.7	8.9	9.1	9.4	9.7	10.0
85	Head press PSIG	223.0	230.0	237.0	245.0	254.0	263.0
	Cap. Btuh/1000	102.2	112.3	123.1	134.6	146.6	159.2
	Unit KW	9.5	9.7	10.0	10.3	10.6	10.9
95	Head press PSIG	252.0	260.0	267.0	276.0	285.0	294.0
	Cap. Btuh/1000	96.5	106.3	116.6	127.5	139.1	151.2
	Unit KW	10.4	10.7	11.0	11.3	11.6	11.9
105	Head press PSIG	285.0	292.0	300.0	309.0	318.0	328.0
	Cap. Btuh/1000	90.6	99.9	109.8	120.3	131.4	142.9
	Unit KW	11.5	11.8	12.0	12.4	12.7	13.0
115	Head press PSIG	319.0	327.0	336.0	345.0	355.0	365.0
	Cap. Btuh/1000	84.50	93.40	102.90	112.90	123.40	134.40
	Unit KW	12.64	12.94	13.25	13.58	13.91	14.26

Notes: Performance data calculated at 15° F subcooling and 20° superheat and does not include capacity loss due to refrigerant lines.

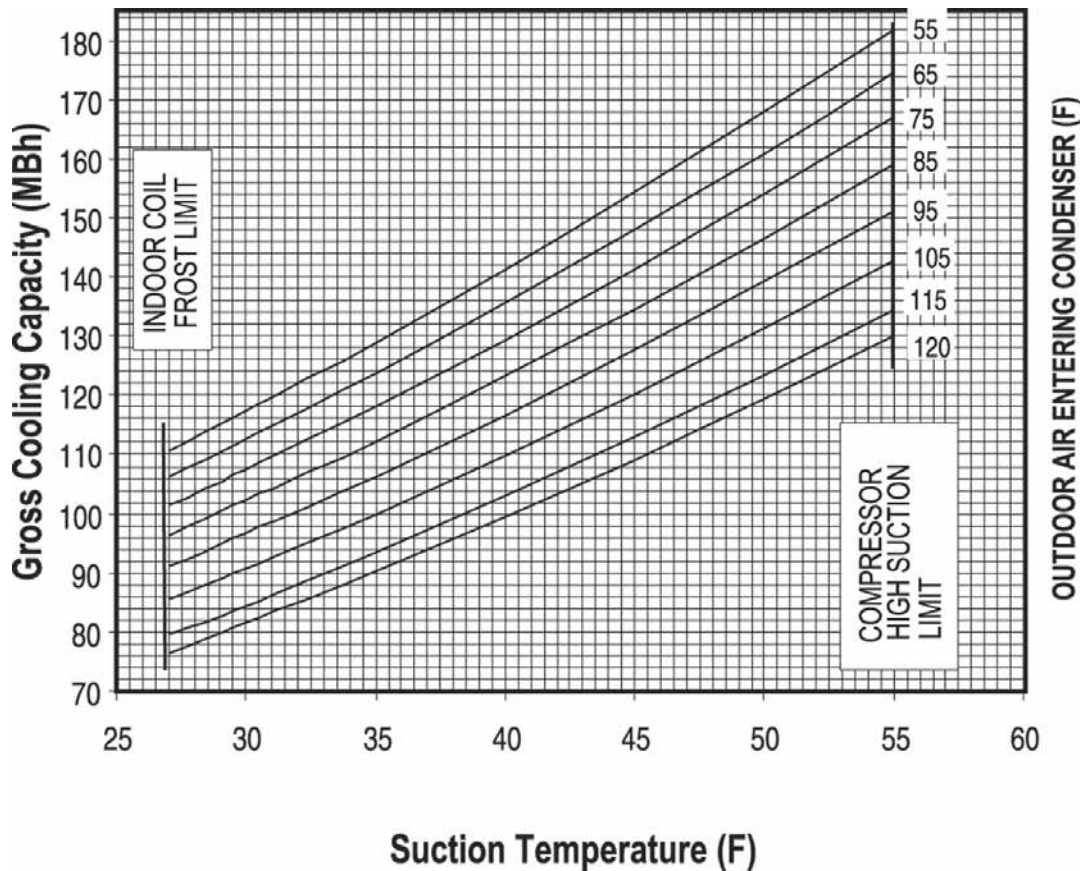


Figure 5. Capacity Curves - 10 Tons TTA120A Condensing Unit Only

Table 19. Gross Cooling Capacities (MBh) - Both Compressors Operating - 10 Tons TTA120C Condensing Unit Only

Outdoor Temp. in °F		Suction Temperature Degrees F					
		30	35	40	45	50	55
65	Head press PSIG	173.2	179.0	185.4	192.2	199.7	207.5
	Cap. Btuh/1000	110.8	121.1	132.0	143.7	156.0	168.9
	Unit KW	7.9	8.2	8.4	8.7	9.0	9.3
75	Head press PSIG	197.4	203.7	210.5	217.8	225.6	233.9
	Cap. Btuh/1000	105.7	116.0	126.9	138.4	150.5	163.0
	Unit KW	8.6	8.8	9.1	9.4	9.7	10.0
85	Head press PSIG	224.4	231.1	238.3	246.1	254.2	262.8
	Cap. Btuh/1000	100.6	110.7	121.4	132.6	144.3	156.3
	Unit KW	9.3	9.6	9.9	10.2	10.5	10.8
95	Head press PSIG	254.4	261.4	268.9	276.9	285.3	294.1
	Cap. Btuh/1000	95.6	105.3	115.6	126.3	137.3	148.7
	Unit KW	10.2	10.5	10.8	11.1	11.4	11.7
105	Head press PSIG	287.3	294.5	302.2	310.3	318.8	327.7
	Cap. Btuh/1000	90.7	99.8	109.4	119.5	129.7	140.3
	Unit KW	11.2	11.4	11.7	12.1	12.4	12.7
115	Head press PSIG	323.2	330.6	338.3	346.3	354.8	363.6
	Cap. Btuh/1000	85.70	94.20	103.00	112.20	121.60	131.20
	Unit KW	12.20	12.50	12.80	13.20	13.50	13.80

Notes: Performance data calculated at 15° F subcooling and 20° superheat and does not include capacity loss due to refrigerant lines.

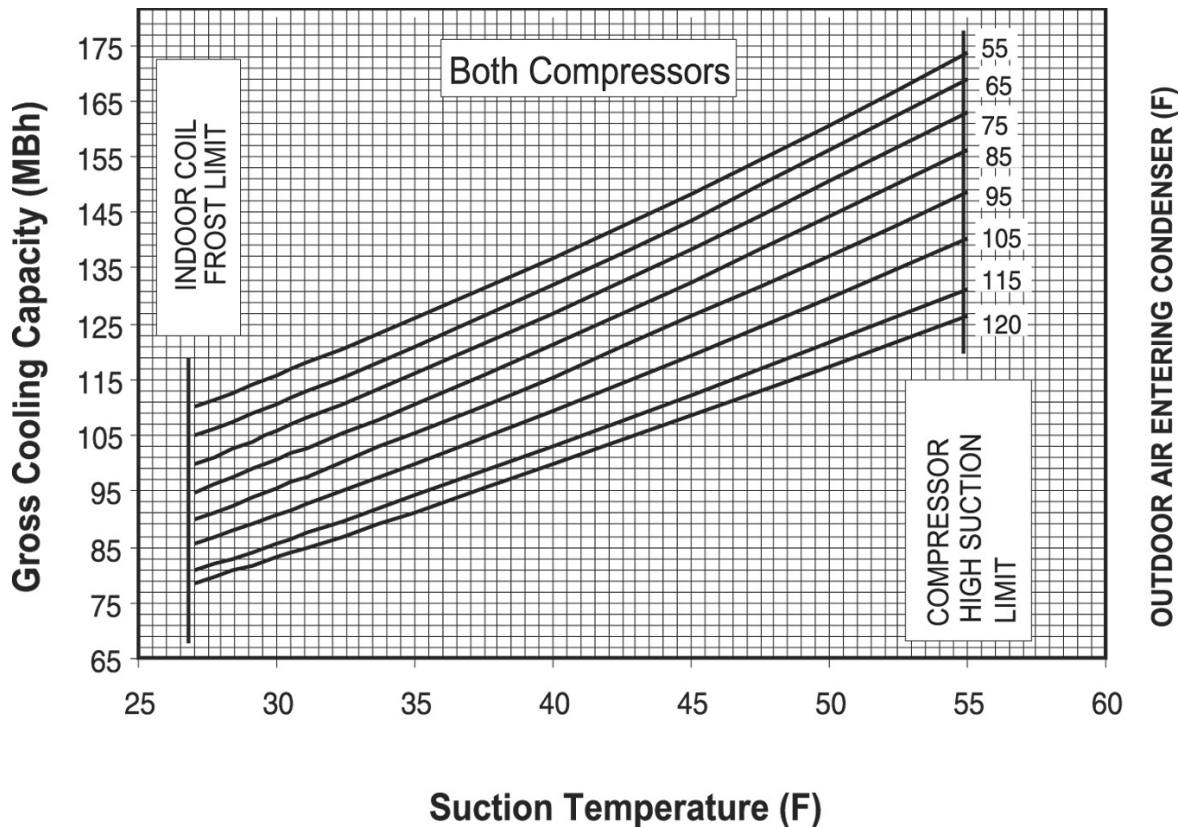


Figure 6. Capacity Curves - Both Compressors Operating - 10 Tons TTA 120C Condensing Unit Only

Table 20. Gross Cooling Capacities (MBh) - One Compressor Operating - 10 Tons TTA120C Condensing Unit Only

Outdoor Temp. in °F		Suction Temperature Degrees F					
		30	35	40	45	50	55
65	Head press PSIG	140.8	143.2	145.7	148.4	151.2	154.2
	Cap. Btuh/1000	59.0	64.1	69.5	75.1	81.1	87.4
	Unit KW	4.1	4.2	4.3	4.4	4.5	4.6
75	Head press PSIG	163.6	166.3	169.2	172.3	175.5	178.9
	Cap. Btuh/1000	56.3	61.6	67.2	73.2	79.4	86.1
	Unit KW	4.4	4.4	4.5	4.6	4.7	4.8
85	Head press PSIG	188.9	192.0	195.2	198.6	202.2	205.9
	Cap. Btuh/1000	53.6	59.0	64.7	70.7	77.2	83.9
	Unit KW	4.7	4.8	4.8	4.9	5.0	5.1
95	Head press PSIG	217.0	220.3	223.8	227.5	231.3	235.3
	Cap. Btuh/1000	50.9	56.2	61.9	67.9	74.3	81.0
	Unit KW	5.1	5.1	5.2	5.3	5.4	5.5
105	Head press PSIG	248.0	251.5	255.3	259.2	263.2	267.5
	Cap. Btuh/1000	48.3	53.4	58.9	64.8	71.0	77.4
	Unit KW	5.5	5.6	5.7	5.8	5.8	5.9
115	Head press PSIG	282.0	285.7	289.6	293.6	297.9	302.3
	Cap. Btuh/1000	45.70	50.50	55.80	61.30	67.20	73.30
	Unit KW	6.00	6.10	6.20	6.30	6.30	6.40

Notes: Performance data calculated at 15° F subcooling and 20° superheat and does not include capacity loss due to refrigerant lines.

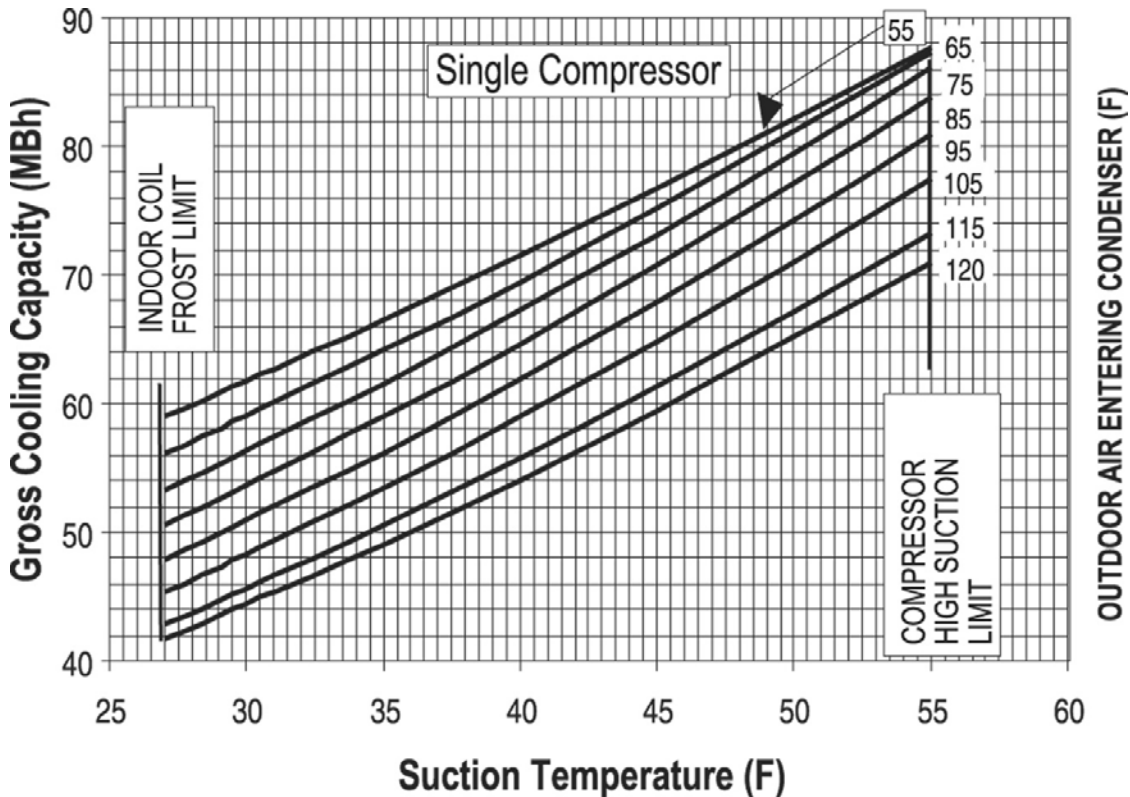


Figure 7. Capacity Curves - One Compressor Operating - 10 Tons TTA 120C Condensing Unit Only

Table 21. Gross Cooling Capacities (MBh) - 10 Tons TTA120B Condensing Unit Only

Outdoor Temp. in °F		Suction Temperature Degrees F					
		30	35	40	45	50	55
65	Head press PSIG	162.0	167.0	172.0	178.0	184.0	190.0
	Cap. Btuh/1000	110.2	120.3	130.9	142.3	154.4	167.3
	Unit KW	7.7	7.9	8.2	8.4	8.7	9.0
75	Head press PSIG	188.0	193.0	199.0	205.0	212.0	219.0
	Cap. Btuh/1000	105.1	115.3	126.1	137.6	149.8	162.7
	Unit KW	8.4	8.6	8.9	9.1	9.4	9.7
85	Head press PSIG	215.0	221.0	228.0	235.0	242.0	250.0
	Cap. Btuh/1000	100.1	110.2	120.8	132.2	144.2	156.9
	Unit KW	9.2	9.5	9.7	10.0	10.3	10.6
95	Head press PSIG	246.0	252.0	259.0	267.0	274.0	283.0
	Cap. Btuh/1000	95.1	104.9	115.2	126.2	137.7	149.8
	Unit KW	10.1	10.4	10.7	10.9	11.3	11.6
105	Head press PSIG	279.0	286.0	293.0	301.0	309.0	318.0
	Cap. Btuh/1000	90.2	99.4	109.2	119.6	130.4	141.8
	Unit KW	11.1	11.4	11.7	12.0	12.3	12.7
115	Head press PSIG	316.0	323.0	330.0	338.0	346.0	355.0
	Cap. Btuh/1000	85.20	93.80	102.90	112.50	122.50	133.00
	Unit KW	12.24	12.53	12.85	13.17	13.49	13.82

Notes: Performance data calculated at 15° F subcooling and 20° superheat and does not include capacity loss due to refrigerant lines.

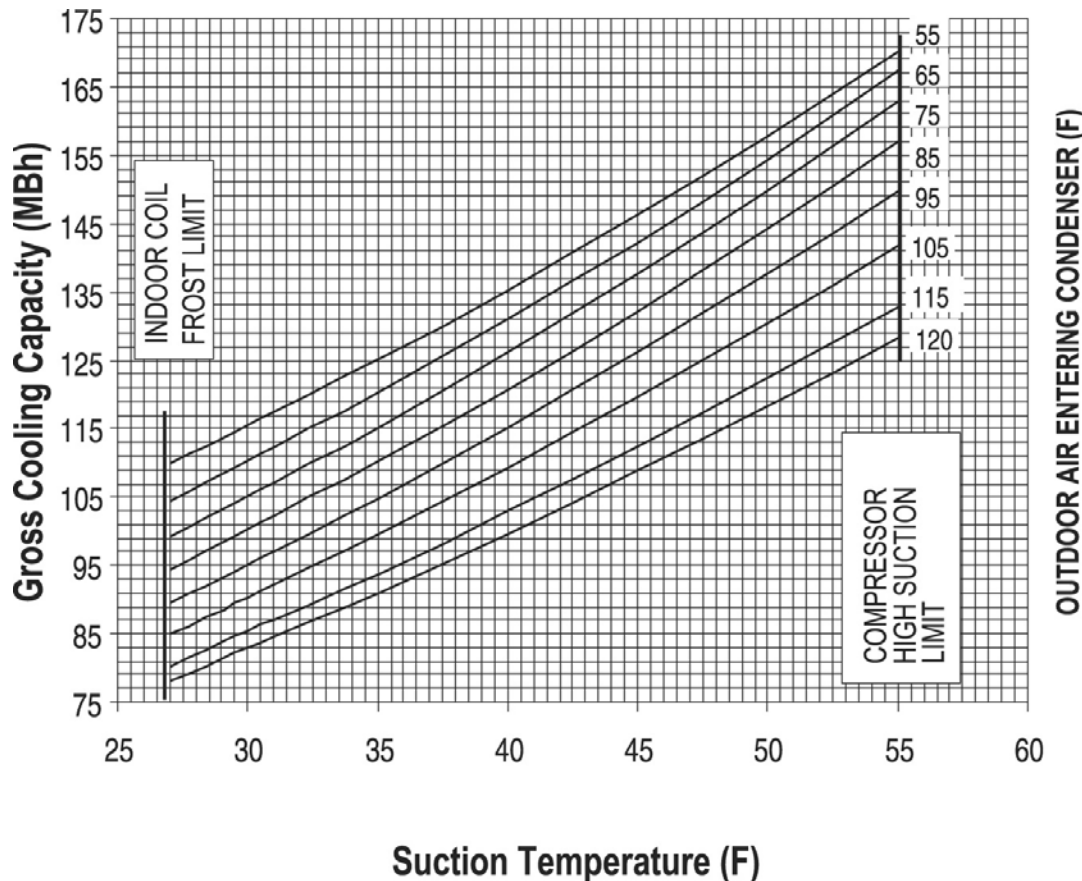


Figure 8. Capacity Curves - 10 Tons TTA120B Condensing Unit Only



Performance Data

12½ Tons

Table 22. Gross Cooling Capacities (MBh) - 12½ Tons TTA150B Condensing Unit Only.

Outdoor Temp. in °F		Suction Temperature Degrees F					
		30	35	40	45	50	55
65	Head press PSIG	178.0	184.0	190.0	197.0	203.0	210.0
	Cap. Btuh/1000	133.1	145.5	158.5	171.9	185.7	199.8
	Unit KW	9.2	9.5	9.8	10.1	10.5	10.8
75	Head press PSIG	205.0	211.0	218.0	224.0	231.0	239.0
	Cap. Btuh/1000	126.9	138.8	151.1	164.0	177.2	190.9
	Unit KW	10.2	10.4	10.8	11.1	11.4	11.8
85	Head press PSIG	234.0	241.0	248.0	255.0	262.0	270.0
	Cap. Btuh/1000	120.4	131.8	143.7	156.0	168.7	181.8
	Unit KW	11.2	11.5	11.9	12.2	12.5	12.9
95	Head press PSIG	266.0	273.0	281.0	288.0	296.0	305.0
	Cap. Btuh/1000	113.6	124.6	136.0	147.8	160.0	172.6
	Unit KW	12.4	12.8	13.1	13.4	13.8	14.2
105	Head press PSIG	301.0	308.0	316.0	324.0	333.0	342.0
	Cap. Btuh/1000	106.6	117.1	128.0	139.3	151.1	163.2
	Unit KW	13.8	14.1	14.4	14.8	15.2	15.6
115	Head press PSIG	338.0	346.0	354.0	363.0	372.0	381.0
	Cap. Btuh/1000	99.40	109.40	119.80	130.70	142.00	153.70
	Unit KW	15.23	15.56	15.92	16.29	16.68	17.10

Notes: Performance data calculated at 15° F subcooling and 20° superheat and does not include capacity loss due to refrigerant lines.

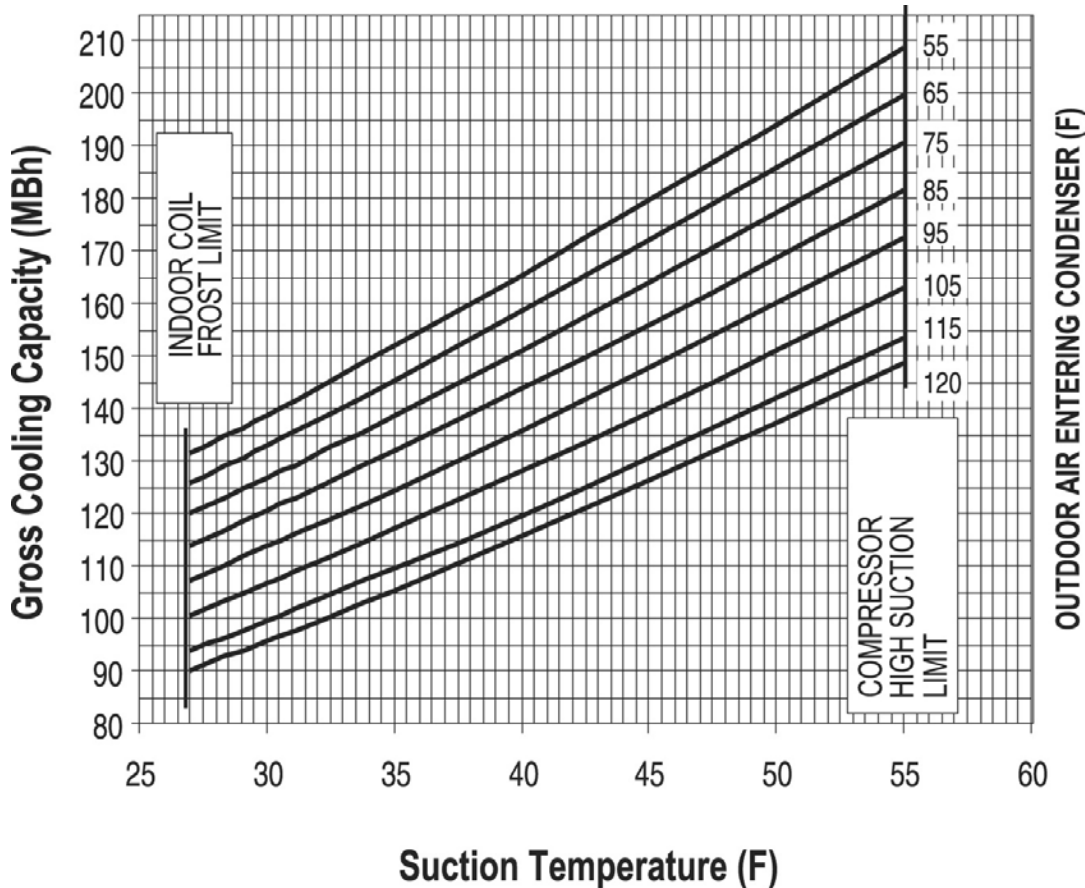


Figure 9. Capacity Curves - 12½ Tons TTA150B Condensing Unit Only



Performance Data

15 Tons

Table 23. Gross Cooling Capacities (MBh) - 15 Tons TTA180B Condensing Unit Only

Outdoor Temp. in °F		Suction Temperature Degrees F					
		30	35	40	45	50	55
65	Head press PSIG	179.0	186.0	194.0	202.0	210.0	220.0
	Cap. Btuh/1000	163.9	179.7	196.2	213.3	231.2	249.9
	Unit KW	11.3	11.6	12.0	12.5	12.9	13.4
75	Head press PSIG	204.0	211.0	219.0	227.0	236.0	246.0
	Cap. Btuh/1000	156.4	171.5	187.2	203.6	220.9	239.0
	Unit KW	12.3	12.7	13.1	13.6	14.1	14.6
85	Head press PSIG	231.0	239.0	247.0	255.0	265.0	275.0
	Cap. Btuh/1000	148.2	162.7	177.7	193.4	210.0	227.4
	Unit KW	13.6	14.0	14.5	14.9	15.5	16.0
95	Head press PSIG	261.0	269.0	277.0	286.0	296.0	306.0
	Cap. Btuh/1000	139.6	153.3	167.6	182.6	198.5	215.2
	Unit KW	15.1	15.5	16.0	16.4	17.0	17.5
105	Head press PSIG	293.0	301.0	310.0	319.0	329.0	340.0
	Cap. Btuh/1000	130.5	143.5	157.1	171.3	186.5	202.5
	Unit KW	16.8	17.2	17.6	18.1	18.6	19.2
115	Head press PSIG	328.0	336.0	345.0	355.0	365.0	377.0
	Cap. Btuh/1000	121.00	133.20	146.10	159.60	174.10	189.30
	Unit KW	18.62	19.03	19.47	19.92	20.42	20.94

Notes: Performance data calculated at 15° F subcooling and 20° superheat and does not include capacity loss due to refrigerant lines.

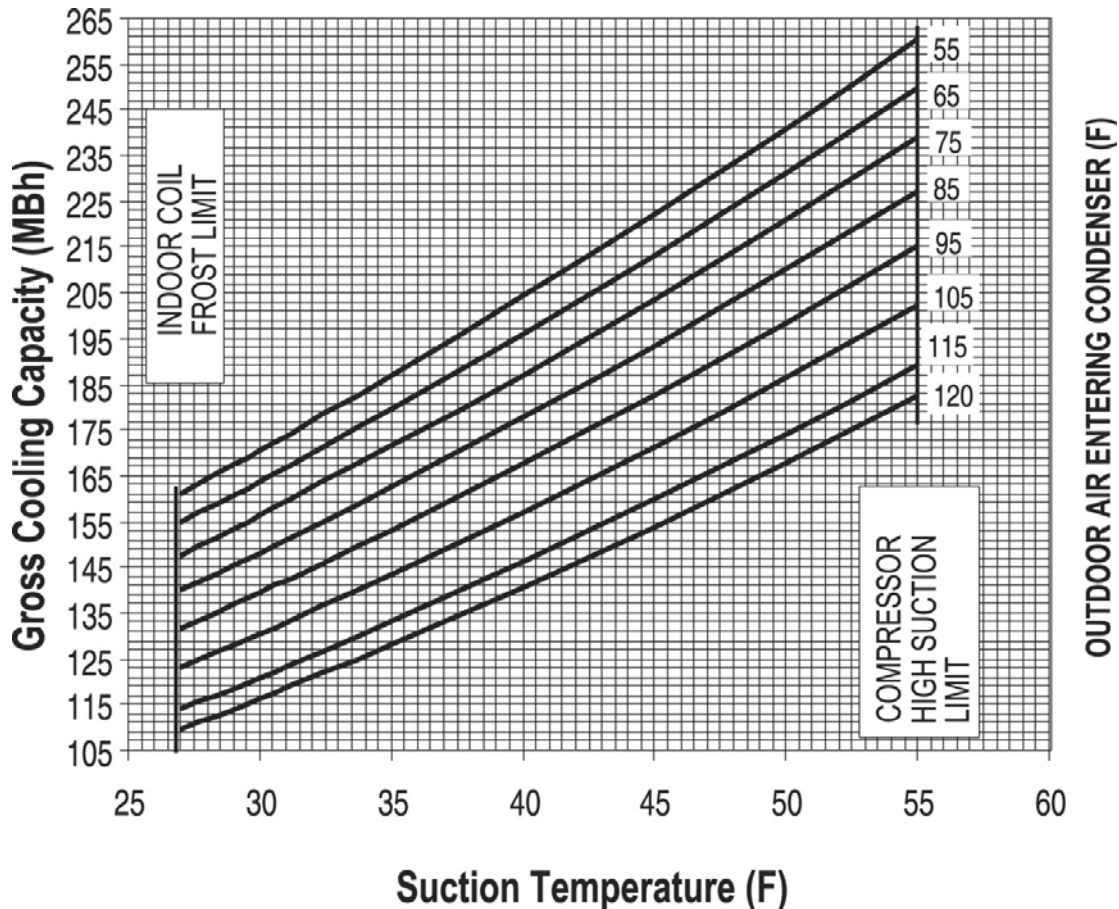


Figure 10. Capacity Curves - 15 Tons TTA180B Condensing Unit Only



Performance Data

15 Tons

Table 24. Gross Cooling Capacities (MBh) Both Compressors Operating - 15 Tons TTA180C Condensing Unit Only.

Outdoor Temp. in °F		Suction Temperature Degrees F					
		30	35	40	45	50	55
65	Head press PSIG	177.5	184.3	191.6	199.3	207.8	217.0
	Cap. Btuh/1000	163.9	179.7	196.1	213.3	231.2	250.0
	Unit KW	11.2	11.5	11.9	12.3	12.8	13.3
75	Head press PSIG	202.2	209.3	216.8	225.1	234.0	243.6
	Cap. Btuh/1000	156.3	171.4	187.1	203.7	221.0	239.1
	Unit KW	12.3	12.6	13.0	13.5	14.0	14.5
85	Head press PSIG	229.4	236.7	244.7	253.4	262.7	272.7
	Cap. Btuh/1000	148.1	162.5	177.6	193.6	210.2	227.5
	Unit KW	13.5	13.9	14.4	14.8	15.3	15.9
95	Head press PSIG	259.2	266.8	275.2	284.2	293.9	304.3
	Cap. Btuh/1000	139.5	153.2	167.6	182.8	198.7	215.3
	Unit KW	15.0	15.4	15.9	16.4	16.9	17.4
105	Head press PSIG	291.5	299.4	308.1	317.6	327.6	338.3
	Cap. Btuh/1000	130.3	143.3	157.0	171.5	186.7	202.5
	Unit KW	16.7	17.1	17.5	18.0	18.5	19.1
115	Head press PSIG	326.3	334.5	343.6	353.4	363.8	374.8
	Cap. Btuh/1000	120.80	133.00	145.90	159.70	174.20	189.30
	Unit KW	18.50	18.90	19.40	19.90	20.30	20.80

Notes: Performance data calculated at 15° F subcooling and 20° superheat and does not include capacity loss due to refrigerant lines.

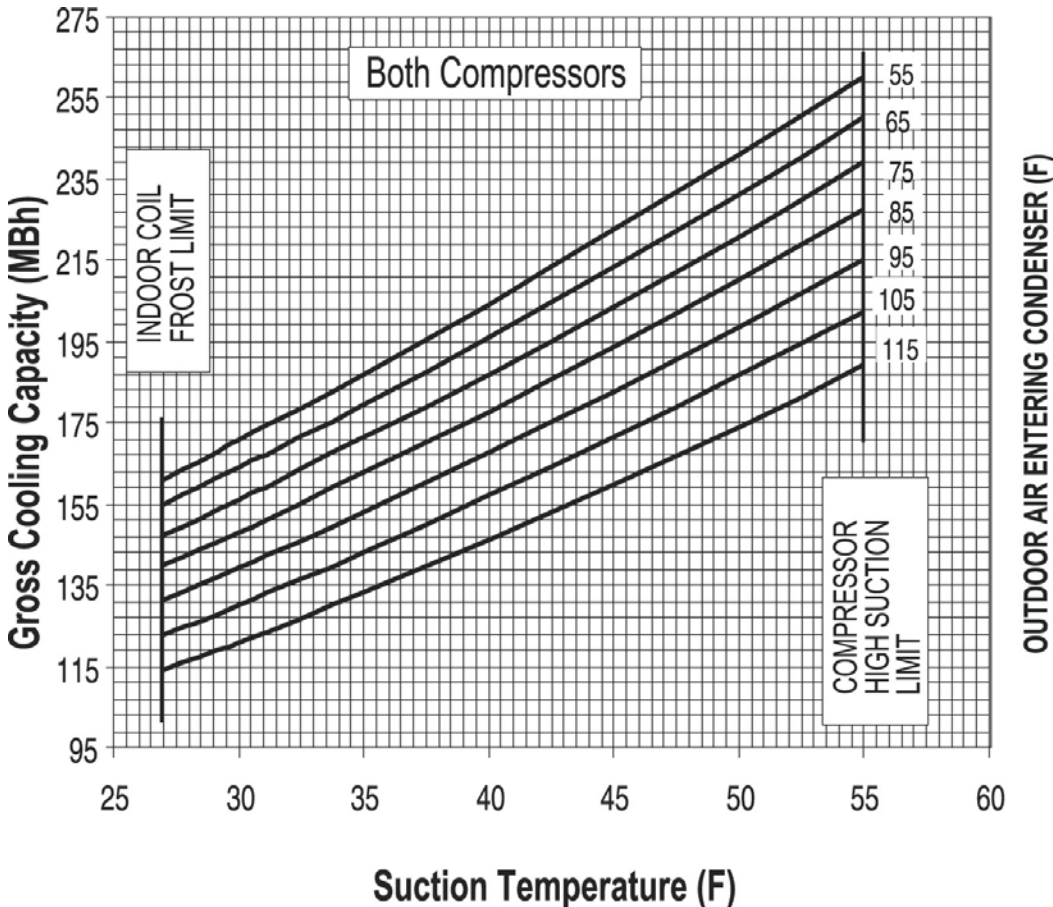


Figure 11. Capacity Curves - Both Compressors Operating - 15 Tons TTA180C Condensing Unit Only



Performance Data

15 Tons

Table 25. Gross Cooling Capacities (MBh) - One Compressor Operating - 15 Tons TTA180C Condensing Unit Only

Outdoor Temp. in °F		Suction Temperature Degrees F					
		30	35	40	45	50	55
65	Head press PSIG	143.5	146.7	150.1	153.8	157.6	161.7
	Cap. Btuh/1000	83.0	91.5	100.4	109.9	119.8	130.2
	Unit KW	5.5	5.6	5.7	5.8	5.9	6.0
75	Head press PSIG	166.9	170.4	174.0	177.9	181.9	186.2
	Cap. Btuh/1000	80.0	88.2	96.9	106.0	115.6	125.7
	Unit KW	5.9	6.0	6.1	6.2	6.4	6.5
85	Head press PSIG	192.8	196.4	200.3	204.3	208.6	213.0
	Cap. Btuh/1000	76.4	84.4	92.8	101.6	110.9	120.6
	Unit KW	6.4	6.5	6.7	6.8	6.9	7.1
95	Head press PSIG	221.2	225.1	229.1	233.4	237.9	242.7
	Cap. Btuh/1000	72.5	80.2	88.2	96.7	105.7	115.1
	Unit KW	7.1	7.2	7.3	7.5	7.6	7.8
105	Head press PSIG	252.3	256.5	260.7	265.3	270.1	275.1
	Cap. Btuh/1000	68.2	75.5	83.3	91.5	100.1	109.2
	Unit KW	7.8	8.0	8.1	8.2	8.4	8.5
115	Head press PSIG	286.2	290.6	295.1	299.9	304.9	310.2
	Cap. Btuh/1000	63.70	70.60	78.00	85.90	94.20	102.90
	Unit KW	8.70	8.80	9.00	9.10	9.20	9.40

Notes: Performance data calculated at 15° F subcooling and 20° superheat and does not include capacity loss due to refrigerant lines.

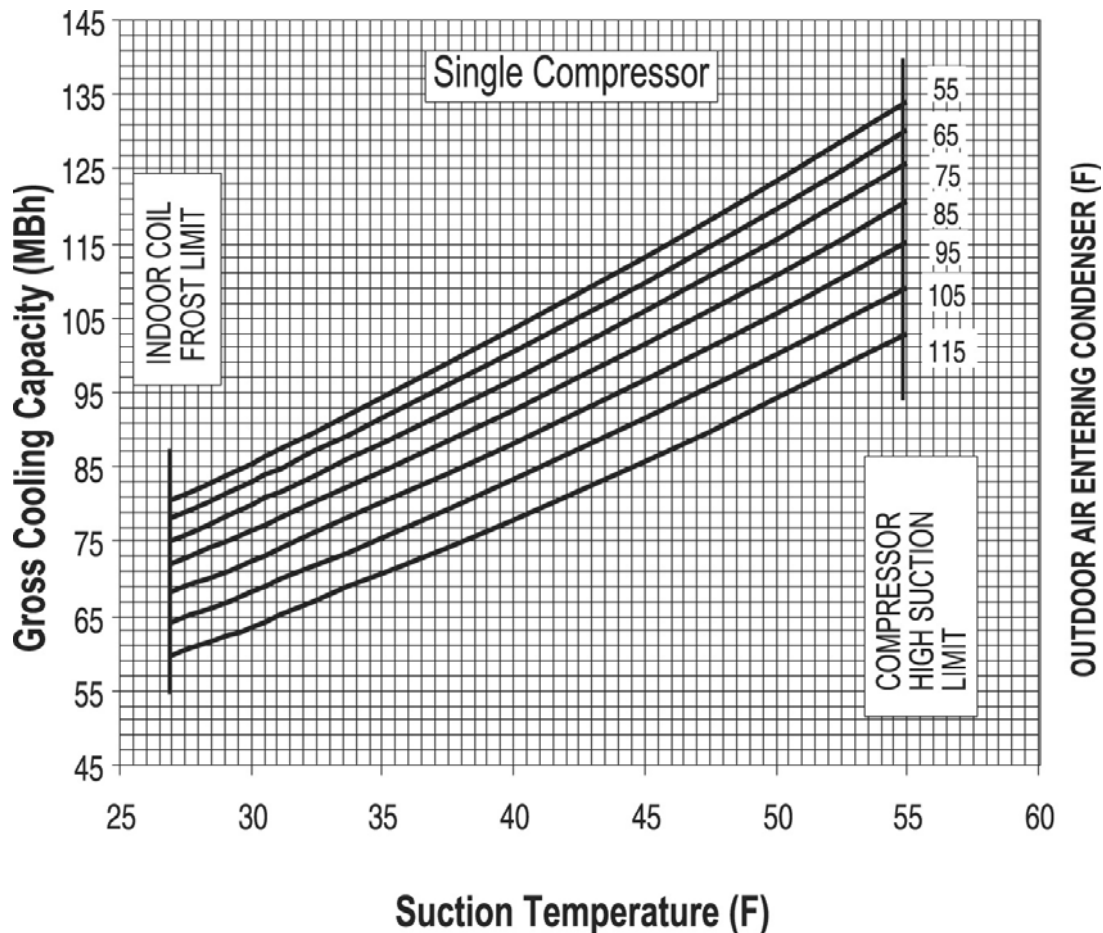


Figure 12. Capacity Curves - One Compressor Operating - 15 Tons TTA180C Condensing Unit Only

Table 26. Gross Cooling Capacities (MBh) - 20 Tons TTA240B Condensing Unit Only

Outdoor Temp. in °F		Suction Temperature Degrees F					
		30	35	40	45	50	55
65	Head press PSIG	172.0	178.0	185.0	191.0	198.0	206.0
	Cap. Btuh/1000	221.1	242.4	264.7	288.2	312.7	338.2
	Unit KW	15.31	15.7	16.13	16.59	17.08	17.6
75	Head press PSIG	198.0	204.0	211.0	218.0	226.0	234.0
	Cap. Btuh/1000	210.9	231.1	252.4	274.8	298.2	322.7
	Unit KW	16.77	17.21	17.68	18.2	18.73	19.3
85	Head press PSIG	226.0	233.0	240.0	248.0	256.0	264.0
	Cap. Btuh/1000	200.0	219.2	239.5	260.9	283.2	306.5
	Unit KW	18.5	18.99	19.5	20.05	20.63	21.23
95	Head press PSIG	257.0	264.0	272.0	280.0	288.0	297.0
	Cap. Btuh/1000	188.4	206.7	226.1	246.4	267.6	289.6
	Unit KW	20.5	21.03	21.59	22.17	22.78	23.41
105	Head press PSIG	290.0	298.0	306.0	314.0	323.0	332.0
	Cap. Btuh/1000	176.4	193.8	212.2	231.5	251.5	272.3
	Unit KW	22.77	23.33	23.92	24.53	25.16	25.81
115	Head press PSIG	326.0	334.0	343.0	351.0	361.0	370.0
	Cap. Btuh/1000	164.0	180.5	198.0	216.2	235.0	254.5
	Unit KW	25.28	25.88	26.50	27.13	27.77	28.42

Notes: Performance data calculated at 15° F subcooling and 20° superheat and does not include capacity loss due to refrigerant lines.

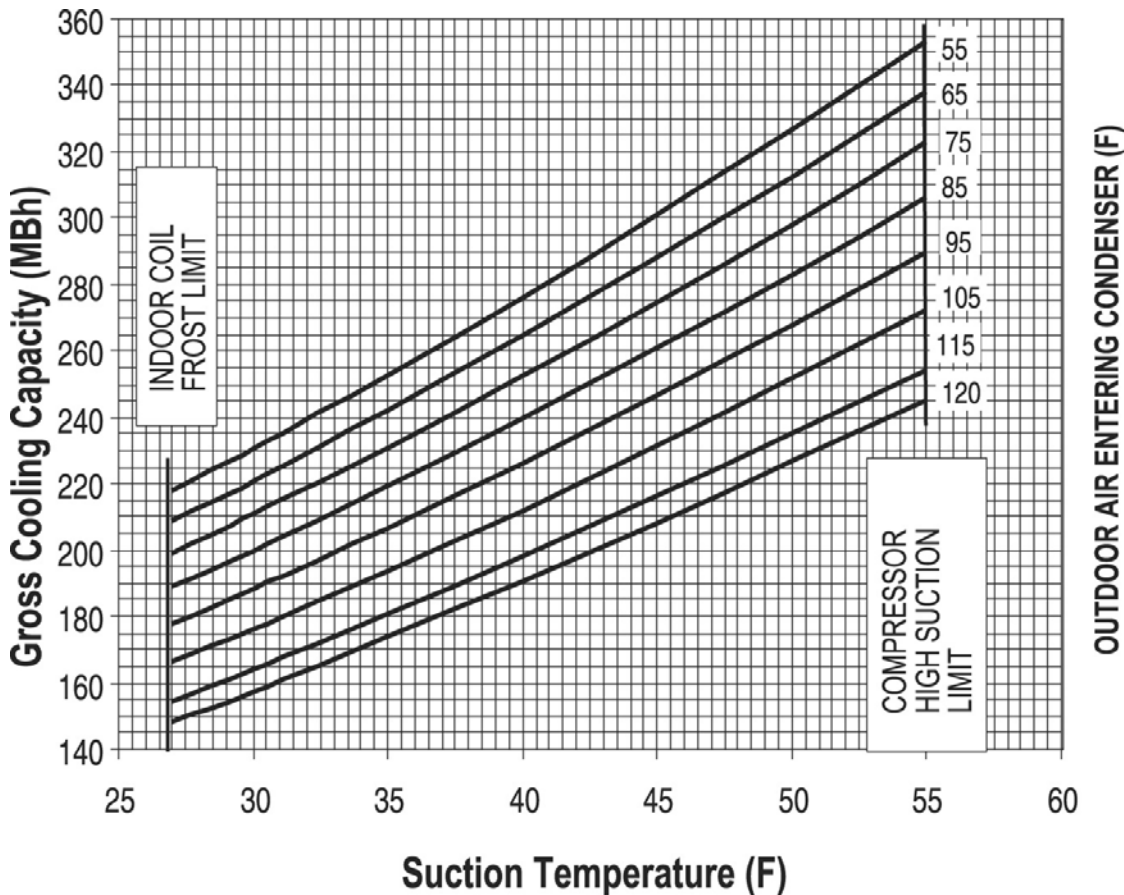


Figure 13. Capacity Curves - 20 Tons TTA240B Condensing Unit Only



Performance Data

20 Tons

Table 27. Gross Cooling Capacities (MBh) - 20 Tons TTA240F Condensing Unit Only

Outdoor Temp. in °F		Suction Temperature Degrees F					
		30	35	40	45	50	55
65	Head press PSIG	297.6	308.0	319.2	331.0	343.6	356.9
	Cap. Btuh/1000	239.6	261.4	284.1	307.7	332.2	357.5
	Unit KW	14.21	14.60	15.02	15.48	15.99	16.56
75	Head press PSIG	336.3	347.3	359.1	371.5	384.7	398.5
	Cap. Btuh/1000	225.6	246.6	268.6	291.3	314.8	339.0
	Unit KW	15.53	15.96	16.42	16.93	17.50	18.12
85	Head press PSIG	378.3	389.9	402.2	415.1	428.9	443.3
	Cap. Btuh/1000	210.9	231.0	252.0	273.6	296.1	319.1
	Unit KW	17.14	17.60	18.09	18.64	19.24	19.90
95	Head press PSIG	423.9	436.0	448.8	462.2	476.3	491.1
	Cap. Btuh/1000	195.5	214.6	234.4	255.0	276.2	297.9
	Unit KW	19.05	19.51	20.02	20.58	21.20	21.88
105	Head press PSIG	473.2	485.6	498.6	512.4	526.7	541.7
	Cap. Btuh/1000	179.7	197.5	216.1	235.3	255.1	275.4
	Unit KW	21.24	21.69	22.19	22.75	23.37	24.05
115	Head press PSIG	526.0	538.5	551.7	565.4	579.7	594.5
	Cap. Btuh/1000	163.2	179.6	196.7	214.5	232.7	251.4
	Unit KW	23.70	24.12	24.58	25.11	25.70	26.35

Notes: Performance data calculated at 15° F subcooling and 20° superheat and does not include capacity loss due to refrigerant lines.

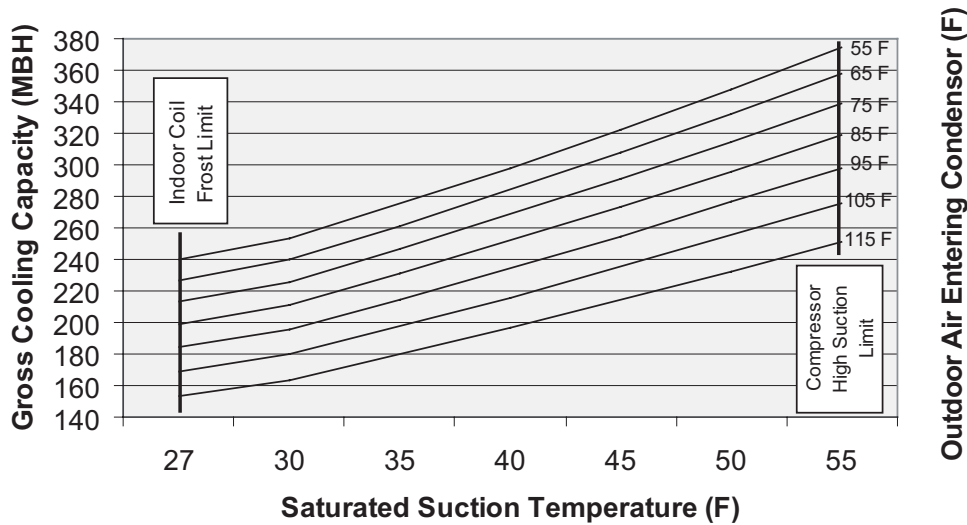


Figure 14. Capacity Curves - 20 Tons TTA240F Condensing Unit Only



Performance Data

Table 28. Evaporator Fan Performance 5 Tons TWE060A, TWE060B - Air Handler

		External Static Pressure (Inches of Water Gauge)																										
		.10"		.20"		.30"		.40"		.50"		.60"		.70"		.80"		.90"		1.00"		1.10"		1.20"				
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
.75 HP Standard Motor and Field Supplied Low Static Drive ⁽ⁱ⁾					.75 HP Standard Motor and Sheaves																							
1600	578	0.34	625	0.38	676	0.43	727	0.48	778	0.52	828	0.57	879	0.62	930	0.67	963	0.70	995	0.74	1028	0.77	1060	0.8				
1700	601	0.35	648	0.4	696	0.44	744	0.49	792	0.54	841	0.59	889	0.64	937	0.69	971	0.73	1005	0.77	1039	0.81	1073	0.84				
1800	625	0.36	671	0.41	716	0.46	762	0.51	807	0.56	853	0.61	898	0.66	944	0.71	979	0.76	1015	0.8	1050	0.84	1085	0.88				
1900	642	0.4	687	0.45	731	0.5	776	0.55	820	0.6	865	0.66	909	0.71	951	0.75	987	0.80	1023	0.84	1059	0.89	1095	0.93				
2000	659	0.44	703	0.49	746	0.54	790	0.6	833	0.65	877	0.7	920	0.75	957	0.8	994	0.84	1031	0.89	1069	0.93	1106	0.98				
2100	674	0.48	722	0.54	770	0.6	817	0.65	857	0.7	897	0.75	936	0.8	973	0.85	1009	0.89	1046	0.94	1082	0.99	1119	1.04				
2200	689	0.52	741	0.59	793	0.65	845	0.71	881	0.76	917	0.8	953	0.85	989	0.9	1024	0.95	1060	1.00	1096	1.04	-	-				
2300	710	0.57	761	0.63	812	0.7	863	0.76	897	0.81	932	0.86	966	0.91	1001	0.96	1035	1.00	-	-	-	-	-	-				
2400	730	0.61	780	0.68	830	0.75	880	0.82	913	0.87	946	0.91	979	0.96	1013	1.01	-	-	-	-	-	-	-	-				
		1 HP Oversized Motor and Sheaves																										

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (MBh) = 3.15 x BHP.
3. Trane's factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

⁽ⁱ⁾ Field Supplied Low Static Drive (use Table 29)

Table 29. Low Static Fan Drive 5 Tons TWE060A, TWE060B, TWE060B Air Handler⁽ⁱ⁾

Motor Sheave Turns Open	Nominal RPM
0	752
1	708
2	663
3	619
4	574
5	530

⁽ⁱ⁾ Field supplied components required:
 Blower Sheave: Fixed Pitch (7.8 inch Pitch Diameter),
 Blower Sheave: 0.625 inch Bore, Single Groove, "A" Belt.
 Belt: A48



Performance Data

7½ Tons

Table 30. Evaporator Fan Performance 7½ Tons TWE090A, TWE090B - Air Handler

External Static Pressure (Inches of Water Gauge)																					
		.10"		.20"		.30"		.40"		.50"		.60"		.70"		.80"		.90"		1.00"	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
1.5 HP Standard Motor and Field Supplied Low Static Drive ⁽¹⁾				1.5 HP Standard Motor and Low Static Drive Kit										1.5 HP Standard Motor and Sheaves							
2400	429	0.45	475	0.51	522	0.58	569	0.65	615	0.71	662	0.78	708	0.84	755	0.91	783	0.98	811	1.05	
2550	453	0.48	496	0.55	539	0.61	582	0.68	626	0.74	669	0.81	712	0.87	756	0.94	785	1	814	1.08	
2700	476	0.52	516	0.58	556	0.65	596	0.71	636	0.77	676	0.83	716	0.9	758	0.96	787	1.02	816	1.11	
2850	500	0.55	537	0.62	573	0.68	610	0.74	646	0.8	683	0.86	720	0.92	759	0.99	788	1.05	819	1.14	
3000	524	0.59	557	0.65	590	0.71	624	0.77	657	0.83	690	0.89	723	0.95	760	1.01	790	1.07	821	1.17	
3150	546	0.62	577	0.68	609	0.75	640	0.81	672	0.87	703	0.94	735	1.00	768	1.07	798	1.15	829	1.25	
3300	568	0.65	598	0.72	628	0.79	657	0.85	687	0.92	717	0.99	746	1.05	776	1.12	807	1.22	837	1.33	
3450	589	0.67	618	0.75	647	0.83	676	0.91	705	0.99	733	1.07	762	1.15	791	1.23	820	1.33	849	1.42	
3600	611	0.69	639	0.79	666	0.88	694	0.97	722	1.06	750	1.16	778	1.25	806	1.34	834	1.43	862	1.51	

External Static Pressure (Inches of Water Gauge)																	
		1.10"		1.20"		1.30"		1.40"		1.50"		1.60"		1.70"		1.80"	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
1.5 HP Standard Motor and Sheaves																	
2400	840	1.11	868	1.18	896	1.25	924	1.32	952	1.39	980	1.46	1009	1.52	1037	1.59	
2550	843	1.15	872	1.23	901	1.31	930	1.38	959	1.46	988	1.54	1016	1.61	1045	1.69	
2700	846	1.19	876	1.28	905	1.36	935	1.45	965	1.53	995	1.62	1024	1.7	1054	1.79	
2850	849	1.23	880	1.33	910	1.42	941	1.51	971	1.6	1002	1.7	1032	1.79	1063	1.88	
3000	853	1.27	884	1.37	915	1.48	946	1.58	978	1.68	1009	1.78	1040	1.88	1071	1.98	
3150	860	1.35	891	1.45	922	1.56	958	1.66	984	1.76	1014	1.86	1044	1.94	—	—	
3300	868	1.43	898	1.54	929	1.64	959	1.74	990	1.85	1020	1.95	1049	2.01	—	—	
3450	879	1.52	908	1.61	937	1.71	966	1.8	995	1.9	1025	2.00	—	—	—	—	
3600	890	1.6	918	1.69	945	1.78	973	1.87	1001	1.96	—	—	—	—	—	—	
2 HP Oversized Motor and Sheaves																	

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (MBh) = 3.15 x BHP.
3. Trane's factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

⁽¹⁾ Field Supplied Low Static Drive (use Table 31)

Table 31. Low Static Fan Drive 7½ Tons TWE090A, B Air Handler

Field Supplied Low Static Fan Drive 7½ Tons TWE090A, B Air Handler ⁽¹⁾		Low Static Fan Drive Accessory Kit 7½ Tons TWE090A, B Air Handler	
Motor Sheave Turns Open	Nominal RPM	Motor Sheave Turns Open	Nominal RPM
0	598	0	733
1	563	1	690
2	528	2	647
3	493	3	604
4	458	4	561
5	422	5	518

⁽¹⁾ Field supplied components required:
Blower Sheave: Fixed Pitch (9.8 inch Pitch Diameter), Blower Sheave: 1.00 inch Bore,
Single Groove, "A" Belt. Belt: A55



Performance Data

10 Tons

Table 32. Evaporator Fan Performance 10 Tons TWE120A1, TWE120B1 - Air Handler

CFM	External Static Pressure (Inches of Water Gauge)																			
	.10"		.20"		.30"		.40"		.50"		.60"		.70"		.80"		.90"		1.00"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	2 HP Standard Motor and Field Supplied Low Static Drive ⁽¹⁾										2 HP Standard Motor and Sheaves									
3200	-	-	-	-	570	0.67	603	0.75	636	0.83	670	0.91	703	1.00	736	1.08	756	1.14	784	1.2
3400	-	-	560	0.71	592	0.79	623	0.88	652	0.95	685	1.04	716	1.12	743	1.18	762	1.24	790	1.3
3600	557	0.77	583	0.84	613	0.92	643	1.01	667	1.07	700	1.16	730	1.23	750	1.27	768	1.34	797	1.41
3800	579	0.94	605	1.01	634	1.09	663	1.18	683	1.24	710	1.29	738	1.37	762	1.42	785	1.49	813	1.56
4000	602	1.11	628	1.17	656	1.26	683	1.35	698	1.4	720	1.43	747	1.5	773	1.58	801	1.64	829	1.71
4200	626	1.23	651	1.31	677	1.4	703	1.48	714	1.53	741	1.59	765	1.66	790	1.72	815	1.81	841	1.9
4400	649	1.36	674	1.45	698	1.53	723	1.62	729	1.65	761	1.76	784	1.81	807	1.87	830	1.98	852	2.09
4600	669	1.52	692	1.62	714	1.69	735	1.77	747	1.82	782	1.92	798	1.99	815	2.06	-	-	-	-
4800	689	1.69	711	1.79	729	1.85	746	1.92	764	1.98	802	2.09	-	-	-	-	-	-	-	-

CFM	External Static Pressure (Inches of Water Gauge)					
	1.20"		1.40"		1.60"	
	RPM	BHP	RPM	BHP	RPM	BHP
3200	838	1.32	890	1.49	942	1.66
3400	844	1.43	895	1.59	948	1.8
3600	850	1.55	900	1.69	954	1.94
3800	861	1.72	911	1.87	-	-
4000	872	1.89	922	2.04	-	-
4200	888	2.08	-	-	-	-
4400	-	-	-	-	-	-
4600	-	-	-	-	-	-
4800	-	-	-	-	-	-

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (MBh) = 3.15 x BHP.
3. Trane's factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

⁽¹⁾ Field Supplied Low Static Drive (use Table 33)

Table 33. Field Supplied Low Static Fan Drive 10 Tons TWE120A1, B1 Air Handler⁽¹⁾

Motor Sheave Turns Open	Nominal RPM
0	745
1	706
2	666
3	627
4	588
5	549

⁽¹⁾ Field supplied components required:
 Blower Sheave: Fixed Pitch (8.8 inch Pitch Diameter),
 Blower Sheave: 1.00 inch Bore, Single Groove, "A" Belt.
 Belt: A54



Performance Data

10 Tons

Table 34. Evaporator Fan Performance 10 Tons TWE120A3, AW; TWE120B3, BW- Air Handler

External Static Pressure (Inches of Water Gauge)																								
		.10"		.20"		.30"		.40"		.50"		.60"		.70"		.80"		.90"		1.00"		1.20		
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
										2 HP Standard Motor and Field Supplied Low Static Drive ⁽¹⁾										2 HP Standard Motor and Sheaves				
3200	-	-	-	-	570	0.67	603	0.75	636	0.83	670	0.91	703	1.00	736	1.08	756	1.14	784	1.2	838	1.32		
3400	-	-	560	0.71	592	0.79	623	0.88	652	0.95	685	1.04	716	1.12	743	1.18	762	1.24	790	1.3	844	1.43		
3600	557	0.77	583	0.84	613	0.92	643	1.01	667	1.07	700	1.16	730	1.23	750	1.27	768	1.34	797	1.41	850	1.55		
3800	579	0.94	605	1.01	634	1.09	663	1.18	683	1.24	710	1.29	738	1.37	762	1.42	785	1.49	813	1.56	861	1.72		
4000	602	1.11	628	1.17	656	1.26	683	1.35	698	1.40	720	1.43	747	1.5	773	1.58	801	1.64	829	1.71	872	1.89		
4200	626	1.23	651	1.31	677	1.4	703	1.48	714	1.53	741	1.59	765	1.66	790	1.72	815	1.81	841	1.9	888	2.08		
4400	649	1.36	674	1.45	698	1.53	723	1.62	729	1.65	761	1.76	784	1.81	807	1.87	830	1.98	852	2.09	904	2.27		
4700	669	1.52	792	1.62	714	1.69	735	1.77	747	1.82	782	1.92	798	1.99	815	2.06	837	2.18	862	2.29	922	2.45		
4800	689	1.69	711	1.79	729	1.85	746	1.92	764	1.98	802	2.09	812	2.17	822	2.24	844	2.39	872	2.48	939	2.64		
																				3 HP Oversized Motor and Sheaves				

External Static Pressure (Inches of Water Gauge)																	
		1.40"		1.60"		1.80"		2.00"		2.20"		2.40"					
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP			
						2 HP Standard Motor and Sheaves						3 HP Oversized Motor and Sheaves					
3200	890	1.49	942	1.66	1001	1.84	1051	2.03	1106	2.24	1162	2.44					
3400	895	1.59	948	1.80	1009	1.98	1057	2.17	1111	2.37	1165	2.57					
3600	900	1.69	954	1.94	1016	2.13	1065	2.31	1115	2.51	1167	2.7					
3800	911	1.87	959	2.15	1024	2.35	1070	2.54	1120	2.73	1169	2.92					
4000	922	2.04	965	2.36	1031	2.57	1077	2.76	1124	2.95	-	-					
4200	941	2.29	984	2.54	1039	2.73	1083	2.91	1129	3.10	-	-					
4400	960	2.53	1003	2.71	1047	2.89	1090	3.06	-	-	-	-					
4600	979	2.67	1020	2.86	1061	3.06	-	-	-	-	-	-					
4800	997	2.8	1036	3.02	-	-	-	-	-	-	-	-					

Notes:

1. Data includes pressure drop due to wet coil and 1" filter.
2. Fan motor heat (MBh) = 3.15 x BHP.
3. Trane's factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

⁽¹⁾ Field Supplied Low Static Drive (use [Table 35](#))

Table 35. Field Supplied Low Static Fan Drive 10 Tons TWE120A3, AW; BE, BW Air Handler⁽¹⁾

Motor Sheave Turns Open	Nominal RPM
0	745
1	706
2	666
3	627
4	588
5	549

⁽¹⁾ Field supplied components required:
 Blower Sheave: Fixed Pitch (8.8 inch Pitch Diameter), Blower Sheave: 1.00 inch Bore, Single Groove, "A" Belt. Belt: A54



Performance Data

15 Tons

Table 36. Evaporator Fan Performance 15 Tons TWE180B - Air Handler

External Static Pressure (Inches of Water Gauge)																							
		.10"		.20"		.30"		.40"		.50"		.60"		.70"		.80"		.90"		1.00"		1.20	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
2 HP Standard Motor and Field Supplied Low Static Drive ⁽¹⁾																	3 HP Standard Motor and Sheaves						
4500	637	1.4	662	1.44	687	1.49	701	1.53	717	1.58	732	1.63	747	1.64	754	1.65	782	1.67	817	1.76	873	1.96	
4800	642	1.42	667	1.51	692	1.54	706	1.63	722	1.64	737	1.65	752	1.66	767	1.68	795	1.73	831	1.82	887	2.02	
5100	647	1.45	672	1.52	697	1.57	713	1.66	726	1.68	740	1.70	761	1.72	783	1.77	811	1.85	843	1.96	900	2.19	
5400	652	1.47	677	1.54	702	1.6	719	1.69	730	1.72	742	1.75	769	1.78	798	1.87	827	1.98	856	2.09	914	2.37	
5700	653	1.48	679	1.56	706	1.67	725	1.75	741	1.80	758	1.84	786	1.92	815	2.02	843	2.14	872	2.27	932	2.57	
6000	655	1.49	681	1.59	709	1.74	731	1.8	752	1.87	774	1.94	803	2.05	831	2.17	860	2.29	889	2.44	950	2.78	
6300	658	1.51	687	1.63	716	1.79	741	1.89	765	1.98	792	2.09	823	2.22	853	2.35	883	2.49	913	2.64	974	2.96	
6600	663	1.54	693	1.68	723	1.84	750	1.97	778	2.09	811	2.24	843	2.39	875	2.53	906	2.69	936	2.84	997	3.15	
6900	670	1.62	700	1.77	735	1.98	767	2.15	799	2.29	832	2.44	865	2.61	900	2.79	934	2.98	967	3.16	1019	3.48	
7200	677	1.7	707	1.86	747	2.12	785	2.33	819	2.49	853	2.65	888	2.83	926	3.05	963	3.27	997	3.49	1041	3.81	
																	5 HP Oversized Motor and Sheaves						

External Static Pressure (Inches of Water Gauge)														
		1.40"		1.60"		1.80"		2.00"		2.20"		2.40"		
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3 HP Standard Motor and Sheaves			5 HP Oversized Motor and Sheaves											
4500	929	2.19	986	2.46	1035	2.74	1084	3.01	1132	3.28	-	-	-	-
4800	943	2.29	999	2.56	1046	2.83	1095	3.11	1143	3.38	-	-	-	-
5100	957	2.48	1012	2.76	1058	3.04	1105	3.31	1152	3.57	-	-	-	-
5400	972	2.67	1024	2.96	1070	3.24	1116	3.51	-	-	-	-	-	-
5700	990	2.89	1038	3.18	1083	3.46	1127	3.74	-	-	-	-	-	-
6000	1008	3.11	1052	3.39	1096	3.68	1138	3.96	-	-	-	-	-	-
6300	1025	3.3	1069	3.61	1113	3.92	1152	4.21	-	-	-	-	-	-
6600	1042	3.49	1087	3.83	1130	4.16	-	-	-	-	-	-	-	-
6900	1063	3.81	1107	4.15	1146	4.49	-	-	-	-	-	-	-	-
7200	1085	4.14	1127	4.47	-	-	-	-	-	-	-	-	-	-

Notes:

1. Data includes pressure drop due to wet coil and 2" filter.
2. Fan motor heat (MBh) = 3.15 x BHP.
3. Trane's factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

⁽¹⁾ Field Supplied Low Static Drive (use Table 37)

Table 37. Field Supplied Low Static Fan Drive 15 Tons TWE180 Air Handler⁽¹⁾

Motor Sheave Turns Open	Nominal RPM
0	776
1	748
2	720
3	692
4	663
5	635
6	607

⁽¹⁾ Field supplied components required:
 Motor Sheave: Variable Pitch (4.3-5.5 Inch Pitch Diameter), 0.875 inch Bore, Single Groove, "B" Belt.
 Blower Sheave: Fixed Pitch (12.4 inch Pitch Diameter), 1.4375 inch Bore, Single Groove, "B" Belt
 Belt: B67



Performance Data

20 Tons

Table 38. Evaporator Fan Performance 20 Tons TWE240B/TWE240E - Air Handler

External Static Pressure (Inches of Water Gauge)																							
		.10"		.20"		.30"		.40"		.50"		.60"		.70"		.80"		.90"		1.00"		1.20	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
										5 HP Standard Motor and Field Supplied Low Static Drive ⁽¹⁾													
										5 HP Standard Motor and Low Static Drive Kit													
6400	-	-	-	-	570	1.41	612	1.57	654	1.7	696	1.83	743	2.06	781	2.25	808	2.4	835	2.55	883	2.86	
6800	-	-	-	-	593	1.58	635	1.74	677	1.90	722	2.08	762	2.29	794	2.46	820	2.61	846	2.76	894	3.07	
7200	-	-	573	1.58	615	1.75	657	1.92	700	2.09	747	2.33	781	2.52	806	2.66	831	2.81	856	2.96	904	3.29	
7600	-	-	603	1.84	651	1.98	694	2.15	731	2.38	766	2.57	795	2.74	819	2.88	844	3.02	869	3.17	919	3.55	
8000	585	1.97	633	2.11	686	2.21	730	2.39	761	2.66	785	2.81	809	2.95	832	3.09	857	3.23	882	3.37	933	3.8	
8400	619	2.2	657	2.35	710	2.54	752	2.73	778	2.94	801	3.09	823	3.23	848	3.39	873	3.55	899	3.71	947	4.14	
8800	652	2.43	680	2.60	733	2.86	773	3.07	794	3.22	816	3.36	837	3.50	863	3.68	889	3.86	915	4.04	960	4.47	
9200	682	2.76	723	2.98	760	3.19	790	3.37	811	3.52	834	3.68	858	3.84	884	4.01	909	4.2	932	4.4	975	4.83	
9600	711	3.08	766	3.36	787	3.52	807	3.67	828	3.82	852	3.99	878	4.17	904	4.35	929	4.53	949	4.75	990	5.2	
										5 HP Standard Motor and Sheave										7.5 HP Oversized Motor and Sheaves			

External Static Pressure (Inches of Water Gauge)																	
		1.40"		1.60"		1.80"		2.00"		2.20"		2.40"		2.60			
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP			
						5 HP Standard Motor and Sheaves						7.5 HP Oversized Motor and Sheaves					
6400	930	3.16	976	3.52	1021	3.89	1066	4.26	1111	4.62	1156	4.99	1201	5.36			
6800	941	3.4	986	3.78	1030	4.16	1075	4.55	1119	4.93	1164	5.31	-	-			
7200	951	3.65	995	4.04	1039	4.44	1083	4.84	1127	5.23	1171	5.63	-	-			
7600	963	3.94	1007	4.34	1050	4.75	1093	5.16	1136	5.57	1179	5.98	-	-			
8000	975	4.23	1018	4.65	1060	5.07	1103	5.49	1145	5.91	1187	6.34	-	-			
8400	989	4.57	1032	5.01	1074	5.44	1117	5.87	1159	6.31	1200	6.73	-	-			
8800	1002	4.92	1045	5.36	1087	5.81	1130	6.26	1172	6.70	-	-	-	-			
9200	1016	5.28	1058	5.73	1099	6.17	1141	6.62	1182	7.07	-	-	-	-			
9600	1030	5.65	1071	6.09	1111	6.54	1152	6.99	1192	7.43	-	-	-	-			

Notes:

1. Data includes pressure drop due to wet coil and 2" filter.
2. Fan motor heat (MBh) = 3.15 x BHP.
3. Trane's factory supplied motors, in commercial equipment, are definite purpose motors, specifically designed and tested to operate reliably and continuously at all cataloged conditions. Using the full horsepower range of our fan motors as shown in our tabular data will not result in nuisance tripping or premature motor failure. Our product's warranty will not be affected.

⁽¹⁾ Field Supplied Low Static Drive (use Table 39)

Table 39. Low Static Fan Drive 20 Tons TWE240B/TWE240E Air Handler

Field Supplied Low Static Fan Drive 20 Tons TWE240B/TWE240E Air Handler ⁽¹⁾		Low Static Fan Drive Accessory Kit 20 Tons TWE240B/TWE240E Air Handler	
Motor Sheave Turns Open	Nominal RPM	Motor Sheave Turns Open	Nominal RPM
0	712	0	857
1	686	1	831
2	660	2	805
3	634	3	779
4	609	4	753
5	583	5	727
6	557	6	701

⁽¹⁾ Field supplied components required:
 Motor Sheave: Variable Pitch (4.3-5.5 inch Pitch Diameter),
 1.125 inch Bore, Single Groove, "B" Belt.
 Blower Sheave: Fixed Pitch (13.4 inch Pitch Diameter),
 1.4375 inch Bore, Single Groove, "B" Belt.
 Belt: B67



Performance Data

5 - 20 Tons

Table 40. Standard Motor and Sheave/Fan Speed (RPM) - Air Handler

Tons	Unit Model No.	Sheave Position						Closed
		6 Turns Open	5 Turns Open	4 Turns Open	3 Turns Open	2 Turns Open	1 Turns Open	
5	TWE060A ⁽ⁱ⁾	-	714	773	833	892	952	1011
	TWE060B ⁽ⁱ⁾	-	714	773	833	892	952	1011
7 1/2	TWE090A ⁽ⁱⁱ⁾	-	726	787	847	908	968	1029
	TWE090B ⁽ⁱⁱ⁾	-	726	787	847	908	968	1029
10	TWE120A1, B1 ⁽ⁱⁱⁱ⁾	-	702	760	819	877	936	994
	TWE120A3, AW ⁽ⁱⁱ⁾	-	710	761	812	863	913	964
	TWE120B3, BW ⁽ⁱⁱ⁾	-	710	761	812	863	913	964
15	TWE180B ⁽ⁱⁱ⁾	760	795	831	866	902	937	-
20	TWE240B ^(iv) /TWE240E ^(iv)	862	894	926	958	990	1022	1054

- ⁽ⁱ⁾ Factory setting is 3.0 turns open.
- ⁽ⁱⁱ⁾ Factory setting is 4.5 turns open.
- ⁽ⁱⁱⁱ⁾ Factory setting is 4.0 turns open.
- ^(iv) Factory setting is 6.0 turns open.

Table 41. Oversized Motor and Sheave/Fan Speed (RPM) - Air Handler

Tons	Unit Model No.	Sheave Position						Closed
		6 Turns Open	5 Turns Open	4 Turns Open	3 Turns Open	2 Turns Open	1 Turns Open	
5	TWE060A1, B1	-	828	897	966	1035	1104	1173
	TWE060A3, A4, AW	-	863	934	1006	1078	1150	1222
	TWE060B3, B4, BW	-	863	934	1006	1078	1150	1222
7½	TWE090A1	-	845	915	986	1056	1127	1197
	TWE090A3, AW	-	847	908	968	1029	1089	1150
10	TWE120A3, AW ⁽ⁱ⁾	-	915	969	1023	1077	1131	1185
	TWE120B3, BW ⁽ⁱ⁾	-	915	969	1023	1077	1131	1185
	TWE120A3, AW ⁽ⁱⁱ⁾	-	733	776	819	863	906	949
	TWE120B3, BW ⁽ⁱⁱ⁾	-	733	776	819	863	906	949
15	TWE180B	946	981	1016	1052	1087	1122	1157
20	TWE240B/TWE240E	-	991	1040	1091	1140	1190	1239

- ⁽ⁱ⁾ High Static Motor with 6 1/2" Fan Sheave.
- ⁽ⁱⁱ⁾ High Static Motor with 8" Fan Sheave.

Table 42. Electric Heat Discharge Plenum and Grille Airflow (CFM)

Tons	Unit Model No.	Electric Heater	Airflow (CFM)	
		Model No.	Minimum	Maximum
5	TWE060A1, B1 TWE060A3, B3 TWE060A4, B4	BAYHTRL117A	2000	2400
		BAYHTRL315A	2000	2400
		BAYHTRL415A	2000	2400
7 1/2	TWE090A1, B1 TWE090A3, B3 TWE090A3, B3	BAYHTRL117A	3000	3600
		BAYHTRL123A	3375	3600
		BAYHTRL315A	2625	3600
		BAYHTRL325A	3000	3600
		BAYHTRL415A	2625	3600
		BAYHTRL425A	2625	3600
10	TWE120A1, B1 TWE120A3, B3 TWE120A3, B3 ⁽ⁱ⁾	BAYHTRL117A	3500	4800
		BAYHTRL123A	4000	4800
		BAYHTRL315A	4000	4800
		BAYHTRL325A	3500	4800
		BAYHTRL415A	3500	4800
		BAYHTRL425A	3500	4800
15	TWE180B3 TWE180B4	BAYHTRM330A	5250	7200
		BAYHTRM430A	5250	7200
20	TWE240B3/TWE240E3 TWE240B4/TWE240E4	BAYHTRM330A	7000	9600
		BAYHTRM430A	7000	9600

- ⁽ⁱ⁾ When wired for 460 Volt.



Performance Data

5 - 20 Tons

Table 43. Discharge Plenum and Grille Assembly Throw Distance (ft) — Air Handler

Tons	Model No.	CFM	Louver Angle Deflection Position			
			Straight	20°	40°	55°
5	TWE060A TWE060B	1600	42	31	26	20
		1800	46	37	29	22
		2000	48	43	33	24
		2200	51	50	36	25
		2400	54	57	39	29
7½	TWE090A TWE090B	2400	52	43	35	29
		2700	55	48	38	31
		3000	58	53	42	32
		3300	62	57	46	35
		3600	66	60	50	37
10	TWE120A TWE120B	3200	56	46	38	30
		3600	62	51	42	33
		4000	66	57	47	35
		4400	71	62	52	38
		4800	76	67	56	42
15	TWE180B	4900	47	38	32	25
		5400	52	44	37	29
		6000	57	49	41	32
		6600	61	53	43	34
		7200	65	57	46	35
20	TWE240B/ TWE240E	6400	56	46	38	30
		7200	62	51	42	33
		8000	66	57	47	35
		8800	71	62	52	38
		9600	76	67	56	42

Notes:

1. Throw distance values are based on a terminal velocity of 75 FPM.
2. Throw distance values at other terminal velocities may be established by multiplying throw distances in the table above by throw factor

Terminal Velocity	Throw Factor
50 FPM	x 1.50
100 FPM	x .75
150 FPM	x .50



Performance Data

5 - 20 Tons

Table 44. Static Pressure Drop Through Accessories (inches of water column)⁽ⁱ⁾ - Air Handlers

Tons	Unit Model No.	CFM	Return Grille	Discharge Plenum and Grille ⁽ⁱⁱ⁾	Electric Heaters (kW)				Hydronic Coils	
					5-10	15-20	25-30	35-50	Steam	Hot Water
5	TWE060A TWE060B	1600	0.12	0.21	0.08	0.08	0.14	-	.44	.31
		2000	0.18	0.33	0.13	0.13	0.19	-	.62	.44
		2400	0.28	0.47	0.19	0.19	0.37	-	.80	.59
7½	TWE090A TWE090B	2400	0.08	0.27	0.03	0.06	0.08	0.12	.38	.23
		3000	0.13	0.4	0.06	0.12	0.17	0.23	.50	.33
		3600	0.18	0.58	0.08	0.16	0.24	0.32	.66	.44
10	TWE120A TWE120B	3200	0.07	0.43	0.06	0.13	0.19	0.26	.42	.40
		4000	0.11	0.66	0.10	0.20	0.30	0.40	.59	.56
		4800	0.15	0.95	0.14	0.28	0.42	0.57	.76	.75
15	TWE180B	4800	0.09	0.23	0.03	0.03	0.06	0.08	.46	.38
		6000	0.15	0.34	0.06	0.06	0.12	0.17	.64	.54
		7200	0.2	0.49	0.08	0.08	0.16	0.24	.82	.72
20	TWE240B/TWE240E	6400	0.11	0.43	0.06	0.06	0.13	0.19	.50	.41
		8000	0.17	0.66	0.10	0.10	0.20	0.30	.70	.58
		9600	0.23	0.95	0.14	0.14	0.28	0.42	.89	.78

⁽ⁱ⁾ Return air filter ESP included in Fan Performance Table data.

⁽ⁱⁱ⁾ At louver opening angle of 42 degrees. For ESP at other angle openings, see accessory Installer's Guide.

Table 45. Auxiliary Electric Heat Capacity - Air Handler

Unit Model No.	Total kW	No. of Stages	Stage 1		Stage 2		Total	
			kW Input	BTUH Output	kW Input	BTUH Output	kW Input	BTUH Output
	5.00	1	5.00	17,065	-	-	5.00	17,065
TWE060A3, A4, AW	9.96	1	9.96	33,993	-	-	9.96	33,993
TWE060B3, B4	14.96	1	14.96	51,058	-	-	14.96	51,058
	24.92	2	14.96	51,058	9.96	33,993	24.92	85,051
	5.00	1	5.00	17,065	-	-	5.00	17,065
TWE090,120A3,AW	9.96	1	9.96	33,993	-	-	9.96	33,993
TWE090B3	14.96	1	14.96	51,058	-	-	14.96	51,058
TWE120B3, BW	24.92	2	14.96	51,058	9.96	33,993	24.92	85,051
TWE060,090,120A1	5.76	1	5.76	19,659	-	-	5.76	19,659
TWE060B1	11.52	1	11.52	39,318	-	-	11.52	39,318
TWE090B1	17.28	1	17.28	58,977	-	-	17.28	58,977
TWE120B1	23.04	2	11.52	39,318	11.52	39,318	23.04	78,636
TWE090,120A1	28.8	2	17.28	58,977	11.52	39,318	28.8	98,295
TWE120B1								
TWE090,120A3, AW	34.88	2	19.92	67,987	14.96	51,058	34.88	119,045
TWE120B3, BW	10.00	1	10.00	34,130	-	-	10.00	34,130
	19.92	1	19.92	67,987	-	-	19.92	67,987
TWE180, 240B, 240E	29.92	2	19.92	67,987	10.00	34,130	29.92	102,117
	49.84	2	29.92	102,117	19.92	67,987	49.84	170,104

Notes: Heaters are rated at 240V, 480V and 600V. For other than rated voltage capacity = (Voltage/Related Voltage)² x Rated Capacity.



Performance Data

5 - 20 Tons

Table 46. Steam Heating Coil Capacity - Air Handlers Steam Pressure (PSIG)

Tons	Unit Model No.	Airflow (CFM)	Entering Air Temp. (F)	2 PSI			5 PSI			10 PSI			15 PSI			25 PSI		
				LAT ⁽ⁱ⁾	MBh ⁽ⁱⁱ⁾	Lb/Hr ⁽ⁱⁱⁱ⁾	LAT ⁽ⁱ⁾	MBh ⁽ⁱⁱ⁾	Cond. Lb/Hr ⁽ⁱⁱⁱ⁾	LAT ⁽ⁱ⁾	MBh ⁽ⁱⁱ⁾	Cond. Lb/Hr ⁽ⁱⁱⁱ⁾	LAT ⁽ⁱ⁾	MBh ⁽ⁱⁱ⁾	Cond. Lb/Hr ⁽ⁱⁱⁱ⁾	LAT ⁽ⁱ⁾	MBh ⁽ⁱⁱ⁾	Cond. Lb/Hr ⁽ⁱⁱⁱ⁾
5	TWE060A	1600	40	97.00	99.00	103.00	100.00	104.00	108.00	104.00	111.00	117.00	108.00	117.00	124.00	113.00	127.00	136.00
			60	111.00	88.00	91.00	114.00	93.00	97.00	118.00	100.00	105.00	121.00	106.00	112.00	127.00	116.00	124.00
			80	125.00	77.00	80.00	127.00	82.00	85.00	131.00	89.00	94.00	135.00	95.00	101.00	140.00	105.00	112.00
	TWE060B	2000	40	90.00	108.00	112.00	93.00	114.00	118.00	96.00	122.00	128.00	99.00	129.00	136.00	104.00	139.00	149.00
			60	104.00	96.00	100.00	107.00	102.00	106.00	111.00	110.00	115.00	114.00	116.00	123.00	119.00	127.00	136.00
			80	119.00	84.00	87.00	121.00	90.00	93.00	125.00	98.00	102.00	128.00	104.00	110.00	133.00	115.00	123.00
		2400	40	85.00	116.00	120.00	87.00	123.00	127.00	90.00	131.00	137.00	93.00	138.00	146.00	98.00	150.00	160.00
			60	100.00	104.00	107.00	102.00	110.00	114.00	105.00	118.00	124.00	108.00	125.00	132.00	113.00	137.00	146.00
			80	115.00	91.00	94.00	117.00	97.00	100.00	120.00	105.00	110.00	123.00	112.00	118.00	127.00	123.00	132.00
7½	TWE090A	2400	40	102.00	162.00	168.00	106.00	171.00	177.00	110.00	182.00	191.00	114.00	192.00	203.00	120.00	208.00	222.00
			60	115.00	144.00	149.00	119.00	152.00	158.00	123.00	164.00	172.00	127.00	174.00	184.00	133.00	190.00	203.00
			80	129.00	126.00	130.00	132.00	134.00	140.00	136.00	146.00	153.00	140.00	155.00	164.00	146.00	171.00	183.00
	TWE090B	3000	40	95.00	178.00	183.00	97.00	187.00	194.00	101.00	200.00	209.00	105.00	210.00	222.00	110.00	228.00	244.00
			60	109.00	158.00	163.00	111.00	167.00	174.00	115.00	180.00	188.00	119.00	190.00	201.00	124.00	208.00	222.00
			80	122.00	138.00	143.00	125.00	147.00	153.00	129.00	160.00	168.00	132.00	170.00	180.00	138.00	188.00	201.00
		3600	40	89.00	191.00	197.00	91.00	201.00	208.00	95.00	215.00	225.00	98.00	226.00	239.00	103.00	245.00	262.00
			60	103.00	170.00	175.00	106.00	180.00	187.00	110.00	193.00	203.00	112.00	205.00	216.00	117.00	224.00	239.00
			80	118.00	149.00	154.00	121.00	158.00	164.00	124.00	172.00	180.00	127.00	183.00	194.00	132.00	202.00	216.00
10	TWE120A	3200	40	99.00	203.00	210.00	102.00	214.00	222.00	106.00	229.00	240.00	109.00	241.00	254.00	115.00	261.00	279.00
			60	112.00	181.00	187.00	115.00	191.00	199.00	119.00	206.00	216.00	123.00	218.00	230.00	129.00	238.00	255.00
			80	126.00	158.00	164.00	129.00	169.00	175.00	133.00	183.00	192.00	136.00	195.00	206.00	142.00	215.00	230.00
	TWE120B	4000	40	91.00	222.00	229.00	94.00	234.00	243.00	98.00	250.00	262.00	101.00	264.00	278.00	106.00	286.00	306.00
			60	106.00	198.00	204.00	108.00	209.00	217.00	112.00	225.00	236.00	115.00	239.00	252.00	120.00	261.00	279.00
			80	120.00	173.00	179.00	123.00	184.00	192.00	126.00	200.00	210.00	129.00	214.00	226.00	134.00	236.00	252.00
		4800	40	86.00	239.00	246.00	88.00	251.00	261.00	92.00	269.00	282.00	94.00	284.00	299.00	99.00	307.00	329.00
			60	101.00	212.00	219.00	103.00	225.00	233.00	107.00	242.00	254.00	109.00	257.00	271.00	114.00	280.00	300.00
			80	116.00	186.00	192.00	118.00	198.00	206.00	121.00	215.00	226.00	124.00	230.00	243.00	129.00	253.00	271.00
15	TWE180B	4800	40	97.00	295.00	304.00	100.00	310.00	322.00	104.00	332.00	348.00	107.00	350.00	369.00	113.00	379.00	406.00
			60	110.00	262.00	271.00	113.00	278.00	288.00	117.00	299.00	313.00	121.00	317.00	334.00	126.00	346.00	370.00
			80	124.00	230.00	237.00	127.00	245.00	254.00	131.00	266.00	279.00	134.00	284.00	299.00	140.00	313.00	334.00
		6000	40	90.00	322.00	332.00	92.00	339.00	352.00	96.00	363.00	380.00	99.00	383.00	404.00	104.00	415.00	444.00
			60	104.00	287.00	296.00	107.00	303.00	315.00	110.00	327.00	343.00	113.00	347.00	366.00	118.00	379.00	405.00
			80	119.00	251.00	259.00	121.00	268.00	278.00	125.00	291.00	305.00	128.00	310.00	328.00	133.00	342.00	366.00
		7200	40	84.00	346.00	356.00	87.00	364.00	378.00	90.00	390.00	408.00	93.00	411.00	434.00	97.00	446.00	477.00
			60	99.00	308.00	318.00	102.00	326.00	338.00	105.00	351.00	368.00	108.00	373.00	393.00	112.00	407.00	435.00
			80	115.00	270.00	278.00	117.00	287.00	299.00	120.00	313.00	327.00	123.00	334.00	352.00	127.00	368.00	394.00
20	TWE240B	6400	40	95.00	379.00	391.00	97.00	399.00	414.00	102.00	427.00	447.00	105.00	450.00	475.00	110.00	488.00	522.00
			60	109.00	337.00	348.00	111.00	357.00	371.00	115.00	384.00	403.00	119.00	408.00	430.00	124.00	445.00	476.00
			80	123.00	295.00	305.00	125.00	315.00	327.00	129.00	342.00	358.00	133.00	365.00	385.00	138.00	402.00	430.00
	TWE240E	8000	40	88.00	414.00	426.00	90.00	436.00	452.00	94.00	467.00	488.00	97.00	492.00	519.00	102.00	534.00	571.00
			60	102.00	368.00	380.00	105.00	390.00	405.00	108.00	420.00	440.00	111.00	446.00	470.00	116.00	487.00	521.00
			80	117.00	322.00	333.00	120.00	344.00	357.00	123.00	374.00	392.00	126.00	399.00	421.00	131.00	440.00	471.00
		9600	40	83.00	443.00	457.00	85.00	468.00	485.00	88.00	501.00	524.00	91.00	529.00	558.00	95.00	574.00	613.00
			60	98.00	395.00	407.00	100.00	418.00	434.00	103.00	451.00	473.00	106.00	479.00	505.00	110.00	524.00	560.00
			80	113.00	346.00	357.00	115.00	369.00	383.00	119.00	402.00	421.00	121.00	429.00	453.00	125.00	473.00	506.00

Notes: Type NS Coil, 1 Row, 1" OD, SF Fins, 132 Fins per Foot.

- (i) LAT - Leaving Air Temperature (F)
- (ii) MBh Capacity: BTU/HR/1000
- (iii) Cond. Lb/Hr - Condensate pound per hour



Performance Data

5 - 20 Tons

Table 47. Hot Water Heating Coil Capacity - Air Handler

				Entering Water Temperature (F)																	
				180									200.0								
Tons	Unit Model No.	Airflow (CFM)	Entering Air Temp. (F)	Water Temperature Drop (F)																	
				20.0			30.0			40.0			20.0			30.0			40.0		
				GPM (i)	MBh (ii)	LAT (iii)	GPM (i)	MBh (ii)	LAT (iii)	GPM (i)	MBh (ii)	LAT (iii)	GPM (i)	MBh (ii)	LAT (iii)	GPM (i)	MBh (ii)	LAT (iii)	GPM (i)	MBh (ii)	LAT (iii)
5	TWE060A	1600	40	10.9	106.1	101.0	6.6	96.5	96.0	4.5	87.4	90.0	12.9	124.9	112.0	7.9	115.4	106.0	5.5	106.3	101.0
			60	9.0	88.3	111.0	5.4	79.1	106.0	3.6	70.3	100.0	11.0	107.0	122.0	6.7	97.8	116.0	4.6	88.9	111.0
			80	7.2	70.6	121.0	4.2	61.8	116.0	2.7	53.4	111.0	9.2	89.1	131.0	5.5	80.2	126.0	3.7	71.7	121.0
	TWE060B	2000	40	12.3	119.8	95.0	7.4	108.6	90.0	5.0	97.9	851.0	4.5	141.3	105.0	8.9	130.1	100.0	6.1	119.4	95.0
			60	10.2	99.6	106.0	6.1	88.8	101.0	4.0	78.6	96.0	12.4	120.9	116.0	7.5	110.1	111.0	5.1	99.7	106.0
			80	8.1	79.5	117.0	4.7	69.2	112.0	3.0	59.6	107.0	10.4	100.6	126.0	6.2	90.2	122.0	4.1	80.3	117.0
		2400	40	13.5	132.0	91.0	8.1	119.2	86.0	5.5	107.1	811.0	6.0	155.8	100.0	9.8	143.1	95.0	6.7	131.0	90.0
			60	11.2	109.6	102.0	6.6	97.4	97.0	4.4	85.9	931.0	3.7	133.3	111.0	8.3	120.9	106.0	5.6	109.2	102.0
			80	9.0	87.4	114.0	5.2	75.7	109.0	3.3	64.9	105.0	11.4	110.8	123.0	6.8	98.9	118.0	4.5	87.8	114.0
7½	TWE090A	2400	40	17.0	165.9	104.0	10.4	152.3	98.0	7.1	139.2	93.0	20.0	194.8	115.0	12.4	181.2	110.0	8.6	168.2	105.0
			60	14.2	138.4	113.0	8.5	125.2	108.0	5.7	112.5	103.0	17.2	167.1	124.0	10.6	153.9	119.0	7.2	141.2	114.0
			80	11.4	111.1	123.0	6.7	98.3	118.0	4.4	86.1	113.0	14.4	139.6	134.0	8.7	126.8	129.0	5.9	114.3	124.0
	TWE090B	3000	40	19.3	187.9	98	11.7	171.9	93	8.0	156.5	88	22.7	220.9	108	14.0	204.9	103.0	9.7	189.6	98.0
			60	16.1	156.7	108.0	9.6	141.1	103.0	6.4	126.3	991.0	9.5	189.4	118.0	11.9	173.9	113.0	8.2	159.0	109.0
			80	12.9	125.5	119.0	7.5	110.6	114.0	4.9	96.5	110.0	16.3	158.1	129.0	9.8	143.0	124.0	6.6	128.5	119.0
		3600	40	21.2	207.3	93.0	12.9	189.1	88.0	8.8	171.6	84.0	25.1	244.0	102.0	15.5	225.7	981.0	0.7	208.4	93.0
			60	17.7	172.7	104.0	10.6	155.0	100.0	7.1	138.3	95.0	21.5	209.1	113.0	13.1	191.4	109.0	9.0	174.4	105.0
			80	14.2	138.2	115.0	8.3	121.2	111.0	5.4	105.4	107.0	17.9	174.3	125.0	10.8	157.1	120.0	7.2	140.9	116.0
10	TWE120A	3200	40	24.5	239.1	109.0	14.3	210.0	100.0	9.1	178.7	91.0	29.3	284.7	122.0	17.6	256.8	114.0	11.7	228.6	106.0
			60	20.2	197.3	117.0	11.5	168.4	108.0	6.9	134.8	99.0	25.0	242.6	130.0	14.7	215.2	122.0	9.6	186.9	114.0
			80	15.9	155.6	125.0	8.6	126.1	116.0	4.0	78.7	103.0	20.6	200.6	138.0	11.9	173.6	130.0	7.4	144.3	122.0
	TWE120B	4000	40	27.8	271.7	103.0	16.2	237.5	95.0	10.3	201.9	86.0	33.4	324.1	115.0	19.9	291.0	107.0	13.3	258.2	99.0
			60	22.9	223.8	112.0	13.0	190.3	104.0	7.8	153.3	95.0	28.4	275.8	124.0	16.7	243.6	116.0	10.8	211.0	109.0
			80	18.1	176.2	121.0	9.7	142.6	113.0	5.0	97.3	102.0	23.4	227.7	132.0	13.4	196.2	125.0	8.4	163.2	118.0
		4800	40	30.7	300.0	98.0	17.8	261.3	90.0	11.3	221.7	82.0	36.9	358.3	109.0	22.0	320.7	102.0	14.6	283.7	94.0
			60	25.3	246.9	107.0	14.3	209.1	100.0	8.6	168.9	92.0	31.4	304.7	118.0	18.4	268.1	111.0	11.9	231.6	104.0
			80	19.9	194.0	117.0	10.7	156.7	110.0	5.6	110.2	101.0	25.9	251.3	128.0	14.8	215.6	121.0	9.2	179.4	114.0
15	TWE180B	4800	40	35.2	343.9	106.0	21.2	310.3	100.0	14.1	276.3	93.0	41.8	406.0	118.0	25.6	373.4	112.0	17.5	341.0	105.0
			60	29.3	285.7	115	17.2	252.7	108.0	11.2	218.5	102.0	35.8	347.5	127.0	21.6	315.4	121.0	14.6	283.4	114.0
			80	23.3	227.7	124.0	13.3	195.0	117.0	8.2	159.9	111.0	29.8	289.1	135.0	17.7	257.6	129.0	11.6	225.7	123.0
		6000	40	40.0	390.3	100.0	23.9	350.8	94.0	15.9	311.4	884.0	7.5	461.4	111.0	29.0	423.0	105.0	19.8	385.0	99.0
			60	33.3	323.9	110.0	19.5	285.3	104.0	12.6	246.2	98.0	40.6	394.6	121.0	24.5	356.9	115.0	16.4	319.6	109.0
			80	26.4	257.7	120.0	15.0	219.9	114.0	9.2	180.5	108.0	33.8	327.9	130.0	19.9	291.0	125.0	13.1	254.3	119.0
		7200	40	44.2	431.3	95.0	26.4	386.5	89.0	17.5	342.1	84.0	52.5	510.4	105.0	32.0	466.7	100.0	21.8	423.8	94.0
			60	36.6	357.6	106.0	21.4	313.9	100.0	13.8	270.6	95.0	44.9	436.3	116.0	27.0	393.5	110.0	18.0	351.4	105.0
			80	29.1	284.2	116.0	16.5	241.6	111.0	10.1	198.3	105.0	37.3	362.2	126.0	22.0	320.5	121.0	14.3	279.5	116.0
20	TWE240B	6400	40	46.8	456.2	106.0	28.4	416.5	100.0	19.3	376.7	94.0	55.2	536.5	117.0	34.1	497.8	112.0	23.6	459.4	106.0
			60	39.0	380.2	115.0	23.3	341.2	109.0	15.4	301.7	103.0	47.4	460.2	126.0	28.9	422.1	121.0	19.7	384.2	115.0
			80	31.2	304.5	124.0	18.2	266.0	118.0	11.6	227.0	113.0	39.5	384.0	135.0	23.8	346.5	130.0	15.9	308.9	124.0
	TWE240E	8000	40	53.0	517.5	100.0	32.1	470.9	94.0	21.7	424.5	89.0	62.7	609.2	110.0	38.6	563.8	105.0	26.6	518.8	100.0
			60	44.2	430.9	110.0	26.3	385.2	104.0	17.4	339.6	99.0	53.8	522.2	120.0	32.7	477.6	115.0	22.2	433.3	110.0
			80	35.3	344.6	120.0	20.5	299.8	115.0	13.0	255.2	109.0	44.8	435.4	130.0	26.8	391.5	125.0	17.9	347.9	120.0
		9600	40	58.6	572.0	94.0	35.4	519.1	90.0	23.9	466.8	85.0	69.4	673.9	105.0	42.7	622.3	100.0	29.3	571.5	95.0
			60	48.8	475.9	106.0	28.9	424.2	101.0	19.1	373.3	96.0	59.4	577.4	115.0	36.1	526.8	111.0	24.5	476.7	106.0
			80	39.0	380.2	116.0	22.5	329.6	112.0	14.3	280.0	107.0	49.5	481.0	126.0	29.6	431.4	121.0	19.6	382.6	117.0



Performance Data

5 - 20 Tons

Table 47. Hot Water Heating Coil Capacity - Air Handler (continued)

				Entering Water Temperature (F)								
				210.0								
Tons	Unit Model No.	Airflow (CFM)	Entering Air Temp. (F)	Water Temperature Drop (F)								
				20.0			30.0			40.0		
				GPM (i)	MBh (ii)	LAT (iii)	GPM (i)	MBh (ii)	LAT (iii)	GPM (i)	MBh (ii)	LAT (iii)
5	TWE060A TWE060B	1600	40	13.9	134.3	117.0	8.6	124.8	112.0	6.0	115.8	107.0
			60	12.0	116.3	127.0	7.4	107.1	122.0	5.1	98.3	117.0
			80	10.2	98.4	137.0	6.1	89.5	132.0	4.2	80.9	127.0
		2000	40	15.7	152.0	110.0	9.7	140.9	105.0	6.7	130.2	100.0
			60	13.6	131.6	121.0	8.3	120.7	116.0	5.7	110.5	111.0
			80	11.5	111.2	131.0	6.9	100.7	126.0	4.7	90.7	122.0
	2400	40	17.3	167.7	104.0	10.6	155.0	99.0	7.4	142.9	95.0	
		60	15.0	145.1	116.0	9.1	132.8	111.0	6.2	121.0	106.0	
		80	12.6	122.6	127.0	7.6	110.6	122.0	5.1	99.3	118.0	
7½	TWE090A TWE090B	2400	40	21.6	209.2	120.0	13.4	195.7	115.0	9.4	182.7	110.0
			60	18.7	181.5	130.0	11.6	168.3	125.0	8.0	155.6	120.0
			80	15.9	153.9	139.0	9.7	141.0	134.0	6.6	128.6	129.0
		3000	40	24.5	237.4	113.0	15.2	221.5	108.0	10.6	206.2	103.0
			60	21.2	205.8	123.0	13.1	190.3	118.0	9.0	175.4	114.0
			80	18.0	174.4	134.0	10.9	159.2	129.0	7.4	144.7	124.0
	3600	40	27.1	262.3	107.0	16.8	244.1	102.0	11.7	226.8	98.0	
		60	23.4	227.3	118.0	14.4	209.6	114.0	9.9	192.6	109.0	
		80	19.8	192.4	129.0	12.0	175.2	125.0	8.2	158.7	121.0	
10	TWE120A TWE120B	3200	40	31.7	307.4	129.0	19.2	279.9	121.0	13.0	252.6	113.0
			60	27.4	265.1	136.0	16.4	238.2	129.0	10.9	211.0	121.0
			80	23.0	223.0	144.0	13.5	196.5	137.0	8.7	169.1	129.0
		4000	40	36.1	350.2	121.0	21.8	317.6	113.0	14.7	285.5	106.0
			60	31.1	301.7	130.0	18.5	269.9	122.0	12.3	238.2	115.0
			80	26.1	253.4	138.0	15.3	222.3	131.0	9.8	190.8	124.0
	4800	40	40.0	387.4	114.0	24.1	350.3	107.0	16.2	313.9	100.0	
		60	34.4	333.6	124.0	20.4	297.3	117.0	13.5	261.7	110.0	
		80	28.9	279.9	134.0	16.8	244.6	127.0	10.8	209.5	120.0	
15	TWE180B	4800	40	45.1	437.0	124.0	27.8	404.7	118.0	19.2	372.9	112.0
			60	39.0	378.3	133.0	23.8	346.6	127.0	16.2	315.2	120.0
			80	33.0	319.8	141.0	19.8	288.6	135.0	13.3	257.5	129.0
		6000	40	51.3	496.8	116.0	31.5	458.9	110.0	21.7	421.5	105.0
			60	44.4	429.9	126.0	27.0	392.6	120.0	18.3	355.8	115.0
			80	37.5	363.0	136.0	22.4	326.5	130.0	14.9	290.3	125.0
	8000	40	56.7	549.8	110.0	34.8	506.7	105.0	23.9	464.3	99.0	
		60	49.1	475.5	121.0	29.8	433.1	115.0	20.2	391.5	110.0	
		80	41.4	401.3	131.0	24.7	359.8	126.0	16.4	319.0	121.0	
20	TWE240B TWE240E	6400	40	59.5	576.5	123.0	37.0	538.3	118.0	25.8	500.5	112.0
			60	51.6	500.0	132.0	31.8	462.4	127.0	21.9	425.0	121.0
			80	43.7	423.7	141.0	26.6	386.6	136.0	18.0	349.7	130.0
		8000	40	67.6	654.9	115.0	41.9	610.0	110.0	29.1	565.7	105.0
			60	58.6	567.8	125.0	36.0	523.6	120.0	24.7	479.9	115.0
			80	49.6	480.7	135.0	30.0	437.3	130.0	20.3	394.2	125.0
	9600	40	74.8	724.6	110.0	46.3	673.8	105.0	32.1	623.6	100.0	
		60	64.8	628.0	120.0	39.7	578.0	115.0	27.2	528.4	111.0	
		80	54.8	531.4	131.0	33.1	482.2	126.0	22.3	433.5	122.0	

Notes: Type W Coil, 2 Row, 5/8" OD, PH Fins

Tons	Fin/Ft.
5	131
7	125
10	167
15	151
20	148

(i) GPM - Gallons Per Minute
(ii) MBh Capacity: BTU/HR/1000
(iii) LAT - Leaving Air Temperature (F)



Performance Data

5 - 20 Tons

Table 48. Airside Pressure Loss (inches of Water Gauge) - Cooling Coils

Tons	Unit Model No.	CFM	Dry Coil	Wet Coil
10	TXE120B500A	3200	0.27	0.32
		3600	0.31	0.40
		4000	0.37	0.47
		4400	0.45	0.56
		4800	0.53	0.65

Notes: Includes pressure loss thru clean 1" throwaway filters.

Table 49. Hot Water Heating Coil - Water Side Pressure Drop @ 180°F Entering Water Temperature - Air Handler

Tons	Unit Model No.	Gallons Per Minute (GPM)																		
		2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
5	TWE060A/ TWE060B	.02	.07	.15	.26	.40	.56	.75	.97	1.22	1.49	1.78	-	-	-	-	-	-	-	-
7½	TWE090A/ TWE090B	-	-	.06	.11	.16	.23	.30	.39	.48	.58	.70	.82	.95	1.09	1.24	1.40	1.57	-	-
10	TWE120A/ TWE120B	-	-	-	.06	.09	.13	.17	.22	.27	.33	.39	.46	.54	.62	.70	.79	.89	.99	1.10
15	TWE180B	-	-	-	-	.11	.15	.20	.26	.32	.39	.47	.55	.64	.73	.83	.94	1.05	1.17	1.29
20	TWE240B/ TWE240E	-	-	-	-	-	.17	.23	.30	.37	.45	.53	.63	.72	.83	.94	1.06	1.19	1.32	1.46

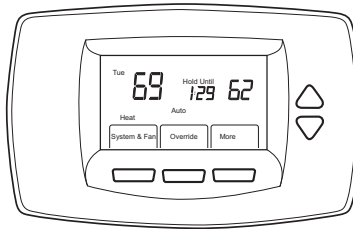
Tons	Unit Model No.	Gallons Per Minute (GPM)																		
		40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76
5	TWE060A/ TWE060B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7½	TWE090A/ TWE090B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	TWE120A/ TWE120B	1.21	1.32	1.44	1.57	1.70	1.84	-	-	-	-	-	-	-	-	-	-	-	-	-
15	TWE180B	1.42	1.56	1.70	1.85	2.00	2.16	2.33	2.50	2.67	2.86	3.04	3.24	3.44	3.64	3.85	4.07	-	-	-
20	TWE240B/ TWE240E	1.61	1.76	1.92	2.09	2.26	2.44	2.63	2.82	3.02	3.22	3.43	3.65	3.87	4.10	4.34	4.58	4.83	5.08	5.34



Controls

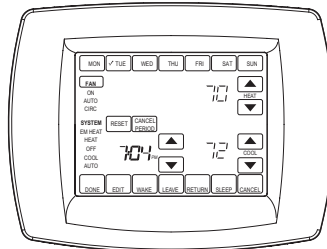
Digital Display Programmable Thermostat (2H/2C)

Two Heat/Two Cool digital display thermostat. 7-day programmable stat with night setback shall be available.



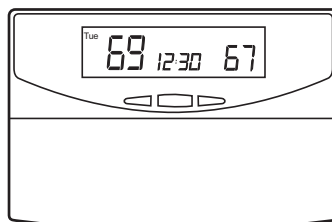
Touchscreen Programmable Thermostat (2H/2C)

Two Heat/Two Cool programmable thermostat with touch screen digital display. Menu-driven programming. Effortless set-up. Program each day separately with no need to copy multiple days. All programming can be done on one screen. Easy to read and use. Large, clear backlit digital display



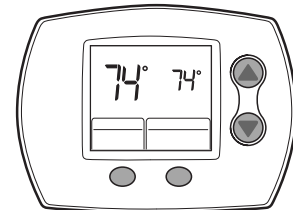
Digital Display Programmable Thermostat with Built-In Relative Humidity Sensing (3H/2C)

Three Heat/Two Cool digital display thermostat with built-in humidity control and display. This thermostat combines both humidity and dry bulb into one. Fully programmable with night setback.



Digital Display Thermostat (3H/2C)

Three Heat, Two Cool digital display thermostat. Easy access battery replacement. Flip-out door for easy battery replacement without removing or disassembling the thermostat.



RA Remote Sensor

Return Air Remote Sensor which can be mounted in the return air duct to report return air temperature.

Room Remote Sensor

Space Remote Sensor which can be mounted on the wall to report/control from a remote location in the space.

Outdoor Thermostat

Outdoor thermostat which can be mounted outdoors to turn on the units electric heater at a pre-selected outdoor temperature.



Electrical Data

Table 50. Electrical Characteristics — Compressor and Condenser Fan Motors — 60 Hz

Tons	Unit Model Number	Compressor Motors					Condenser Fan Motors				
		No.	Volts	Phase	Amps		No.	Volts	Phase	Amps	
					RLA (Ea.)	LRA (Ea.)				FLA (Ea.)	LRA (Ea.)
7½	TTA090A3	1	208-230	3	25.1	182	1	208-230	1	3.1	8.1
	TTA090A4	1	460	3	13.2	94.9	1	460	1	1.6	3.7
	TTA090AK	1	380	3	15	106.3	1	380	1	2.2	5.8
	TTA090AW	1	575	3	10.6	70	1	575	1	1.2	3
10	TTA120A3	1	208-230	3	33.7	278	1	208-230	1	6	17
	TTA120A4	1	460	3	16.5	1240	1	460	1	2.7	7
	TTA120AK	1	380	3	18.1	137	1	380	1	3.4	7.8
	TTA120AW	1	575	3	13.4	92	1	575	1	2	5.7
	TTA120B3	2	208-230	3	18.6	128	1	208-230	1	6	17
	TTA120B4	2	460	3	9.4	63	1	460	1	2.7	7
	TTA120BK	2	380	3	12.7	82	1	380	1	3.4	7.8
	TTA120BW	2	575	3	7.6	49	1	575	1	2	5.7
	TTA120C3	2	208-230	3	17.7	123	1	208-230	1	6	17
	TTA120C4	2	460	3	9	62	1	460	1	2.7	7
TTA120CW	2	575	3	7.1	50	1	575	1	2	5.7	
12½	TTA150B3	2	208-230	3	22	156	1	208-230	1	6	17
	TTA150B4	2	460	3	11.3	75	1	460	1	2.7	7
	TTA150BK	2	380	3	13.3	63	1	380	1	3.4	7.8
	TTA150BW	2	575	3	8.7	54	1	575	1	2	5.7
15	TTA180B3	2	208-230	3	25.1	182	2	208-230	1	3.1	8.1
	TTA180B4	2	460	3	13.2	94.9	2	460	1	1.6	3.7
	TTA180BK	2	380	3	15	106.3	2	380	1	2.2	5.8
	TTA180BW	2	575	3	10.6	70	2	575	1	1.2	3
	TTA180C3	2	208-230	3	25.1	182	2	208-230	1	3.1	8.1
	TTA180C4	2	460	3	13.2	94.9	2	460	1	1.6	3.8
	TTA180CW	2	575	3	10.6	70	2	575	1	1.2	3
20	TTA240B3	2	208-230	3	33.7	278	2	208-230	1	6	17
	TTA240B4	2	460	3	16.5	124	2	460	1	2.7	7
	TTA240BK	2	380	3	18.1	137	2	380	1	3.4	7.8
	TTA240BW	2	575	3	13.4	92	2	575	1	2	5.7
	TTA240F3	2	208-230	3	35.3	239	2	208-230	1	5	14.4
	TTA240F4	2	460	3	18.5	125	2	460	1	2.5	5.8
	TTA240FW	2	575	3	14.2	80	2	575	1	2	5.1

Notes: Electrical characteristics reflect nameplate values and are calculated in accordance with UL and ARI specifications.



Electrical Data

Table 51. Unit Wiring - Condensing Units

Tons	Unit Model Number	Unit Operating Voltage Range	Minimum Circuit Ampacity	Maximum Fuse or HACR Circuit Breaker Size ⁽¹⁾
7½	TTA090A3	187-253	34.5	50
	TTA090A4	414-506	18.1	25
	TTA090AK	342-418	21	30
	TTA090AW	518-632	14.5	20
10	TTA120A3	187-253	48.1	70
	TTA120A4	414-506	23.3	35
	TTA120AK	342-418	26	40
	TTA120AW	518-632	18.8	25
	TTA120B3	187-253	47.9	60
	TTA120B4	414-506	23.9	30
	TTA090BK	342-418	32	40
	TTA120BW	518-632	19.1	25
	TTA120C3	187-253	49.4	60
	TTA120C4	414-506	25.2	30
12½	TTA150B3	187-253	55.5	70
	TTA150B4	414-506	28.1	35
	TTA150BK	342-418	33.3	40
	TTA150BW	518-632	21.6	25
15	TTA180B3	187-253	62.7	80
	TTA180B4	414-506	32.9	45
	TTA180BK	342-418	38.2	50
	TTA180BW	518-632	26.3	35
	TTA180C3	187-253	62.7	80
	TTA180C4	414-506	32.9	45
20	TTA240B3	187-253	87.8	100
	TTA240B4	414-506	42.5	50
	TTA240BK	342-418	47.5	60
	TTA240BW	518-632	34.2	45
	TTA240F3	187-253	89.4	110
	TTA240F4	414-506	46.6	60
	TTA240FW	518-632	36.0	50

Notes: Electrical characteristics reflect nameplate values and are calculated in accordance with UL and ARI specifications. 7½ and 10 ton values are system rated; 12½, 15 and 20 ton values are condensing unit only rated.

⁽¹⁾ HACR type circuit breaker per NEC.



Electrical Data

Table 52. Unit Wiring - Air Handler

Tons	Unit Model Number	Unit Operating Voltage Range	Minimum Circuit Ampacity	Maximum Fuse or HACR Circuit Breaker Size ⁽ⁱ⁾
5	TWE060A1, B1	187-253	7	15
	TWE060A3, B3	187-253	4	15
	TWE060A4, B4	414-506	2	15
	TWE060AW	518-632	2	15
7½	TWE090A1, B1	187-253	8	15
	TWE090A3, B3 ⁽ⁱⁱ⁾	187-253	7	15
	TWE090A3, B3 ⁽ⁱⁱⁱ⁾	414-506	4	15
	TWE090AW	518-632	4	15
10	TWE120A1, B1	187-253	11	15
	TWE120A3, B3 ⁽ⁱⁱ⁾	187-253	8	15
	TWE120A3, B3 ⁽ⁱⁱⁱ⁾	414-506	5	15
	TWE120AW, BW	518-632	4	15
15	TWE180B3	187-253	12	20
	TWE180B4	414-506	6	15
	TWE180BW	518-632	5	15
20	TWE240B3, E3	187-253	19	25
	TWE240B4, E4	414-506	9	15
	TWE240BW, EW	518-632	7	15

(i) HACR type circuit breaker per NEC.
(ii) When wired for 208-230 volt.
(iii) When wired for 460 volt.

Table 53. Electrical Characteristics - Motors - 60Hz Air Handler

Tons	Unit Model Number	Standard Evaporator Fan Motor					Oversized Evaporator Fan Motor				
		No.	Volts	Phase	Amps		No.	Volts	Phase	Amps	
					FLA	LRA				FLA	LRA
5	TWE060A1, B1	1	208-230	1	5.6	45	1	208-230	1	6.3	45
	TWE060A3, B3	1	208-230	3	2.6	16.4	1	208-230	3	3.6	22
	TWE060A4, B4	1	460	3	1.3	8.2	1	460	3	1.8	11
	TWE060AK	1	380	3	1.4	9.9	-	-	-	-	-
	TWE060AW	1	575	3	1.3	6.6	1	575	3	1.7	10.8
7½	TWE090A1, B1	1	208-230	1	6.2	33	1	208-230	1	7.7	57.4
	TWE090A3, B3 ⁽ⁱ⁾	1	208-230/460	3	5.0/2.5	34.3/17.0	1	208-230/460	3	6.0/3.4	49.0/27.5
	TWE090AK	1	380	3	2.5	23.8	-	-	-	-	-
	TWE090AW	1	575	3	3.1	15	1	575	3	2.6	17.5
10	TWE120A1, B1	1	208-230	1	8.3	57.4	1	208-230	1	-	-
	TWE120A3, B3 ⁽ⁱ⁾	1	208-230/460	3	6.0/3.4	49.0/27.5	1	208-230/460	3	9.4/4.6	74.9/39.3
	TWE120AK, BK	1	380	3	3.0	30.9	-	-	-	-	-
	TWE120AW, BW	1	575	3	2.6	17.5	1	575	3	5.4	37.3
15	TWE180B3	1	208-230	3	9.4	74.9	1	208-230	3	14.4	98
	TWE180B4	1	460	3	4.6	39.3	1	460	3	6.7	47
	TWE180BK	1	380	3	7.3	54.5	-	-	-	-	-
	TWE180BW	1	575	3	3.4	24.6	1	575	3	5.4	37.3
20	TWE240B3, E3	1	208-230	3	14.5	98	1	208-230	3	18	122.8
	TWE240B4, E4	1	460	3	6.7	47	1	460	3	9	61.4
	TWE240BK	1	380	3	10.0	53.9	-	-	-	-	-
	TWE240BW, EW	1	575	3	5.4	37.3	1	575	3	7.2	49.8

(i) Ships wired for 208-230/3/60. Field convertible to 460/3/60.



Electrical Data

Table 54. Unit Wiring with Electric Heat (Single Point Connection) - 5, 7½ and 10 Ton Air Handlers

Heater Model No.	Maximum Fuse Heater KW Rating ⁽ⁱ⁾	To Use With Unit	Unit Power Supply	Control Stages	Minimum Circuit Ampacity ⁽ⁱⁱ⁾	Maximum Fuse or HACR Circuit Breaker Size ^{(ii), (iii)}
BAYHTRL106A	4.33/5.76			1	33/37	35/40
BAYHTRL112A	8.65/11.52	TWE060A1	208-230/1/60	1	59/67	60/70
BAYHTRL117A	12.98/17.28	TWE060B1		1	88/97	90/100
BAYHTRL123A	17.30/23.04			2	111/127 ^(iv)	125/150
BAYHTRL106A	4.33/5.76			1	34/38	35/40
BAYHTRL112A	8.65/11.52			1	60/68 ^(iv)	60/70
BAYHTRL117A	12.98/17.28	TWE090A1	208-230/1/60	1	86/98	90/100
BAYHTRL123A	17.30/23.04	TWE090B1		2	112/128 ^(iv)	125/150
BAYHTRL129A	21.65/28.80			2	138/158 ^(iv)	150/175
BAYHTRL106A	4.33/5.76			1	31/41	40/45
BAYHTRL112A	8.65/11.52			1	63/73 ^(iv)	70/80
BAYHTRL117A	12.98/17.28	TWE120A1	208-230/1/60	1	89/101	90/110
BAYHTRL123A	17.30/23.08	TWE120B1		2	115/131 ^(iv)	125/150
BAYHTRL129A	21.65/28.80			2	141/161 ^(iv)	150/175
BAYHTRL305A	3.75/5.00			1	17/19	20/20
BAYHTRL310A	7.45/9.96	TWE060A3	208-230/3/60	1	30/34	30/35
BAYHTRL315A	11.25/14.96	TWE060B3		1	43/49	45/50
BAYHTRL325A	18.71/24.92			2	69/79 ^(iv)	70/80
BAYHTRL305A	3.75/5.00			1	20/22	20/25
BAYHTRL310A	7.45/9.96			1	33/37	35/40
BAYHTRL315A	11.25/14.96	TWE090A3	208-230/3/60	1	46/52	50/60
BAYHTRL325A	18.71/24.92	TWE090B3		2	72/82 ^(iv)	80/90
BAYHTRL335A	26.20/34.88			2	97/112 ^(v)	100/125
BAYHTRL305A	3.75/5.00			1	21/23	25/25
BAYHTRL310A	7.45/9.96			1	34/38	35/40
BAYHTRL315A	11.25/14.96	TWE120A3	208-230/3/60	1	47/53	50/60
BAYHTRL325A	18.71/24.92	TWE120B3		2	73/83 ^(iv)	80/90
BAYHTRL335A	26.20/34.88			2	98/113 ^(v)	100/125
BAYHTRL405A	5			1	10	15
BAYHTRL410A	9.96	TWE060A4	460/3/60	1	17	20
BAYHTRL415A	14.96	TWE060B4		1	25	25
BAYHTRL425A	24.92			2	40	40
BAYHTRL405A	5			1	11	15
BAYHTRL410A	9.96			1	19	20
BAYHTRL415A	14.96	TWE090A3 ^(vi)	460/3/60	1	26	30
BAYHTRL425A	24.92	TWE090B3 ^(vi)		2	41	45
BAYHTRL435A	34.88			2	56	60
BAYHTRL405A	5			1	12	15
BAYHTRL410A	9.96			1	20	20
BAYHTRL415A	14.96	TWE120A3 ^(vi)	460/3/60	1	27	30
BAYHTRL425A	24.92	TWE120B3 ^(vi)		2	42	45
BAYHTRL435A	34.88			2	57	60
BAYHTRLW05A	5			1	8	15
BAYHTRLW10A	9.96			1	15	15
BAYHTRLW15A	14.96	TWE060AW	575/3/60	1	21	25
BAYHTRLW25A	24.92			2	33	35



Electrical Data

Table 54. Unit Wiring with Electric Heat (Single Point Connection) - 5, 7½ and 10 Ton Air Handlers

Heater Model No.	Maximum Fuse Heater KW Rating ⁽ⁱ⁾	To Use With Unit	Unit Power Supply	Control Stages	Minimum Circuit Ampacity ⁽ⁱⁱ⁾	Maximum Fuse or HACR Circuit Breaker Size ^{(ii), (iii)}
BAYHTRLW05A	5	TWE090AW	575/3/60	1	11	15
BAYHTRLW10A	9.96			1	17	20
BAYHTRLW15A	14.96			1	23	25
BAYHTRLW25A	24.92			2	36	40
BAYHTRLW35A	34.88			2	48	50
BAYHTRLW05A	5	TWE120AW TWE120BW	575/3/60	1	10	15
BAYHTRLW10A	9.96			1	16	20
BAYHTRLW15A	14.96			1	22	25
BAYHTRLW25A	24.92			2	35	35
BAYHTRLW35A	34.88			2	47	50

- (i) kW ratings are at: 208/240V for 208-230V air handlers.
480V for 460V air handlers
600V for 575V air handlers
For other than rated voltage, capacity = (Voltage/Rated Voltage)² x Rated Capacity.
- (ii) Any power supply and circuits must be wired and protected in accordance with local codes.
- (iii) The HACR circuit breaker is for U.S.A. installations only.
- (iv) Field wire must be rated at least 75 C.
- (v) Field wire must be rated at least 90 C.
- (vi) With motor field converted to 460V.

Table 55. Unit Wiring with Electric Heat (Single Point Connection) - 15 and 20 Ton Air Handlers

Heater Model No.	Heater KW Rating ⁽ⁱ⁾	To Use With Unit	Unit Power Supply	Control Stages	Minimum Circuit Ampacity ⁽ⁱⁱ⁾	Maximum Fuse or HACR Circuit Breaker Size ^{(ii), (iii)}
BAYHTRM310A	7.50/10.00	TWE180B3	208-230/3/60	1	38/42	40/45
BAYHTRM320A	14.96/19.92			1	64/72	70/80
BAYHTRM330A	22.50/29.92			2	90/102	90/110
BAYHTRM350A	37.42/49.84			2	142/162 ^(iv)	150/175
BAYHTRM310A	7.50/10.00	TWE240B3, E3	208-230/3/60	1	45/49	50/50
BAYHTRM320A	14.96/19.92			1	71/79	80/80
BAYHTRM330A	22.50/29.92			2	97/109	100/110
BAYHTRM350A	37.42/49.84			2	144/169 ^(iv)	150/175
BAYHTRM410A	10	TWE180B4	460/3/60	1	21	25
BAYHTRM420A	19.92			1	36	40
BAYHTRM430A	29.92			2	51	60
BAYHTRM450A	49.84			2	81	90
BAYHTRM410A	10	TWE240B4, E4	460/3/60	1	24	25
BAYHTRM420A	19.92			1	34	40
BAYHTRM430A	29.92			2	54	60
BAYHTRM450A	49.84			2	84	90
BAYHTRMW10A	10	TWE180BW	575/3/60	1	17	20
BAYHTRMW20A	19.92			1	30	30
BAYHTRMW30A	29.92			2	42	45
BAYHTRMW50A	49.84			2	67	70
BAYHTRMW10A	10	TWE240BW, EW	575/3/60	1	20	25
BAYHTRMW20A	19.92			1	32	35
BAYHTRMW30A	29.92			2	45	50
BAYHTRMW50A	49.84			2	70	80

- (i) kW ratings are at: 208/240V for 208-230V air handlers.
480V for 460V air handlers
600V for 575V air handlers
For other than rated voltage, capacity = (Voltage/Rated Voltage)² x Rated Capacity.
- (ii) Any power supply and circuits must be wired and protected in accordance with local codes.
- (iii) The HACR circuit breaker is for U.S.A. installations only.
- (iv) Field wire must be rated at least 90 C.

Jobsite Connections

Wiring shown with dashed lines is to be furnished and installed by the customer. All customer-supplied wiring must be copper only and must conform to NEC and local electrical codes. Codes may require line of sight between disconnect switch and unit.

Note:

1. When electric heater accessory is used, single point power entry or dual point power entry is field optional. Single point power entry option is through electric heater only.

TTA060/TWE060A

Field Wiring:

1. 3 power wires. Line voltage for 3 phase; 2 wires for single phase.
2. 3 power wires. Line voltage for 3 phase; 2 wires for single phase
3. Cooling only thermostat: 3 wires, 24 volts.
 - a. One Stage Electric heat: add 1 additional wire, 24 volts.
 - b. Two Stage Electric heat: add 2 additional wires, 24 volts.
4. 2 wires, 24 volts.

(2) TTA048/TWE090B

(2) TTA060/TWE120B

Field Wiring:

1. 3 power wires. Line voltage for 3 phase; 2 wires for single phase.
2. 3 power wires. Line voltage for 3 phase; 2 wires for single phase.
3. Cooling only thermostat: 5 wires, 24 volts Electric Heat: add 2 additional wires, 24 volts.
 - a. One Stage Electric heat: add 1 additional wire, 24 volts.
 - b. Two Stage Electric heat: add 2 additional wires, 24 volts.
4. 2 wires, 24 volts to outdoor section "A"
 - a. 2 wires, 24 volts to outdoor section "B"

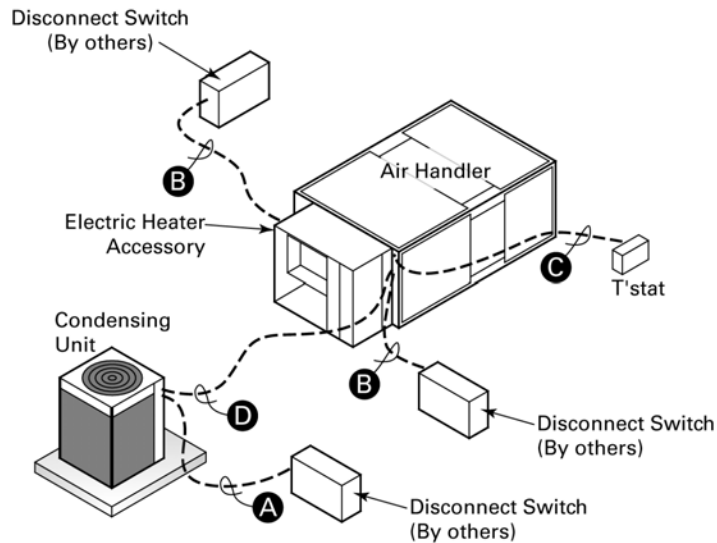


Figure 15.

TTA090A/TWE090A
TTA120A/TWE120A
TTA120C/TWE120A

Field Wiring:

1. 3 power wires, line voltage.
2. 3 power wires, line voltage for 3 phase; 2 wires for single phase.
3. Cooling only thermostat: 4 wires, 24 volts.
 - a. One Stage Electric heat: add 1 additional wire, 24 volts.
 - b. Two Stage Electric heat: add 2 additional wires, 24 volts.
4. 4 wires, 24 volts.

(2) TTA120B/TWE120B

Field Wiring:

1. 3 power wires, line voltage.
2. 3 power wires, line voltage for 3 phase.
3. Cooling only thermostat: 5 wires, 24 volts.
 - a. One Stage Electric heat: add 1 additional wire, 24 volts.
 - b. Two Stage Electric heat: add 2 additional wires, 24 volts.
4. 5 wires, 24 volts.

TTA150B/TWE180B
TTA180B/TWE180B
TTA240B/TWE240B
TTA240F/TWE240E
TTA180C/TWE180B

Field Wiring:

1. 3 power wires, line voltage.
2. 3 power wires, line voltage.
3. Cooling only thermostat: 5 wires, 24 volts.
 - a. One Stage Electric heat: add 1 additional wire, 24 volts.
 - b. Two Stage Electric heat: add 2 additional wires, 24 volts.
4. 5 wires, 24 volts.

(2) TTA090A/TWE180B

(2) TTA120A/TWE240B

Field Wiring:

1. 3 power wires, line voltage.
2. 3 power wires, line voltage.
3. Cooling only thermostat: 5 wires, 24 volts.
 - a. One Stage Electric heat: add 1 additional wire, 24 volts.
 - b. Two Stage Electric heat: add 2 additional wires, 24 volts.
4. 6 wires, 24 volts.

For ReliaTel Controls

Wiring shown with dashed lines is to be furnished and installed by the customer. All customer-supplied wiring must be copper only and must conform to NEC and local electrical codes. Codes may require line of sight between disconnect switch and unit.

Note:

1. When electric heater accessory is used, single point power entry or dual point power entry is field optional. Single point power entry option is through electric heater only.
2. ***Choose only one of the following: Thermostat, Zone Sensor, or NSB Panel.

TTA120A

Field Wiring:

1. 3 power wires. Line voltage.
2. 3 power wires. Line voltage for 3 phase; 2 wires for single phase
3. Cooling only thermostat: 4 wires, 24 volts.
 - a. One Stage Electric heat: add 1 additional wire, 24 volts.
 - b. Two Stage Electric heat: add 2 additional wires, 24 volts.
4. Add 4 wires, 24 volts.
 - a. One Stage Electric heat: add 1 additional wire, 24 volts.
 - b. Two Stage Electric heat: add 2 additional wires, 24 volts.
5. Zone sensor: 2 wires minimum or 10 wires maximum, 24 volts (# of wires are dependent upon zone sensor selection).
6. NSB Panel: 8 wires, 24 volts.

TTA120B & 100B/TWE120B & 100B TTA120C/TWE120A

Field Wiring:

1. 3 power wires. Line voltage.
2. 3 power wires. Line voltage for 3 phase; 2 wires for single phase.
3. Cooling only thermostat: 5 wires, 24 volts.

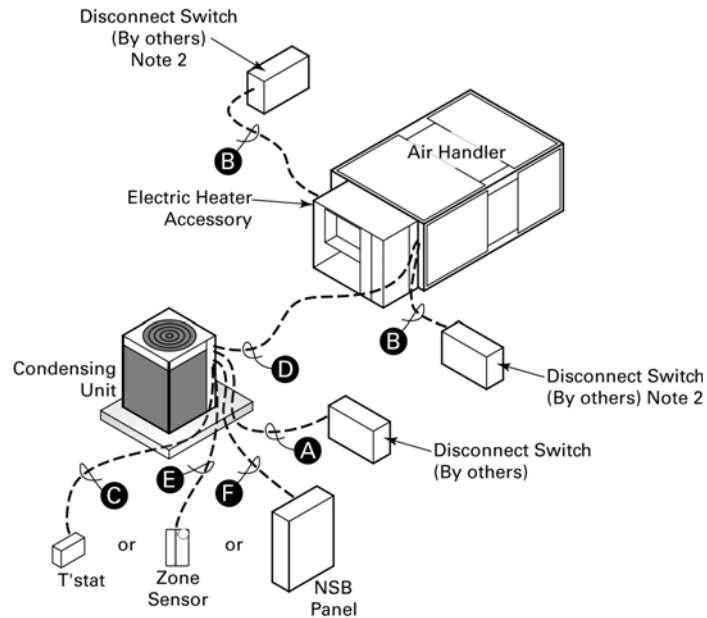


Figure 16.

4. Add 4 wires, 24 volts.
 - a. One Stage Electric heat: add 1 additional wire, 24 volts.
 - b. Two Stage Electric heat: add 2 additional wires, 24 volts.
5. Zone sensor: 2 wires minimum or 10 wires maximum, 24 volts (# of wires are dependent upon zone sensor selection).
6. NSB Panel: 8 wires, 24 volts.

TTA150A/TWE180A TTA120A/TWE120A TTA240B/TWE240B TTA240F/TWE240E TTA180C/TWE180B

Field Wiring:

1. 3 power wires, line voltage.
2. 3 power wires, line voltage for 3 phase; 2 wires for single phase.
3. Cooling only thermostat: 5 wires, 24 volts.
 - a. One Stage Electric heat: add 1 additional wire, 24 volts.
 - b. Two Stage Electric heat: add 2 additional wires, 24 volts.
4. Add 4 wires, 24 volts.

(2) TTA090A/TWE180B (2) TTA120A/TWE240B

Field Wiring:

1. 3 power wires, line voltage.
2. 3 power wires, line voltage for 3 phase; 2 wires for single phase.
3. Cooling only thermostat: 6 wires, 24 volts.
 - a. One Stage Electric heat: add 1 additional wire, 24 volts.
 - b. Two Stage Electric heat: add 2 additional wires, 24 volts.
4. Add 8 wires, 24 volts.
 - a. One Stage Electric heat: add 1 additional wire, 24 volts.
 - b. Two Stage Electric heat: add 2 additional wires, 24 volts.
5. Zone sensor: 2 wires minimum or 10 wires maximum, 24 volts (# of wires are dependent upon zone sensor selection).
6. NSB Panel: 8 wires, 24 volts.

Typical Wiring

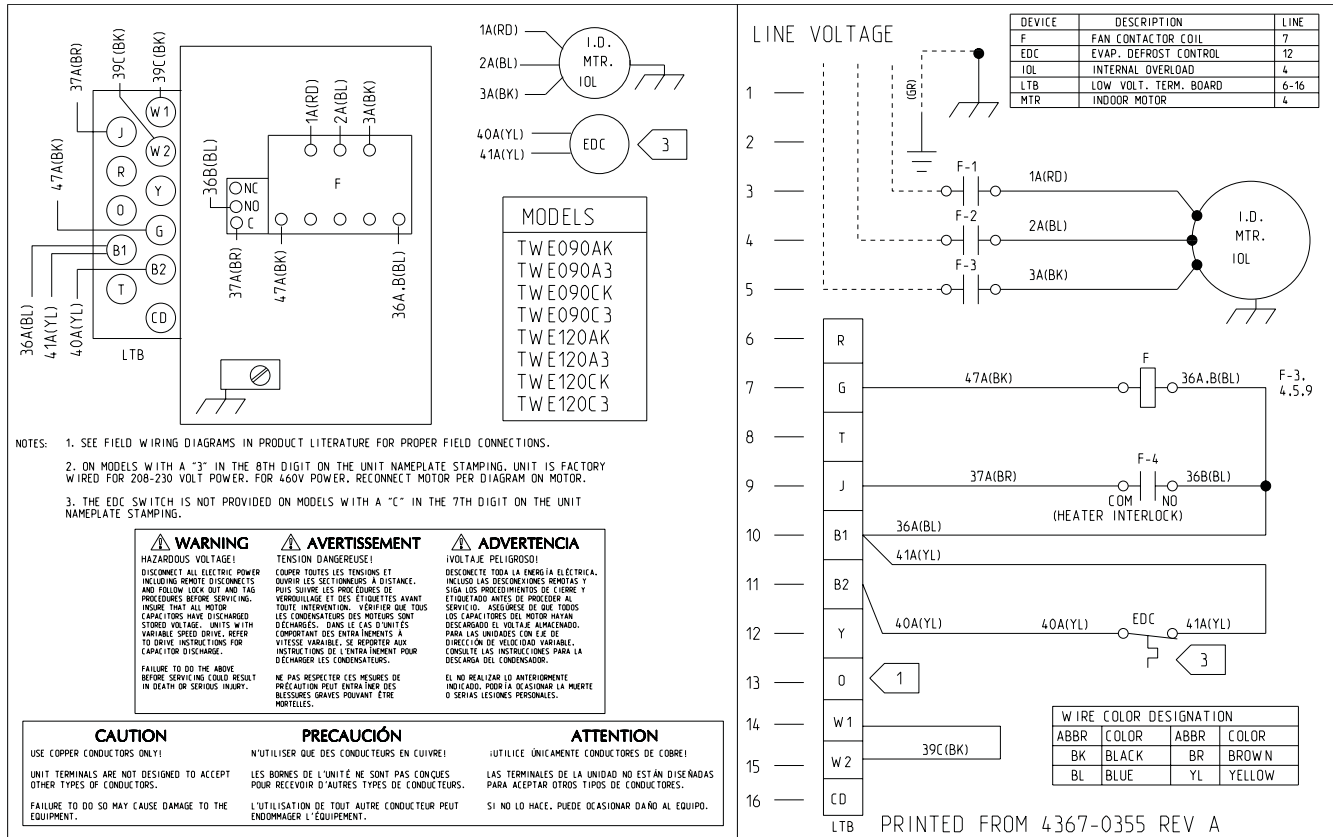
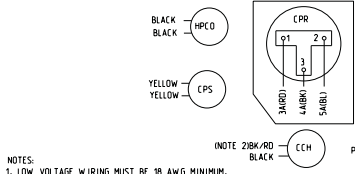
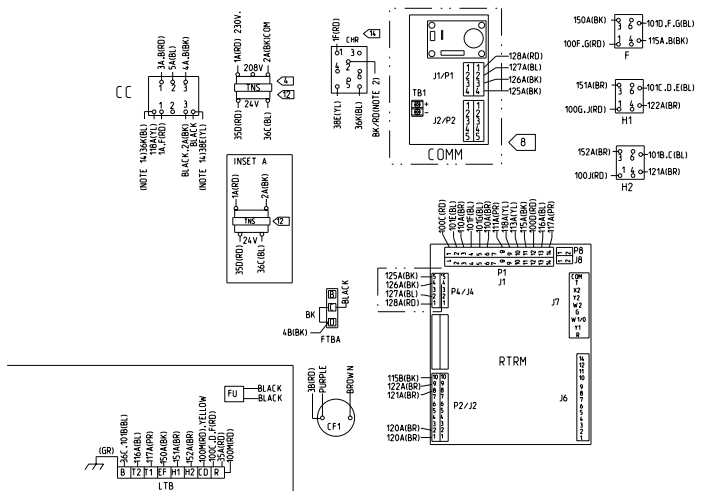


Figure 17. Air Handler: Typical unit wiring diagram. For specific wiring, see individual Service Facts.



FUSE	AMP
FU	3

- NOTES:**
- LOW VOLTAGE WIRING MUST BE 18 AWG MINIMUM.
 - ON ALL NOTE 2 REFERENCES, LEAD COLOR TO BE BK/YL ON TTA09A3 MODEL, BK/BR ON TTA09D/20A W MODELS, AND BK/ROD ON ALL OTHER MODELS.
 - SEE HEATER ACCESSORY DIAGRAM FOR DETAILS OF HEATER WIRING.
 - CONNECTIONS SHOWN ARE FOR 230V/60 HZ/3 PH. WHEN 208V/60 HZ/3 PH OPERATION IS REQUIRED, REMOVE 1A(ROD) WIRE AT UNIT TRANSFORMER AND RECONNECT TO 208V TRANSFORMER TERMINAL.
 - IF EVAPORATOR DEFOST CONTROL (EDC) IS USED IN INDOOR UNIT, REMOVE JUMPER WIRE ON CONDENSER LOW VOLTAGE BOARD BETWEEN TERMINALS "R" AND "ED".
 - DO NOT JUMPER COMPRESSOR PROTECTION SWITCH (CPS) OR THE HIGH PRESSURE CUT-OUT SWITCH (HPCO).
 - ON MODELS WITH RTRM BOARDS, INSTALLER MUST MOVE EDC WIRES IF AIR HANDLER HAS AN EVAPORATOR DEFOST CONTROL FROM AIR HANDLER LOW VOLTAGE TERMINAL CONNECTIONS "B2" AND "B1" TO "R" AND "ED".
 - ALL COMPONENTS WITH PHANTOM LINES AROUND PERIMETER ARE FIELD INSTALLED ACCESSORIES EXCEPT FOR COMMUNICATION INTERFACE BOARD(COMM) AND CRANKCASE HEATER RELAY (CHR) WHICH MAY BE FACTORY INSTALLED ON SOME MODELS.
 - IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH WIRING OF THE SAME GAUGE RATED AT 600 VOLTS AND 90°C.
 - CUT WIRE 120A TO ENABLE ELECTRIC HEAT.
 - CUT WIRE 110A TO CONFIGURE FOR TWO STAGES OF ELECTRIC HEAT.
 - CONNECTIONS FOR THE 230V/60HZ/3 PH UNIT ARE SHOWN, FOR 400V, 460V, AND 575V MODELS, SEE TRANSFORMER CONNECTIONS IN INSERT "A" AND "B".
 - UNIT MODELS WITH A "R", "T", "U" OR "W" IN THE 10TH DIGIT (SEE UNIT NAMEPLATE) ALL USE A RELIATEL MODULE (RTRM). SEE PRODUCT LITERATURE FOR EXPLANATION OF 10TH DIGIT MODEL DESIGNATION.
 - THE CRANKCASE HEATER RELAY (CHR) IS USED ONLY ON TTA120A4, TA120AW AND TTA20A W MODELS. ON ALL OTHER MODELS (SEE MODEL TABLE), THE BK/ROD/INTE 21 CRANKCASE HEATER LEAD CONNECTS TO THE LINE SIDE OF C1-1.
 - MAXIMUM EXTERNAL LOW VOLTAGE LOAD 1.8 AMPS 24 V.A.C. DOES NOT INCLUDE ACCESSORIES, BUT DOES INCLUDE INDOOR BLOWER RELAY.
 - INSTALL OPTIONAL REMOTE SENSOR TO TERMINALS S1 AND S2 WHEN REQUIRED. SEE PROGRAMMABLE ZONE SENSOR / REMOTE PANEL LITERATURE FOR OPTION CONFIGURATION.

DEVICE	DESCRIPTION	LINE
CC	COMPRESSOR CONTACTOR	11-14
CCH	CRANKCASE HEATER	16
CF-1	OUTDOOR FAN CAPACITOR	15
CHR	CRANKCASE HEATER RELAY	19-20
CN	CONNECTOR OR WIRE BUIT	
COMM	COMMUNICATION INTERFACE MODULE	59-64
CPR	COMPRESSOR	11-13
CPS	COMPRESSOR PROTECTION SWITCH	35
EDC	EVAPORATOR DEFOST CONTROL	77-78
F	FAN RELAY	39
FTB	FAN TERMINAL BOARD	17-19
FU	FUSE	24
H1,H2	HEAT RELAYS	42,44
HPCO	HIGH PRESSURE CUTOUT	57
IDL	INTERNAL OVERLOAD	
LTB	LOW VOLTAGE TERMINAL BOARD	27-28
ODM	OUTDOOR FAN MOTOR	16-18
RTRM	RELIATEL REFRIGERATION MODULE	41-70
TRSA	CONTROL POWER TRANSFORMER	23

CAUTION
USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.

FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

ATTENTION
N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!
LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.

L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT ENDOMMAGER L'EQUIPEMENT.

PRECAUCIÓN
¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.

SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.

ABBR	COLOR	ABBR	COLOR
BK	BLACK	PR	PURPLE
BL	BLUE	RD	RED
BR	BROWN	WH	WHITE
GR	GREEN	YL	YELLOW
OR	ORANGE		

<p>⚠ WARNING HAZARDOUS VOLTAGE! DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS AND FOLLOW LOCK OUT AND TAG PROCEDURES BEFORE SERVICING. INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED STORED VOLTAGE. UNITS WITH VARIABLE SPEED DRIVE, REFER TO DRIVE INSTRUCTIONS FOR CAPACITOR DISCHARGE. FAILURE TO DO THE ABOVE BEFORE SERVICING COULD RESULT IN DEATH OR SERIOUS INJURY.</p>	<p>⚠ AVERTISSEMENT TENSION DANGEREUSE! COUPER TOUTES LES TENSIONS ET OUVRIR LES SECTIONNEURS À DISTANCE. PUIS SUIVRE LES PROCÉDURES DE VERROUILLAGE ET DES ÉTIQUETTES AVANT TOUTE INTERVENTION. VÉRIFIER QUE TOUTS LES CONDENSATEURS DES MOTEURS SONT DÉCHARGÉS. DANS LE CAS D'UNITÉS COMPORTANT DES ENTRAÎNEMENTS À VITESSE VARIABLE, SE REPORTER AUX INSTRUCTIONS DE L'ENTRAÎNEMENT POUR DÉCHARGER LES CONDENSATEURS. NE PAS RESPECTER CES MESURES DE PRECAUCIÓN PEUT ENTRAÎNER DES BLESSURES GRAVES POUVANT ÊTRE MORTELLES.</p>	<p>⚠ ADVERTENCIA ¡VOLTAJE PELIGROSO! DESCONECTE TODA LA ENERGÍA ELÉCTRICA, INCLUIDO LAS DESCONEXIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. ASEGURESE DE QUE TODOS LOS CAPACITORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON EJE DE DIRECCIÓN DE VELOCIDAD VARIABLE, CONSULTE LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR. EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRÍA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.</p>
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Figure 18. Condensing Unit - Single Compressor: Typical unit wiring diagram. For specific wiring, see individual Service Facts.

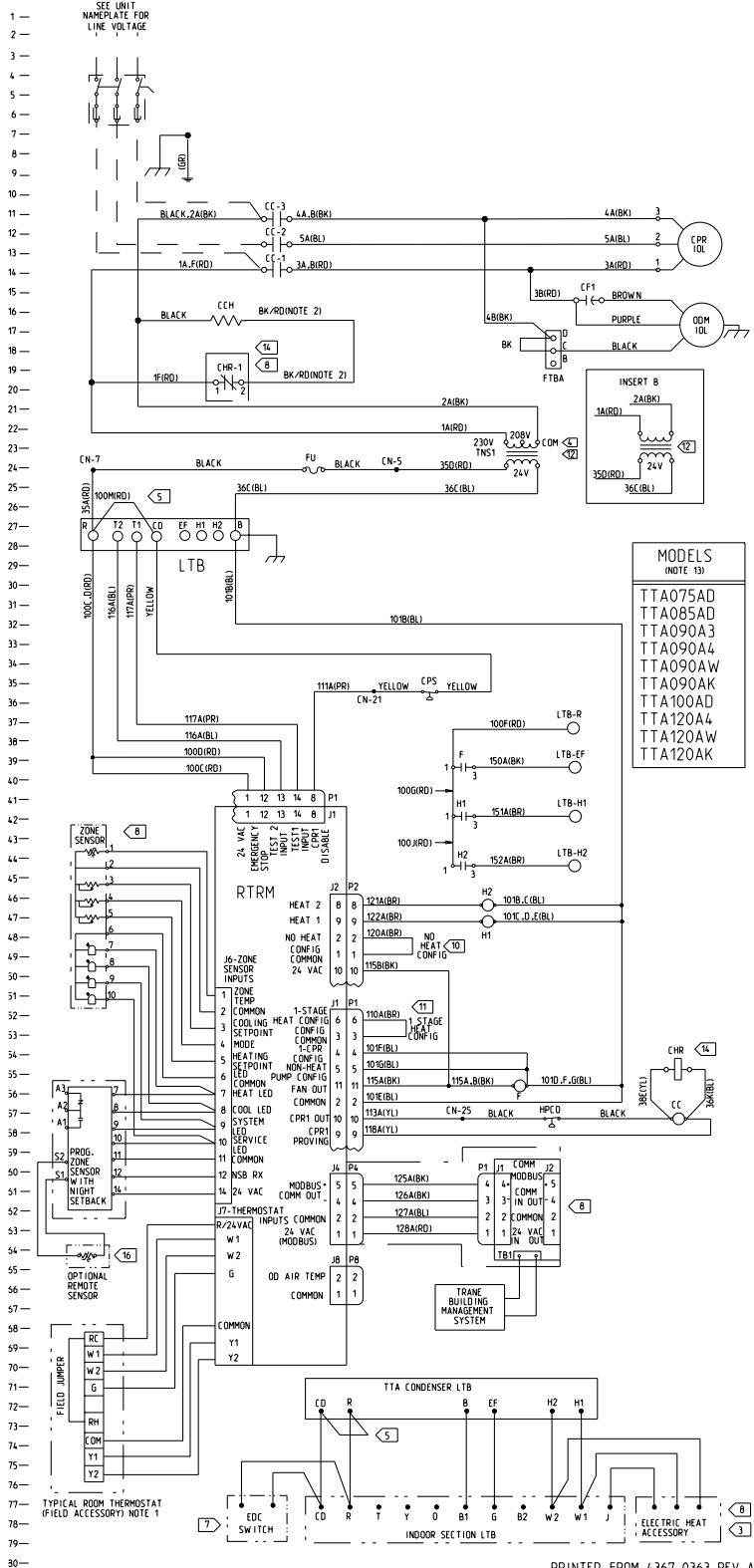
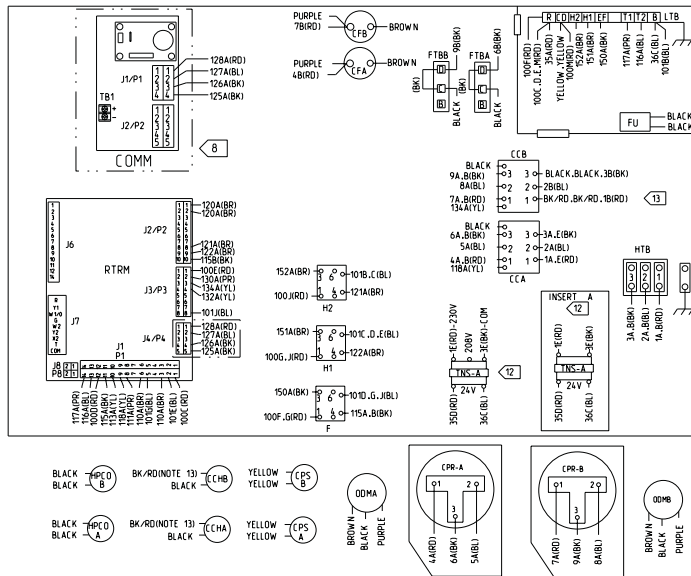


Figure 19. Condensing Unit - Single Compressor: Typical unit wiring diagram. For specific wiring, see individual Service Facts.



DEVICE	DESCRIPTION	LINE
CC	COMPRESSOR CONTACTOR	5, 12
CCA, CEB	COMPRESSOR CONTACTOR COIL	4, 3, 4, 9
CCH	CRANKCASE HEATER	9, 36
CF	OUTDOOR FAN CAPACITOR	8, 15
CN	CONNECTOR OR WIRE NUT	
COMM	COMMUNICATION INTERFACE MODULE	62-67
CPR	COMPRESSOR	6, 13
CPS	COMPRESSOR PROTECTION SWITCH	37, 39
EDC	EVAPORATOR DEFOREST CONTROL	79-80
F	FAN RELAY	4, 1
FTB	FAN TERMINAL BOARD	10, 17
FU	FUSE	27
H1, H2	HEAT RELAYS	37, 39
HPCO	HIGH PRESSURE CUTOUT	44, 49
HTB	HIGH VOLTAGE TERMINAL BLOCK	3
IDL	INTERNAL OVERLOAD	
LTB	LOW VOLTAGE TERMINAL BOARD	29-31
ODM	OUTDOOR FAN MOTOR	10, 17
RTRM	RELATIEL REFRIGERATION MODULE	41-71
TNSA	CONTROL POWER TRANSFORMER	25

NOTES:

- LOW VOLTAGE WIRING MUST BE 18 AWG MINIMUM.
- MAXIMUM EXTERNAL LOW VOLTAGE LOAD 1.8 AMPS 24 V.A.C. DOES NOT INCLUDE ACCESSORIES, BUT DOES INCLUDE INDOOR BLOWER RELAY.
- SEE HEATER ACCESSORY DIAGRAM FOR DETAILS OF HEATER WIRING.
- CONNECTIONS SHOWN ARE FOR 230V/60 HZ/3 PH. WHEN 208V/60 HZ/3 PH OPERATION IS REQUIRED, REMOVE "EIRD" WIRE AT UNIT TRANSFORMER AND RECONNECT TO 208V TRANSFORMER TERMINAL.
- IF EVAPORATOR DEFOREST CONTROL (EDC) IS USED IN INDOOR UNIT, REMOVE JUMPER WIRE ON CONDENSER LOW VOLTAGE BOARD BETWEEN TERMINALS "R" AND "CD".
- DO NOT JUMPER COMPRESSOR PROTECTION SWITCH (CPS) OR THE HIGH PRESSURE CUT-OUT SWITCH (HPCO).
- ON MODELS WITH RTRM BOARDS, INSTALLER MUST MOVE EDC WIRES (IF AIR HANDLER HAS AN EVAPORATOR DEFOREST CONTROL) FROM AIR HANDLER LOW VOLTAGE TERMINAL CONNECTIONS "B2" AND "B1" TO "R" AND "CD".
- ALL COMPONENTS WITH PHANTOM LINES AROUND PERIMETER ARE FIELD INSTALLED ACCESSORIES EXCEPT FOR COMMUNICATION INTERFACE BOARD (COMM) WHICH MAY BE FACTORY INSTALLED ON SOME MODELS.
- IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH WIRING OF THE SAME GAUGE RATED AT 600 VOLTS AND 105°C.
- CUT WIRE 120A TO ENABLE ELECTRIC HEAT.
- CUT WIRE 110A TO CONFIGURE FOR TWO STAGES OF ELECTRIC HEAT.
- CONNECTIONS FOR THE 230V/60HZ/3 PH UNIT ARE SHOWN. FOR 400V., 460V., AND 575V. MODELS, SEE TRANSFORMER CONNECTIONS IN INSERT "A" AND "B".
- AT ALL NOTE 13 REFERENCES, LEAD COLOR IS BK/BR ON TTA180/240BW MODELS, BK/YL ON TTA180B3 MODELS, AND BK/RD ON ALL OTHER MODELS.
- UNIT MODELS WITH A "R", "T", "U" OR "W" IN THE 10TH DIGIT (SEE UNIT NAMEPLATE) ALL USE A RELATIEL MODULE (RTRM). SEE PRODUCT LITERATURE FOR EXPLANATION OF 10TH DIGIT MODEL DESIGNATOR.
- INSTALL OPTIONAL REMOTE SENSOR TO TERMINALS S1 AND S2 WHEN REQUIRED. SEE PROGRAMMABLE ZONE SENSOR / REMOTE PANEL W/NSB LITERATURE FOR OPTION CONFIGURATION.

CAUTION

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 FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

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 L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT ENDOMMAGER L'EQUIPEMENT.

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 LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.
 SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.

WIRE COLOR DESIGNATION			
ABBR	COLOR	ABBR	COLOR
BK	BLACK	PR	PURPLE
BL	BLUE	RD	RED
BR	BROWN	WH	WHITE
GR	GREEN	YL	YELLOW
OR	ORANGE		

<p>⚠ WARNING HAZARDOUS VOLTAGE! DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS AND FOLLOW LOCK OUT AND TAG PROCEDURES BEFORE SERVICING. INSURE THAT ALL MOTOR CAPACITORS HAVE DISCHARGED STORED VOLTAGE. UNITS WITH VARIABLE SPEED DRIVE, REFER TO DRIVE INSTRUCTIONS FOR CAPACITOR DISCHARGE. FAILURE TO DO THE ABOVE BEFORE SERVICING COULD RESULT IN DEATH OR SERIOUS INJURY.</p>	<p>⚠ AVERTISSEMENT TENSION DANGEREUSE! COUPER TOUTES LES TENSIONS ET OUVRIRE LES SECTIONNEURS À DISTANCE. PUIS SUIVRE LES PROCÉDURES DE VERROUILLAGE ET DES ÉTIQUETTES AVANT TOUTE INTERVENTION. VÉRIFIER QUE TOUTS LES CONDENSATEURS DES MOTEURS SONT DÉCHARGÉS. DANS LE CAS D'UNITÉS COMPORTANT DES ENTRAINEMENTS À VITESSE VARIABLE, SE REPORTER AUX INSTRUCTIONS DE L'ENTRAÎNEMENT POUR DÉCHARGER LES CONDENSATEURS. NE PAS RESPECTER CES MESURES DE PRÉCAUTION PEUT ENTRAINER DES BLESSURES GRAVES POUVANT ÊTRE MORTELLES.</p>	<p>⚠ ADVERTENCIA ¡VOLTAJE PELIGROSO! DESCONECTE TODA LA ENERGÍA ELÉCTRICA, INCLUIDO LAS DESCONEXIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. ASEGÚRESE DE QUE TODOS LOS CAPACITORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON EJE DE DIRECCIÓN DE VELOCIDAD VARIABLE, CONSULTE LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR. EL NO REALIZAR LO ANTERIORMENTE INDICADO, PUEDE OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.</p>
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Figure 20. Condensing Unit - Dual Compressor: Typical unit wiring diagram. For specific wiring, see individual Service Facts.

Dimensional Data

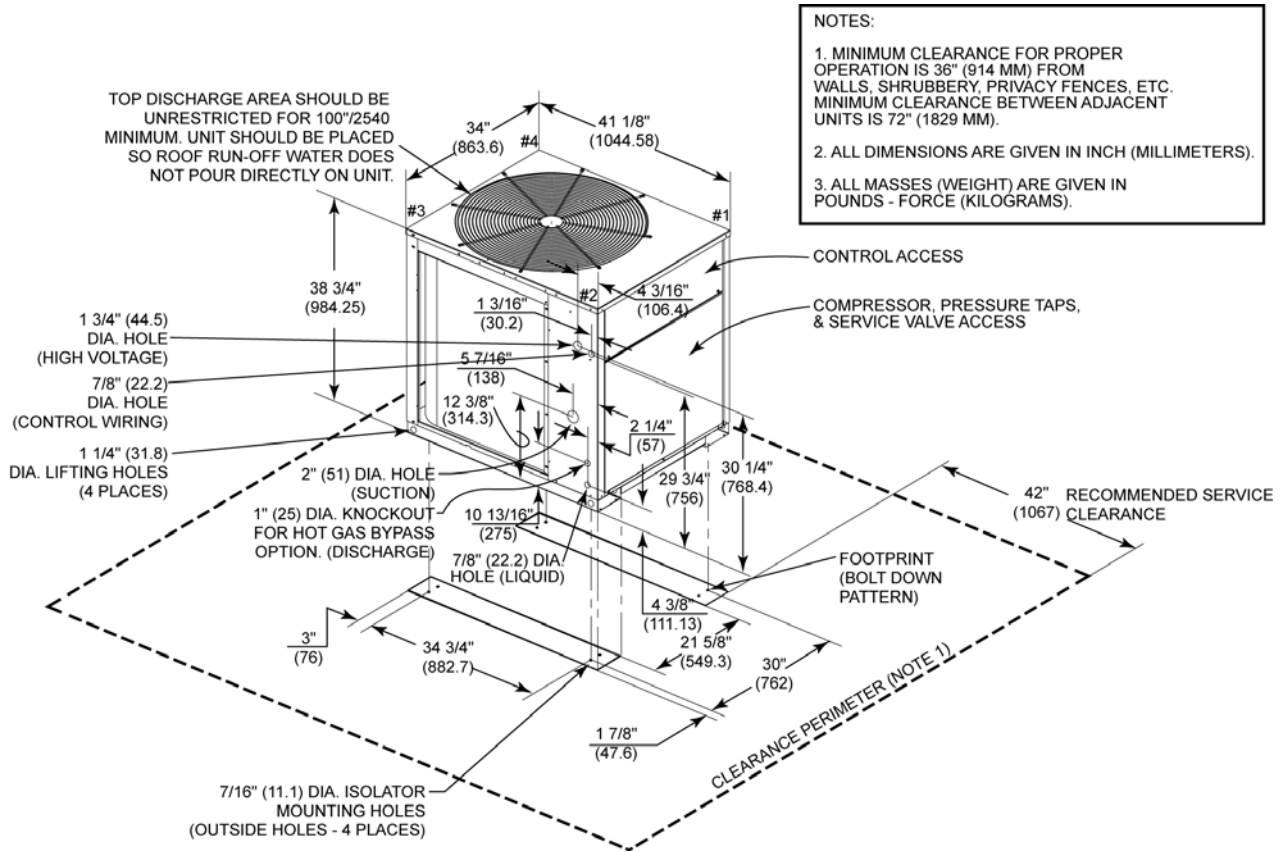


Figure 22. 7 1/2 Tons TTA090A Condensing Unit

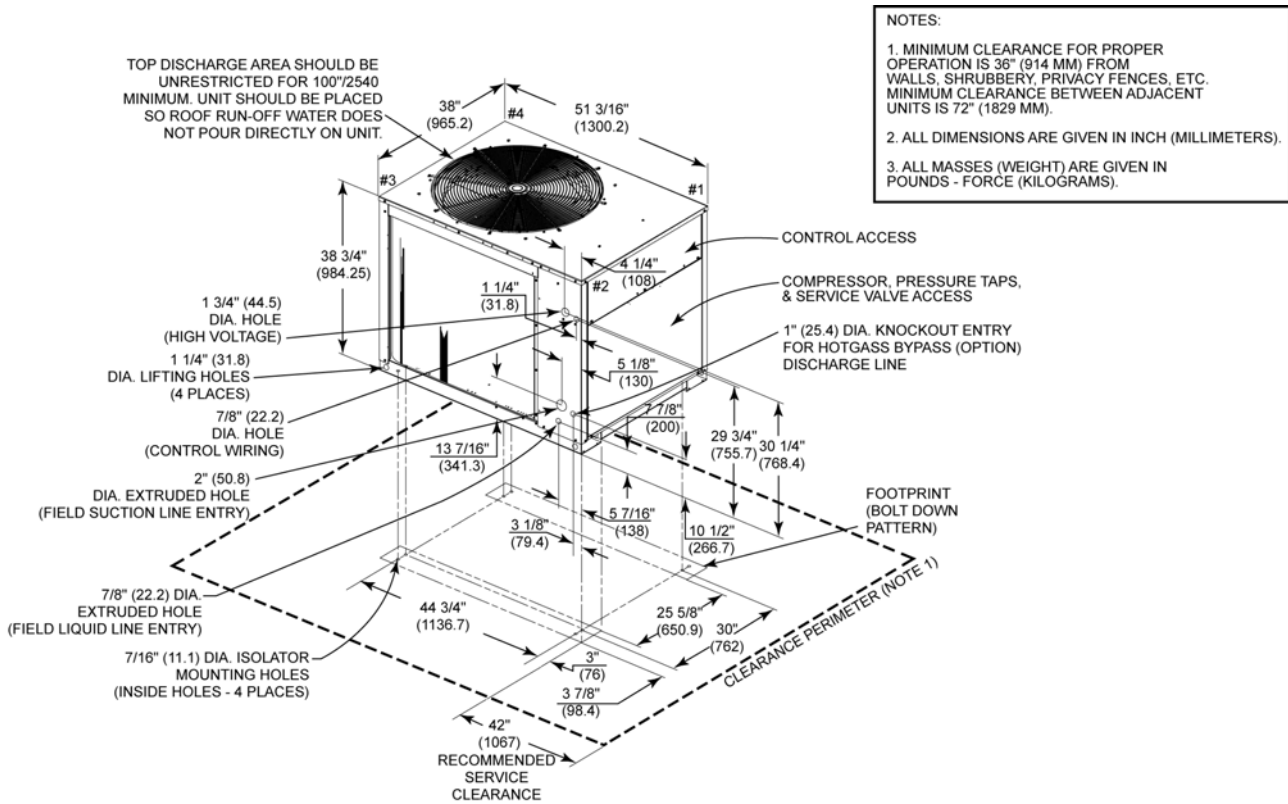


Figure 23. 10 Tons TTA120A Condensing Unit

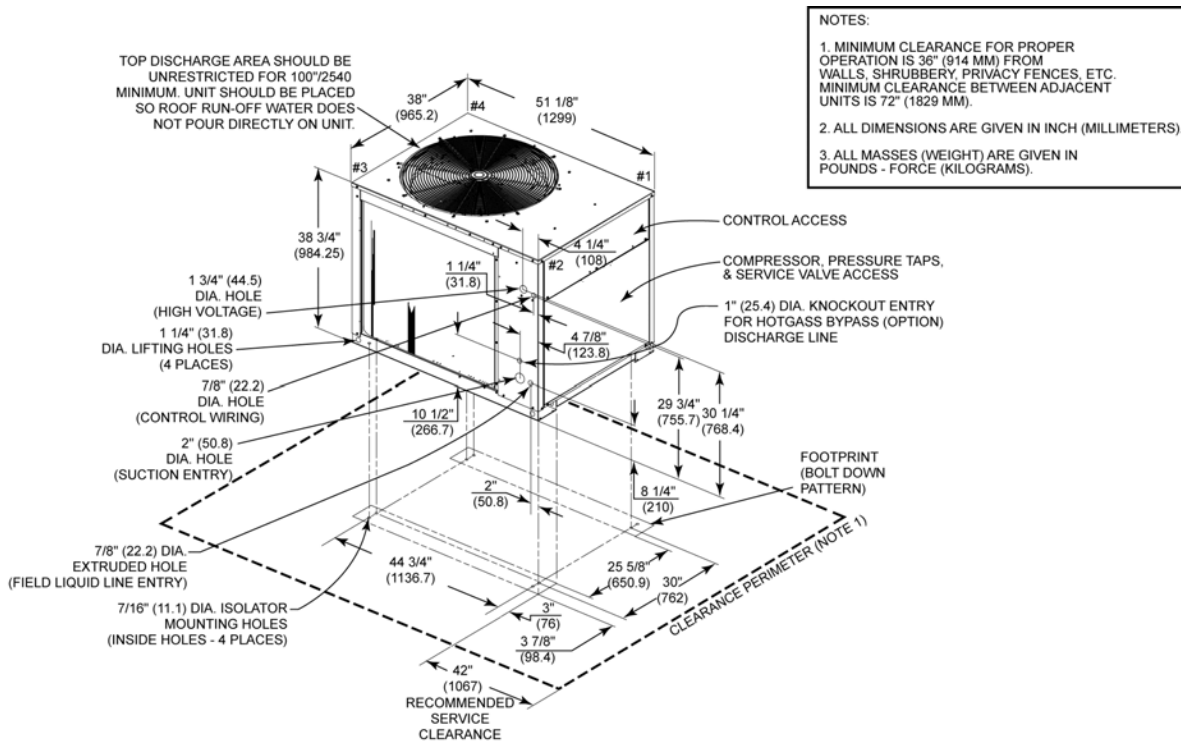


Figure 24. 10 Tons TTA120C Condensing Unit

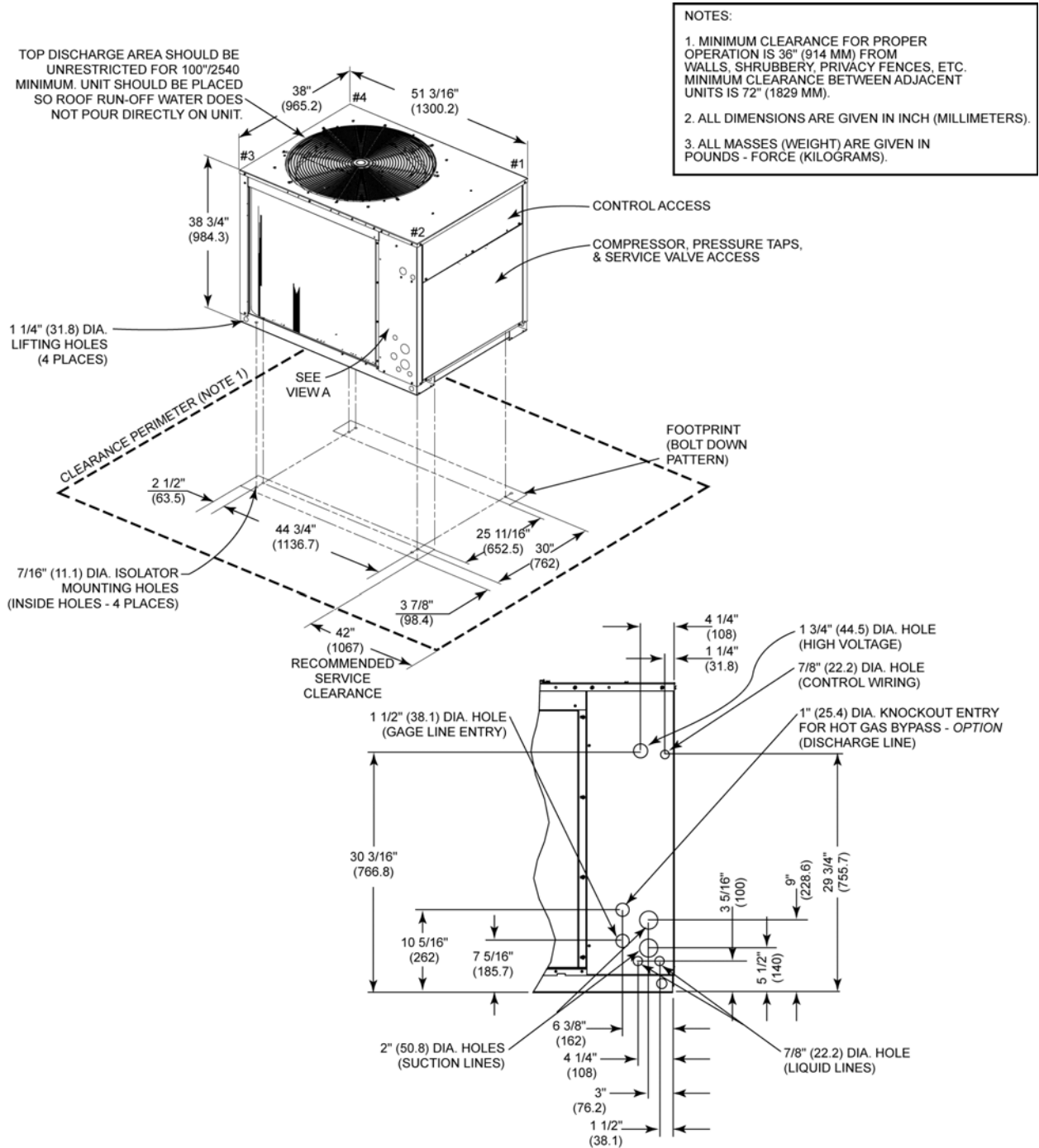


Figure 25. 10 and 12½ Tons TTA120B and TTA150B Condensing Unit

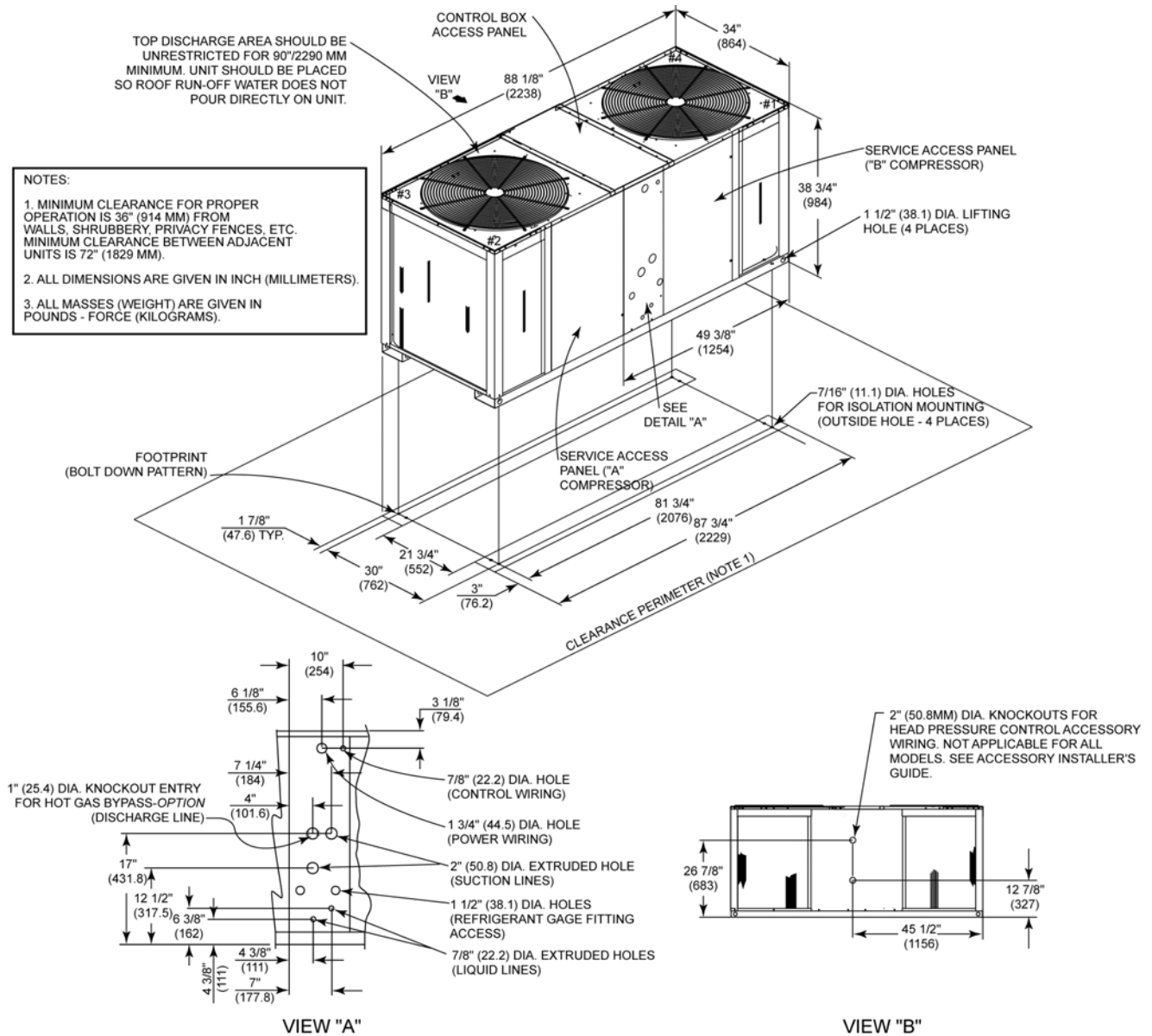


Figure 26. 15 Tons TTA180B Condensing Unit

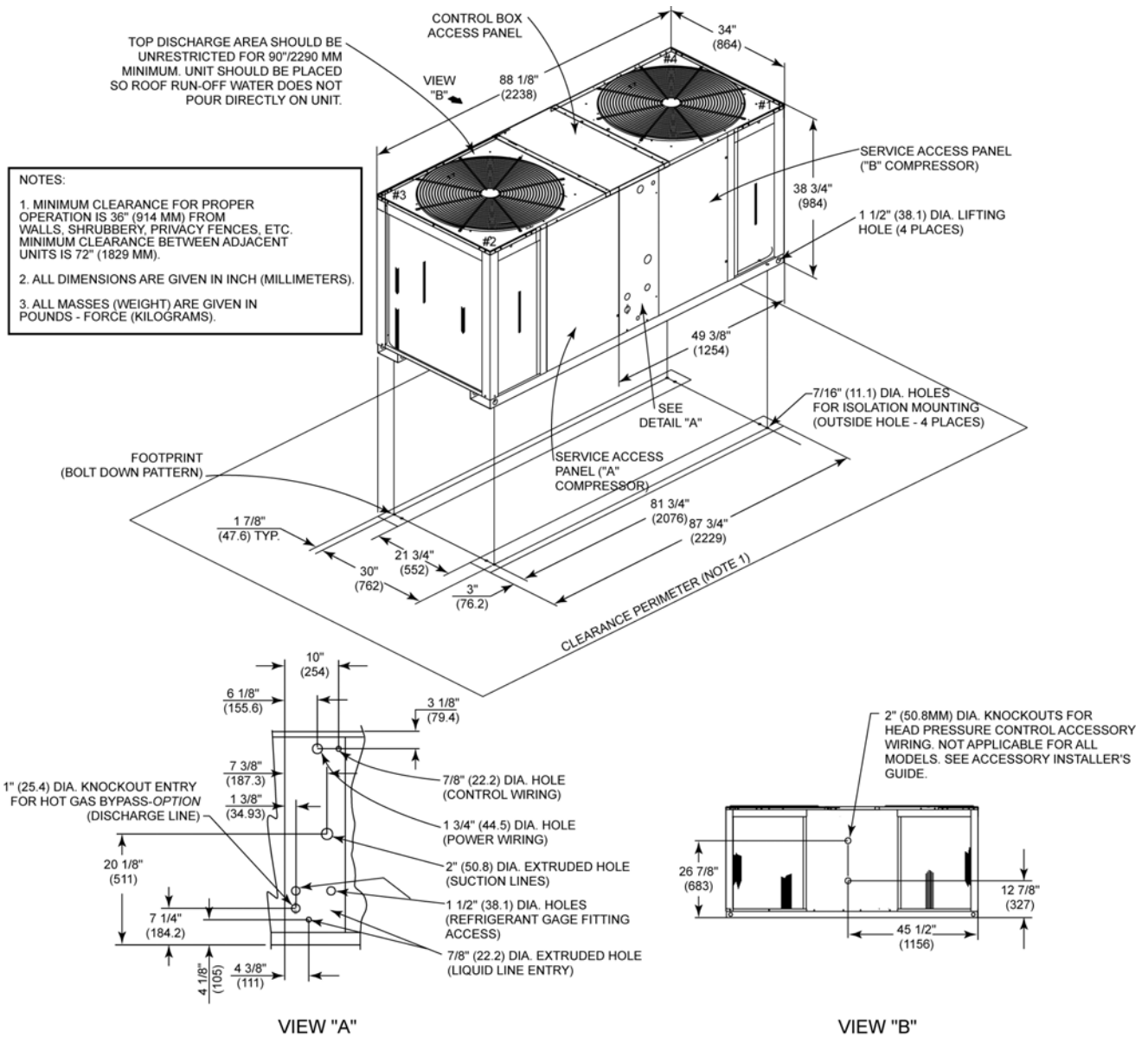


Figure 27. 15 Tons TTA180C Condensing Unit

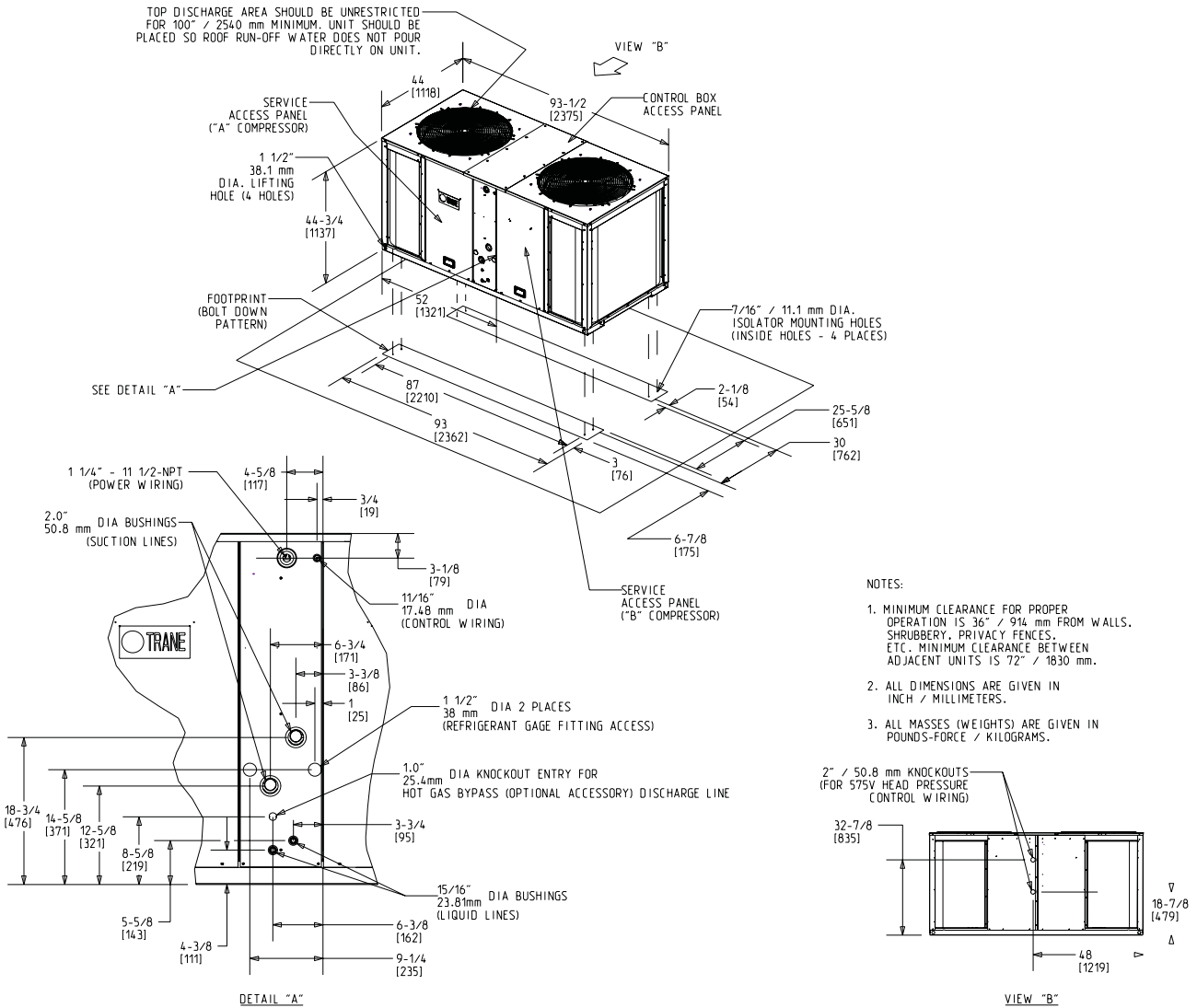


Figure 28. 20 Tons TTA240B Condensing Unit

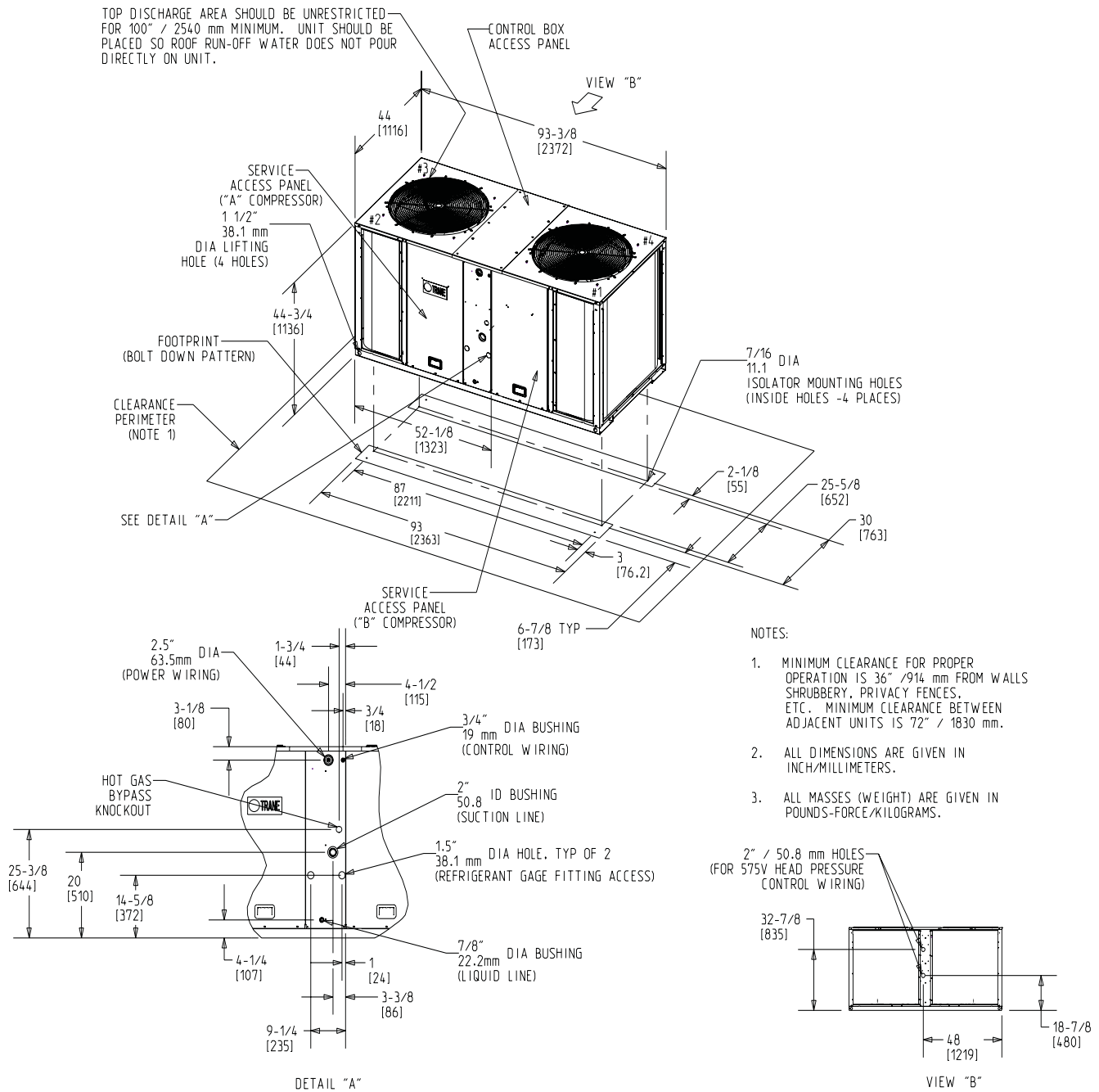
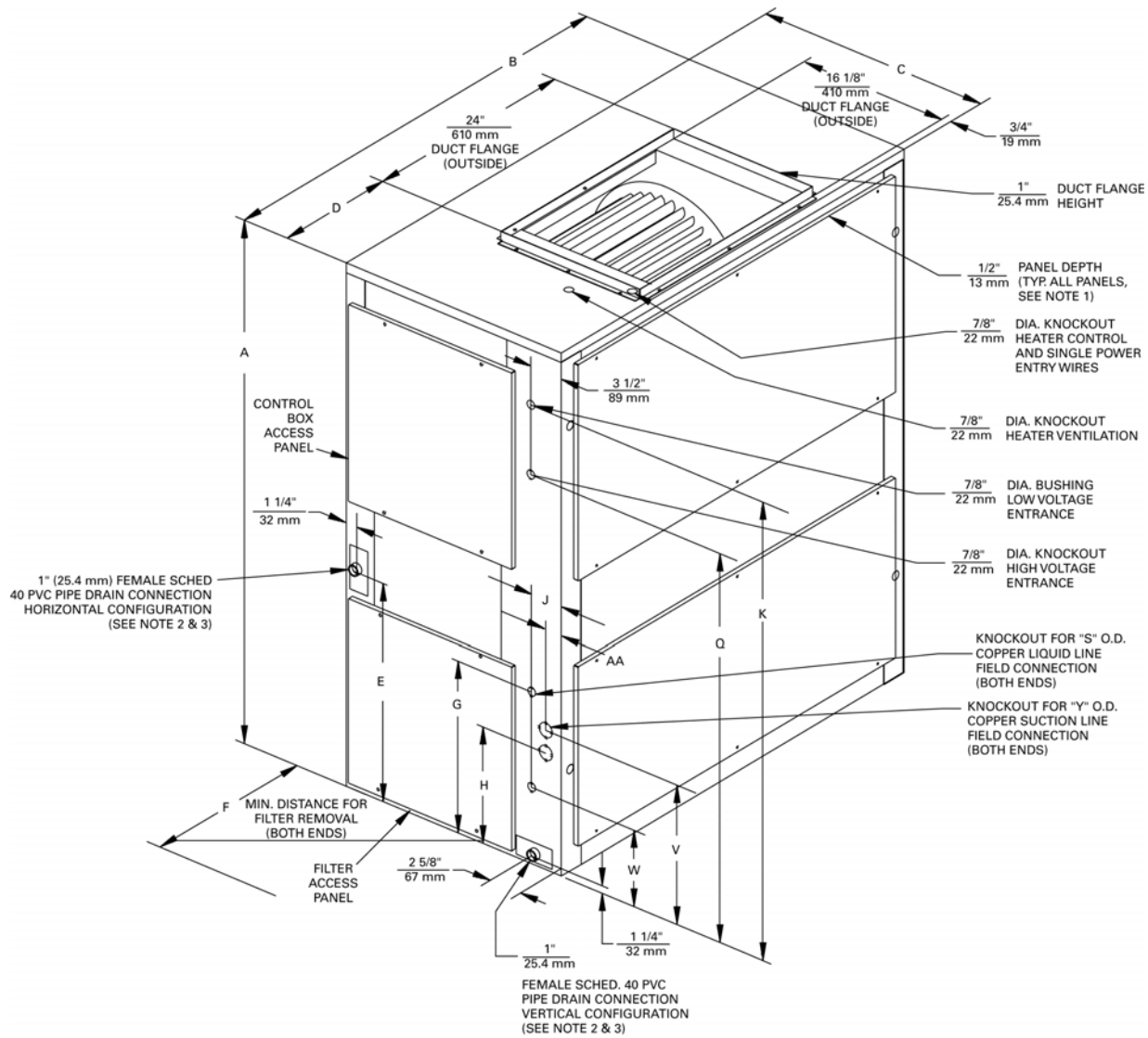


Figure 29. 20 Tons TTA240F Condensing Unit



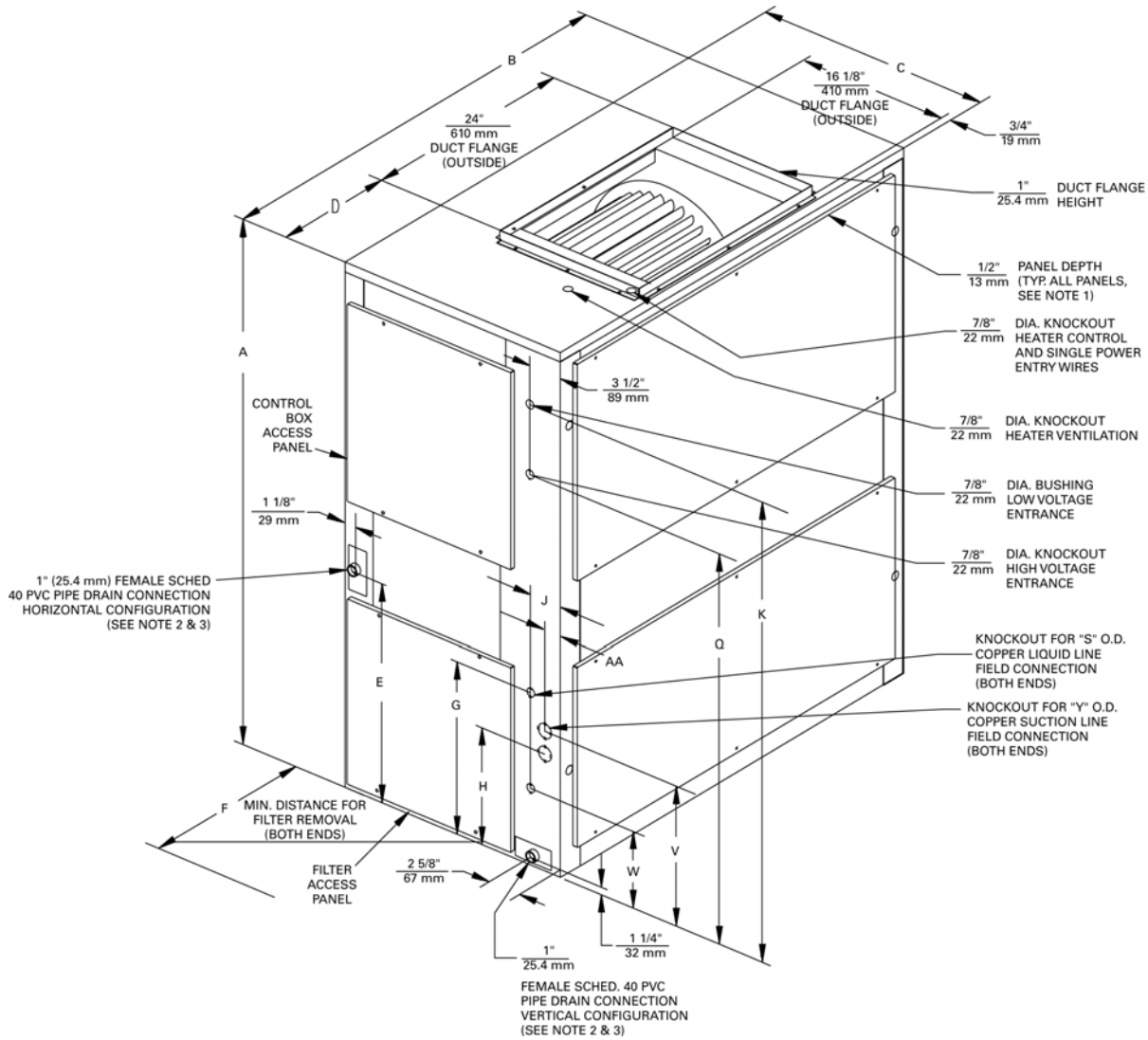
NOTE:

1. LENGTH, WIDTH, AND HEIGHT DIMENSIONS DO NOT INCLUDE 1/2" ACCESS PANEL DEPTH.
2. REMOVABLE DRAIN PAN AND ATTACHED DRAIN CONNECTION MAY BE INSTALLED ON EITHER END OF UNIT IN EITHER THE VERTICAL OR HORIZONTAL CONFIGURATION. PLASTIC DRAIN PAN ACCESS PLATE ON THE END OF UNIT OPPOSITE DRAIN CONNECTION MUST BE REMOVED TO SLIDE DRAIN PAN OUT OF UNIT FOR CLEANING. ACCESS PLATE MUST BE RE-INSTALLED AFTER SLIDING DRAIN PAN BACK INTO UNIT.
3. IF PERIODIC DRAIN PAN CLEANING IS REQUIRED, ALLOW ROOM FOR PARTIAL REMOVAL OF PAN OR DRAIN CONNECTION END OF UNIT.

Figure 30. 5 Tons TWE060A, 060B Air Handlers. All dimensions are in inches (millimeters).

Table 56. Air Handler Dimensions (in.)

Tons	Model No.	A	B	C	D	E	F	G	H	J	K	Q	S	V	W	Y	AA
5	TWE060A	48	38	22	8	19 1/2	26	15 7/8	14 1/8	1 7/8	42 1/8	34 5/8	3/8	-	-	1 1/8	1 7/8
5	TWE060B	48	38	22	8	19 1/2	26	16 1/4	13 1/4	1 1/8	42 1/8	34 5/8	5/16	14 3/4	11 1/8	3/4	2



NOTE:

1. LENGTH, WIDTH, AND HEIGHT DIMENSIONS DO NOT INCLUDE 1/2" ACCESS PANEL DEPTH.
2. REMOVABLE DRAIN PAN AND ATTACHED DRAIN CONNECTION MAY BE INSTALLED ON EITHER END OF UNIT IN EITHER THE VERTICAL OR HORIZONTAL CONFIGURATION. PLASTIC DRAIN PAN ACCESS PLATE ON THE END OF UNIT OPPOSITE DRAIN CONNECTION MUST BE REMOVED TO SLIDE DRAIN PAN OUT OF UNIT FOR CLEANING. ACCESS PLATE MUST BE RE-INSTALLED AFTER SLIDING DRAIN PAN BACK INTO UNIT.
3. IF PERIODIC DRAIN PAN CLEANING IS REQUIRED, ALLOW ROOM FOR PARTIAL REMOVAL OF PAN OR DRAIN CONNECTION END OF UNIT.

Figure 31. 7½ & 10 Ton TWE090A, 120A; TWE090B, 120B Air Handlers. All dimensions are in inches (millimeters).

Table 57. Air Handler Dimensions (in.)

Model		A	B	C	D	E	F	G	H	J	K	Q	S	V	W	Y	AA
Tons	No.																
7½	TWE090A	54	47 1/2	25	11 3/4	22 3/8	22	-	17 3/4	4	45 1/4	38 1/8	1/2	-	15	1 3/8	2
7½	TWE090B	54	47 1/2	25	11 3/4	22 3/8	22	20 1/8	16	2 1/8	45 1/4	38 1/8	3/8	18 3/4	14	1 1/8	2 1/8
10	TWE120A	54	63 1/2	25	19 3/4	22 3/8	22	-	17 3/4	4	45 1/4	38 1/8	1/2	-	15	1 3/8	2
10	TWE120B	54	63 1/2	25	19 3/4	22 3/8	22	20 1/8	16	2 1/8	45 1/4	38 1/8	3/8	18 3/4	14	1 1/8	2 1/8

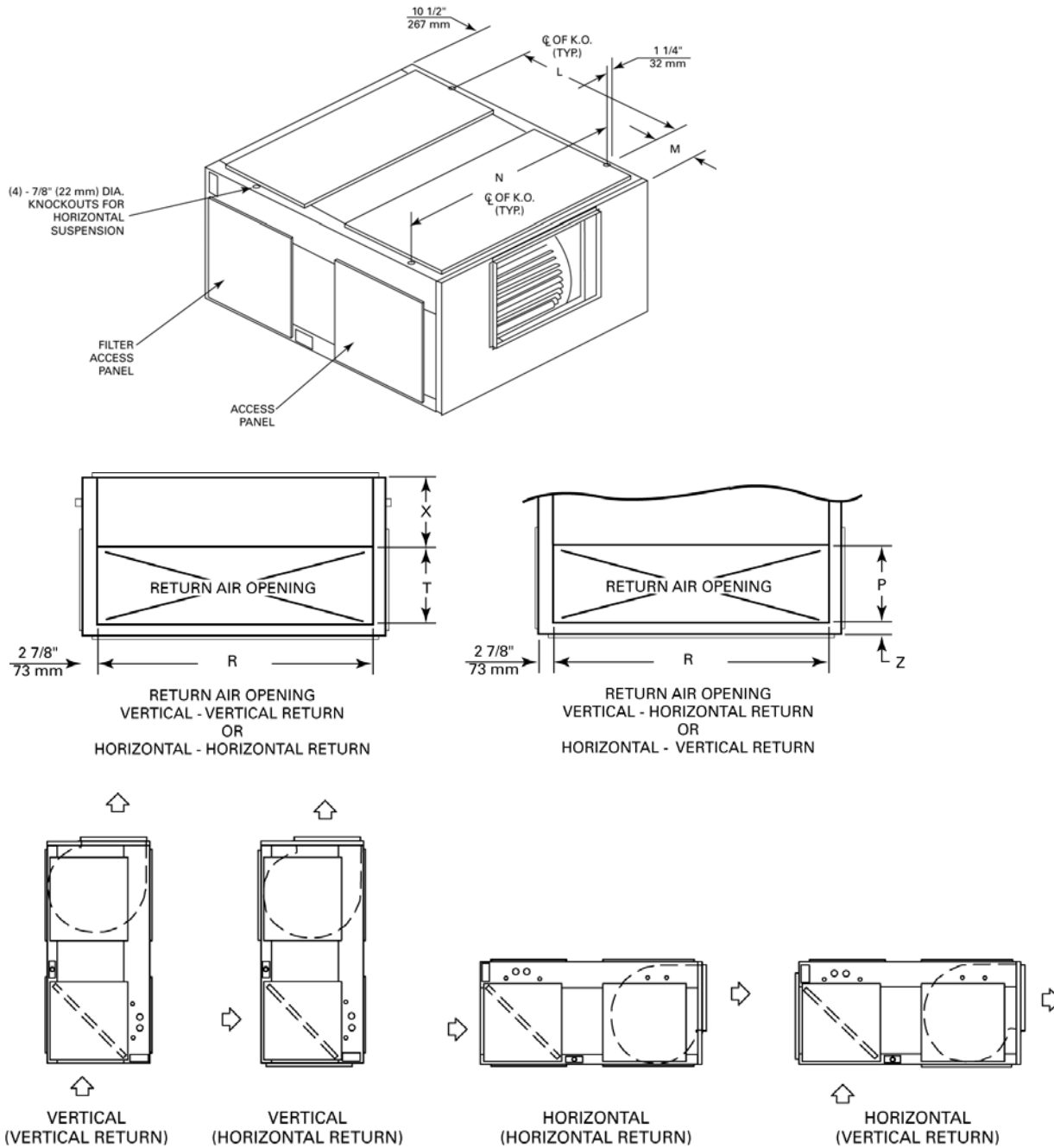
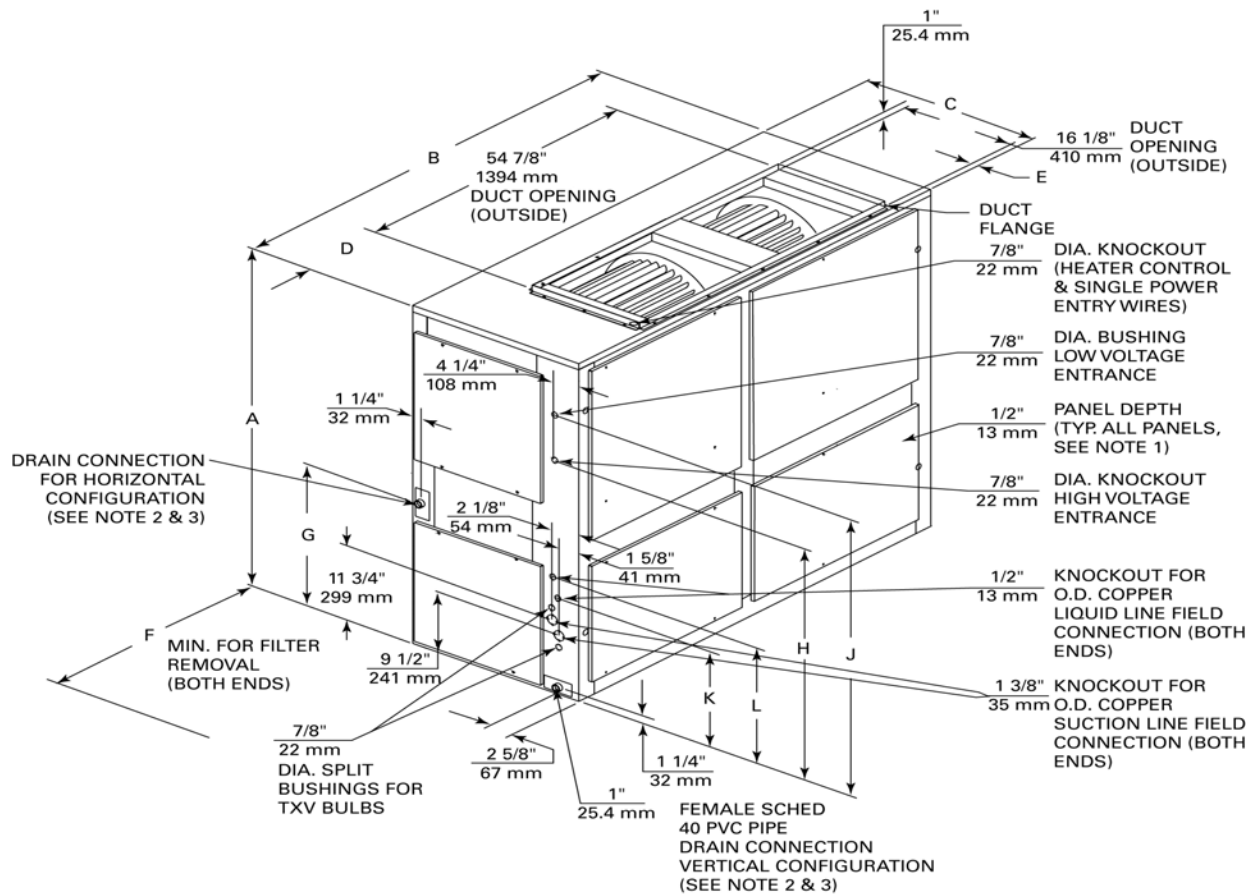


Figure 32. 5 - 10 Tons TWE060A,090A,120A; TWE060B,090B,120B Air Handlers. All dimensions are in inches (millimeters)

Table 58. Air Handler Dimensions (in.)

Tons	Model No.	L	M	N	P	R	T	X	Z
5	TWE060A,060B	34 5/8	2 7/8	35 5/8	12 1/4	32 1/4	12 1/2	7 5/8	2
7½	TWE090A, 090B	36 7/8	6 5/8	45 1/8	16 1/8	41 3/4	16 1/4	6 7/8	1 3/4
10	TWE120A, 120B	36 7/8	6 5/8	61 1/8	16 1/8	57 3/4	16 1/4	6 7/8	1 3/4



NOTE:

1. LENGTH, WIDTH, AND HEIGHT DIMENSIONS DO NOT INCLUDE 1/2" ACCESS PANEL DEPTH.
2. REMOVABLE DRAIN PAN AND ATTACHED DRAIN CONNECTION MAY BE INSTALLED ON EITHER END OF UNIT IN EITHER THE VERTICAL OR HORIZONTAL CONFIGURATION. PLASTIC DRAIN PAN ACCESS PLATE ON THE END OF UNIT OPPOSITE DRAIN CONNECTION MUST BE REMOVED TO SLIDE DRAIN PAN OUT OF UNIT FOR CLEANING. ACCESS PLATE MUST BE RE-INSTALLED AFTER SLIDING DRAIN PAN BACK INTO UNIT.
3. IF PERIODIC DRAIN PAN CLEANING IS REQUIRED, ALLOW ROOM FOR PARTIAL REMOVAL OF PAN OR DRAIN CONNECTION END OF UNIT.

Figure 33. 15 Tons TWE180 Air Handlers. All dimensions are in inches (millimeters)

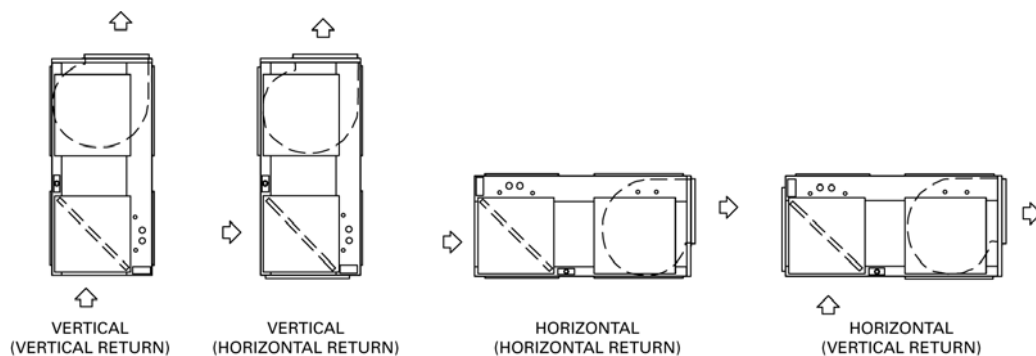


Figure 34.

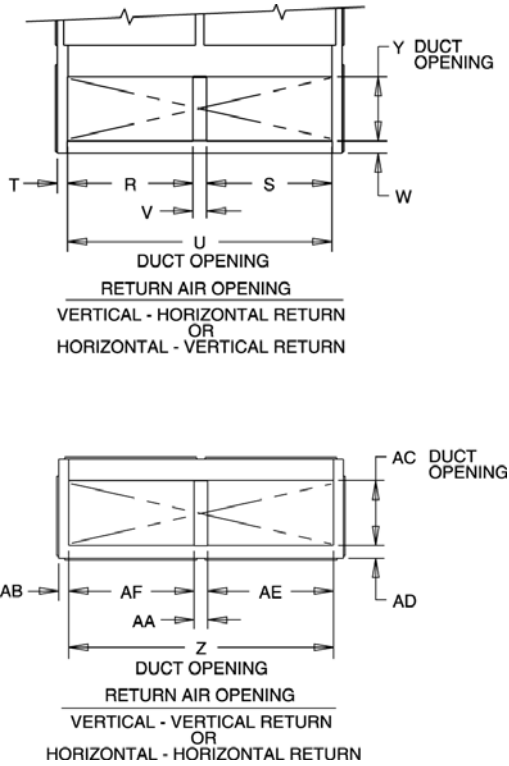


Figure 35.

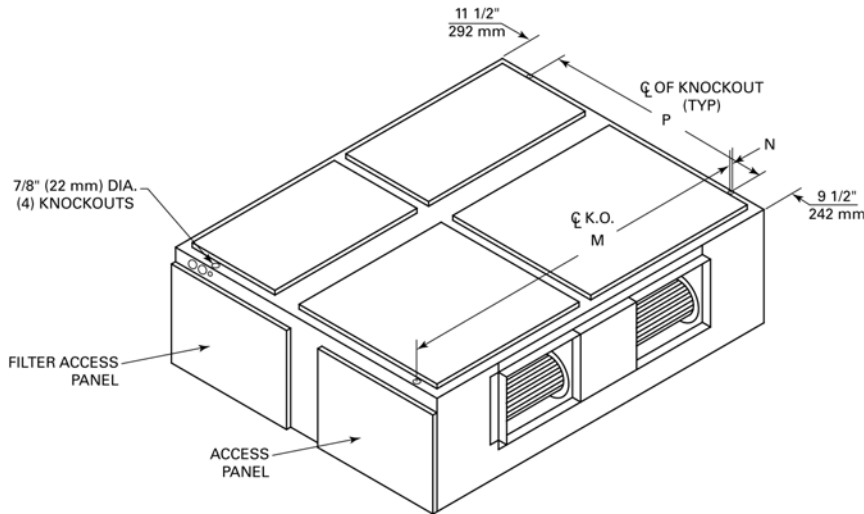
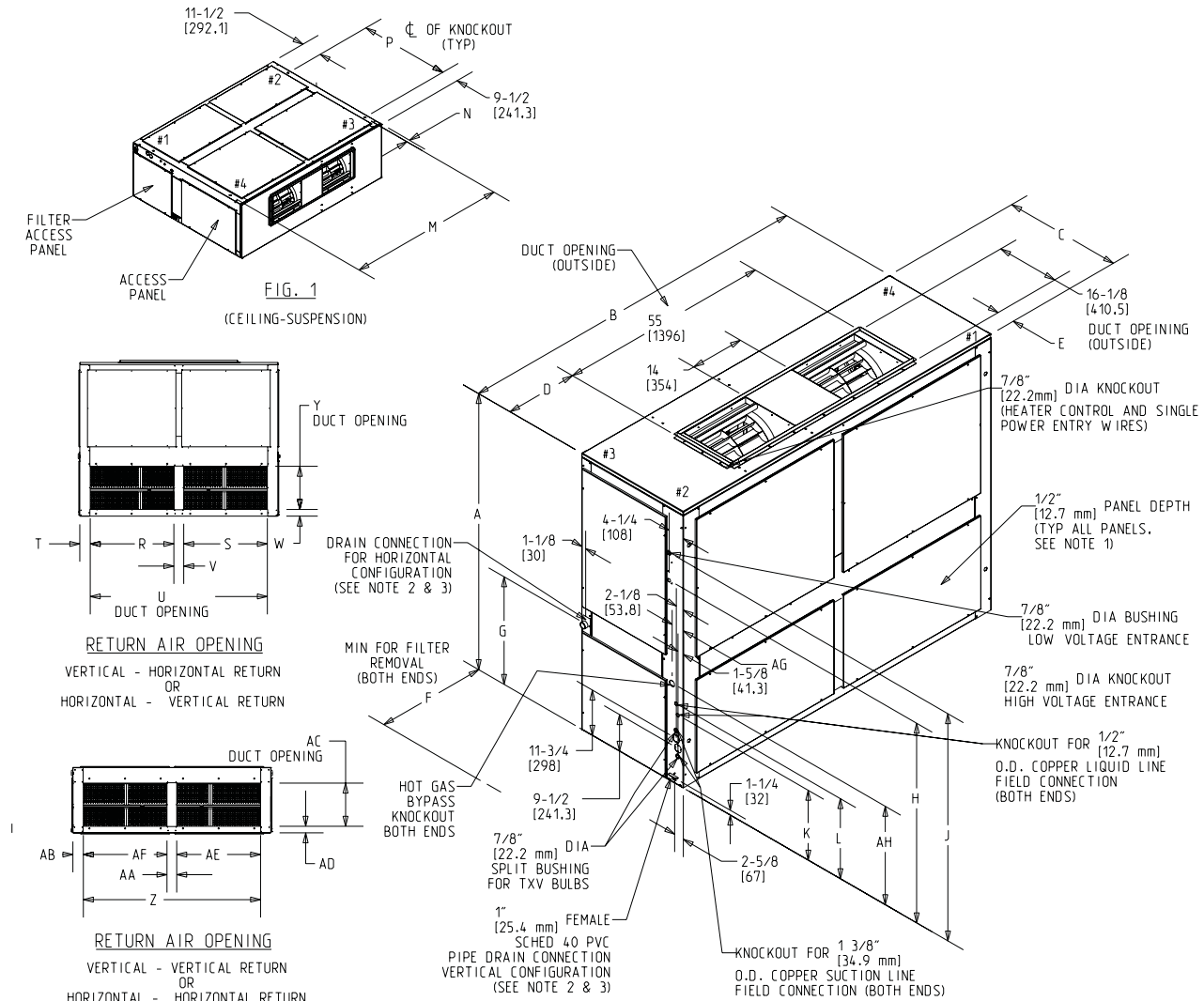


Figure 36. 15 Tons TWE 180 Air Handlers. All dimensions are in inches (millimeters)

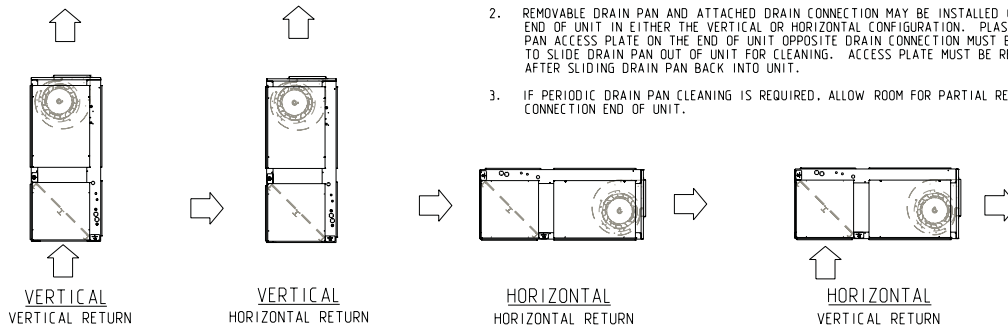
Table 59. Electrical Characteristics - Compressor and Condenser Fan Motors - 60 Hz

Tons	Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R
15	TWE180B	69	79 1/2	27 5/8	12 3/8	1 5/8	26	25 1/8	49 1/8	56 1/4	15 1/2	19 1/2	77 1/4	1 1/4	48	35
Tons	Model No.	S	T	U	V	W	Y	Z	AA	AB	AC	AD	AE	AF		
15	TWE180B	35	2 7/8	73 7/8	3 3/4	3 3/8	18	73 7/8	3 3/4	2 7/8	18	3 5/8	35	35		



NOTES:

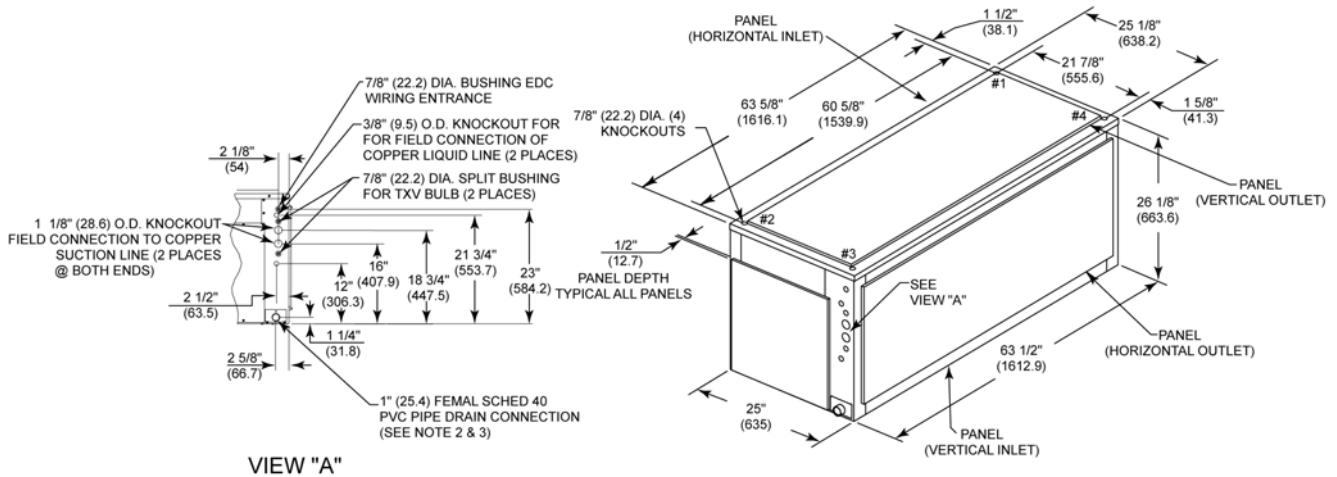
1. LENGTH, WIDTH, AND HEIGHT DIMENSIONS DO NOT INCLUDE 1/2" ACCESS PANEL DEPTH.
2. REMOVABLE DRAIN PAN AND ATTACHED DRAIN CONNECTION MAY BE INSTALLED ON EITHER END OF UNIT IN EITHER THE VERTICAL OR HORIZONTAL CONFIGURATION. PLASTIC DRAIN PAN ACCESS PLATE ON THE END OF UNIT OPPOSITE DRAIN CONNECTION MUST BE REMOVED TO SLIDE DRAIN PAN OUT OF UNIT FOR CLEANING. ACCESS PLATE MUST BE RE-INSTALLED AFTER SLIDING DRAIN PAN BACK INTO UNIT.
3. IF PERIODIC DRAIN PAN CLEANING IS REQUIRED, ALLOW ROOM FOR PARTIAL REMOVAL OF PAN ON DRAIN CONNECTION END OF UNIT.



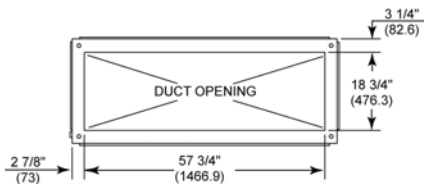
MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R
TWE200B & E	71 7/8"	92 5/8"	30 1/2"	18 7/8"	4 1/2"	28 1/2"	28"	51 7/8"	59 1/8"	18 1/8"	20 7/8"	89 1/4"	1 3/4"	50 7/8"	39 1/8"
TWE240B & E	1825.6 mm	2352.7 mm	774.7 mm	479.4 mm	114.3 mm	723.9 mm	711.2 mm	1317.6 mm	1501.8 mm	460.4 mm	530.2 mm	2267 mm	44.45 mm	1292.2 mm	993.8 mm

MODEL	S	T	U	V	W	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
TWE200B & E	39 1/8"	4 7/8"	82 7/8"	4 5/8"	3 1/8"	20 1/8"	82 7/8"	4 5/8"	4 7/8"	20 1/8"	3 1/8"	39 1/8"	39 1/8"	3 3/8"	25 1/2"
TWE240B & E	993.8 mm	123.8 mm	2105.0 mm	117.5 mm	79.4 mm	511.2 mm	2105.0 mm	117.5 mm	123.8 mm	511.2 mm	79.4 mm	993.8 mm	993.8 mm	85.7 mm	647.7 mm

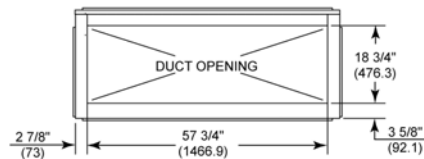
Figure 37. 20 Tons TWE240B and TWE240E Air Handlers



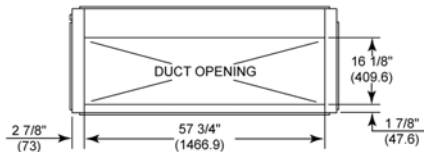
- NOTES:**
- LENGTH, WIDTH AND HEIGHT DIMENSIONS DO NOT INCLUDE 1/2" ACCESS PANEL DEPTH.
 - REMOVABLE DRAIN PAN AND ATTACHED DRAIN CONNECTION MAY BE INSTALLED ON EITHER END OF THE UNIT. PLASTIC DRAIN PAN ACCESS PLATE ON THE END OF UNIT OPPOSITE DRAIN CONNECTION MUST BE REMOVED TO SLIDE PAN OUT OF THE UNIT FOR CLEANING. ACCESS PLATE MUST BE RE-INSTALLED AFTER SLIDING DRAIN PAN BACK INTO THE UNIT.
 - IF PERIODIC DRAIN PAN CLEANING IS REQUIRED, ALLOW ROOM FOR PARTIAL REMOVAL OF PAN ON DRAIN CONNECTION END OF UNIT.



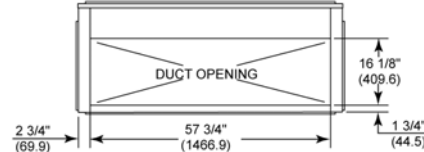
VERTICAL OUTLET (TOP VIEW)



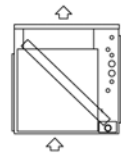
HORIZONTAL OUTLET (SIDE VIEW)



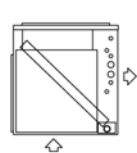
VERTICAL INLET (BOTTOM VIEW)



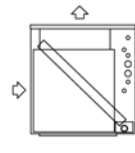
HORIZONTAL INLET (SIDE VIEW)



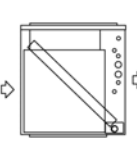
VERTICAL INLET VERTICAL OUTLET



VERTICAL INLET HORIZONTAL OUTLET

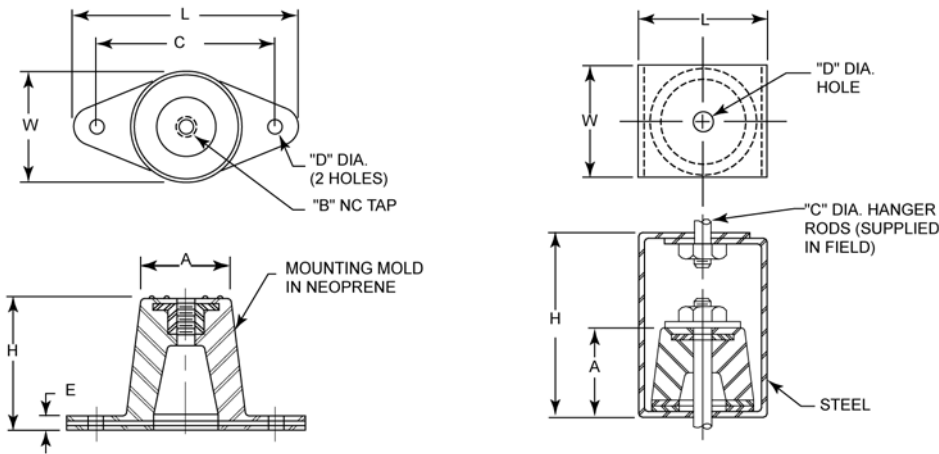


HORIZONTAL INLET VERTICAL OUTLET



HORIZONTAL INLET HORIZONTAL OUTLET

Figure 38. 10 Tons TXE120B Cooling Coil



BAYISLT003, 004, 005, 009, 010

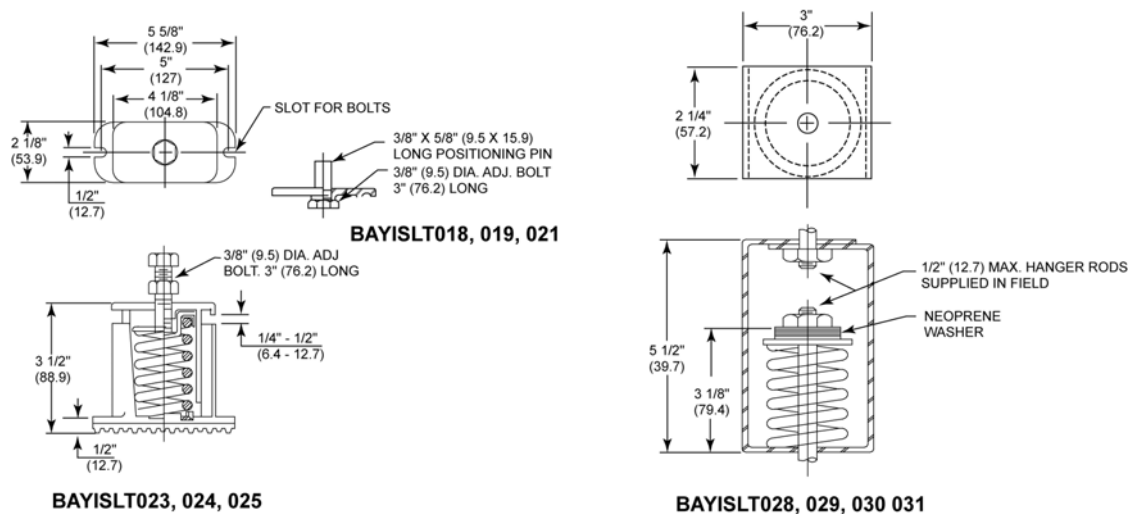
BAYISLT012, 013, 014, 015, 016

Figure 39. 5-20 Tons Rubber Isolators

Table 60. Isolator Dimensions (in.)

Model No.	L	W	H	A	B	C	D	E
BAYISLT003	3-1/8	1-3/4	1-1/4	1-1/4	3/8	2-3/8	3/8	1/4
BAYISLT004								
BAYISLT005								
BAYISLT009	3-7/8	2-3/8	1-3/4	1-3/4	3/8	3	3/8	1/4
BAYISLT010								
BAYISLT013								
BAYISLT014	2-1/4	2	3	1-3/8	3/4	3/8	1/2	—
BAYISLT015 ⁽ⁱ⁾								
BAYISLT012								
BAYISLT015 ⁽ⁱ⁾	3	2-1/4	4-1/2	1-7/8	1/4	5/8	3/4	—
BAYISLT016								

⁽ⁱ⁾ BAYISLT015 contains quantity 2 of the 2 1/4 x 2 x 3 isolators and quantity 3 of the 3 x 2 1/4 x 4 1/2 isolators.



BAYISLT018, 019, 021

BAYISLT028, 029, 030 031

BAYISLT023, 024, 025

Figure 40. 5-20 Ton Spring Isolators

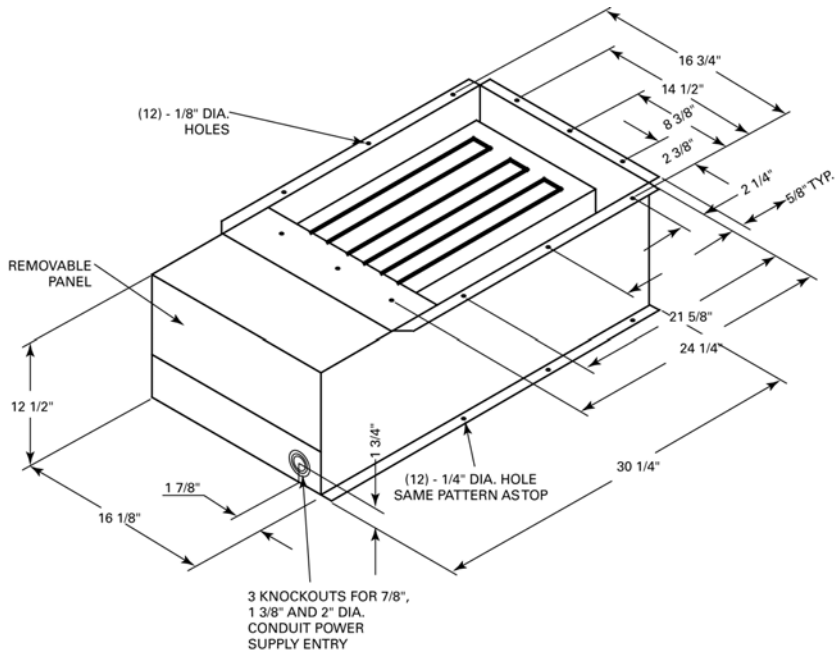


Figure 41. Electric Heater for 5, 7½ and 10 Ton Air Handlers. All dimensions are in inches.

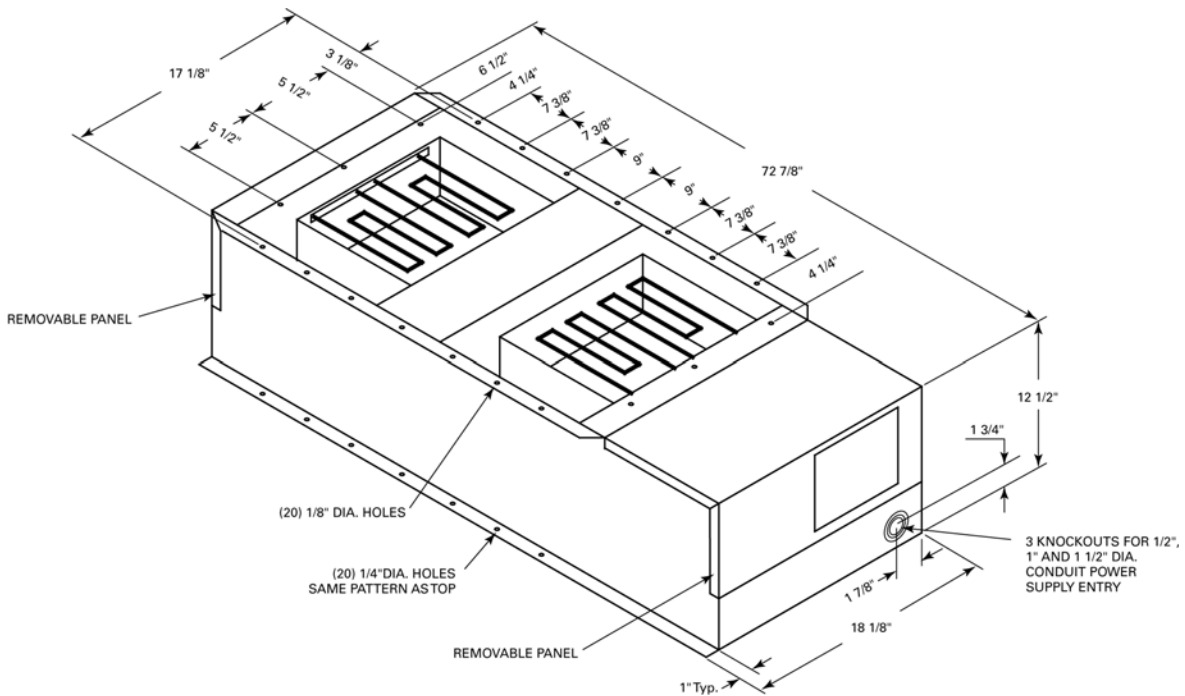


Figure 42. Electric Heater for 15 and 20 Ton Air Handlers. All dimensions are in inches.

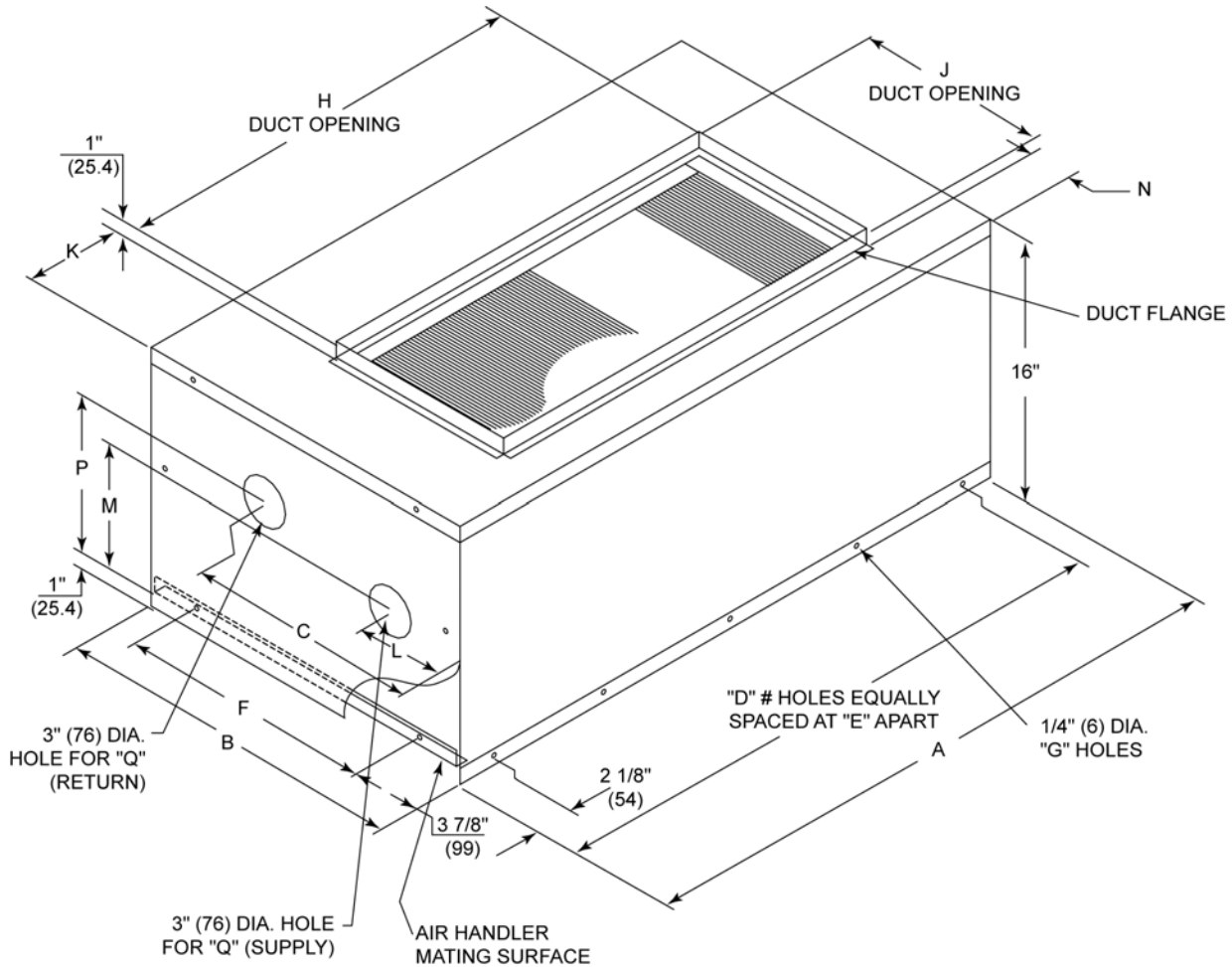


Figure 43. Hot Water Coil. All dimensions are in inches (millimeters).

Table 61. Hot Water Coil Dimensions (in.)

Tons	Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q ⁽¹⁾
5	BAYWATRO17	38 (965)	22 1/8 (562)	13 11/32 (339)	5 (127)	9 (229)	14 (356)	14 (356)	26 (660)	12 (305)	6 (152)	4 11/32 (110)	8 1/4 (210)	2 7/8 (73)	10 1/2 (267)	2 NPT (51) NPT
7½	BAYWATRO18	47 5/8 (1210)	25 1/8 (638)	15 19/32 (396)	5 (127)	10 7/8 (276)	17 1/8 (435)	14 (356)	30 (762)	18 (457)	8 7/8 (225)	8 3/32 (206)	10 3/8 (264)	2 7/8 (73)	7 7/8 (200)	2 1/2 NPTI (64) NPTI
10	BAYWATRO19	63 5/8 (1616)	25 1/8 (638)	15 19/32 (396)	6 (152)	11 7/8 (302)	17 1/8 (435)	16 (406)	36 (914)	18 (457)	13 7/8 (352)	8 3/32 (206)	10 3/8 (264)	2 7/8 (73)	7 7/8 (200)	2 1/2 NPTI (64) NPTI
15	BAYWATRO20	79 5/8 (2022)	27 3/4 (705)	14 7/16 (367)	6 (152)	15 1/8 (384)	19 3/4 (502)	16 (406)	51 (1295)	18 (457)	14 1/4 (362)	6 15/16 (176)	9 1/2 (241)	1 7/8 (48)	7 (178)	2 1/2 NPTI (64) NPTI
20	BAYWATRO21	92 5/8 (2353)	30 5/8 (778)	16 3/8 (416)	7 (178)	14 3/4 (375)	22 1/2 (572)	18 (457)	64 (1626)	18 (457)	14 1/4 (362)	8 7/8 (225)	9 1/2 (241)	3 3/4 (95)	7 (178)	2 1/2 NPTI (64) NPTI

⁽¹⁾ Note internal vs. external pipe threads

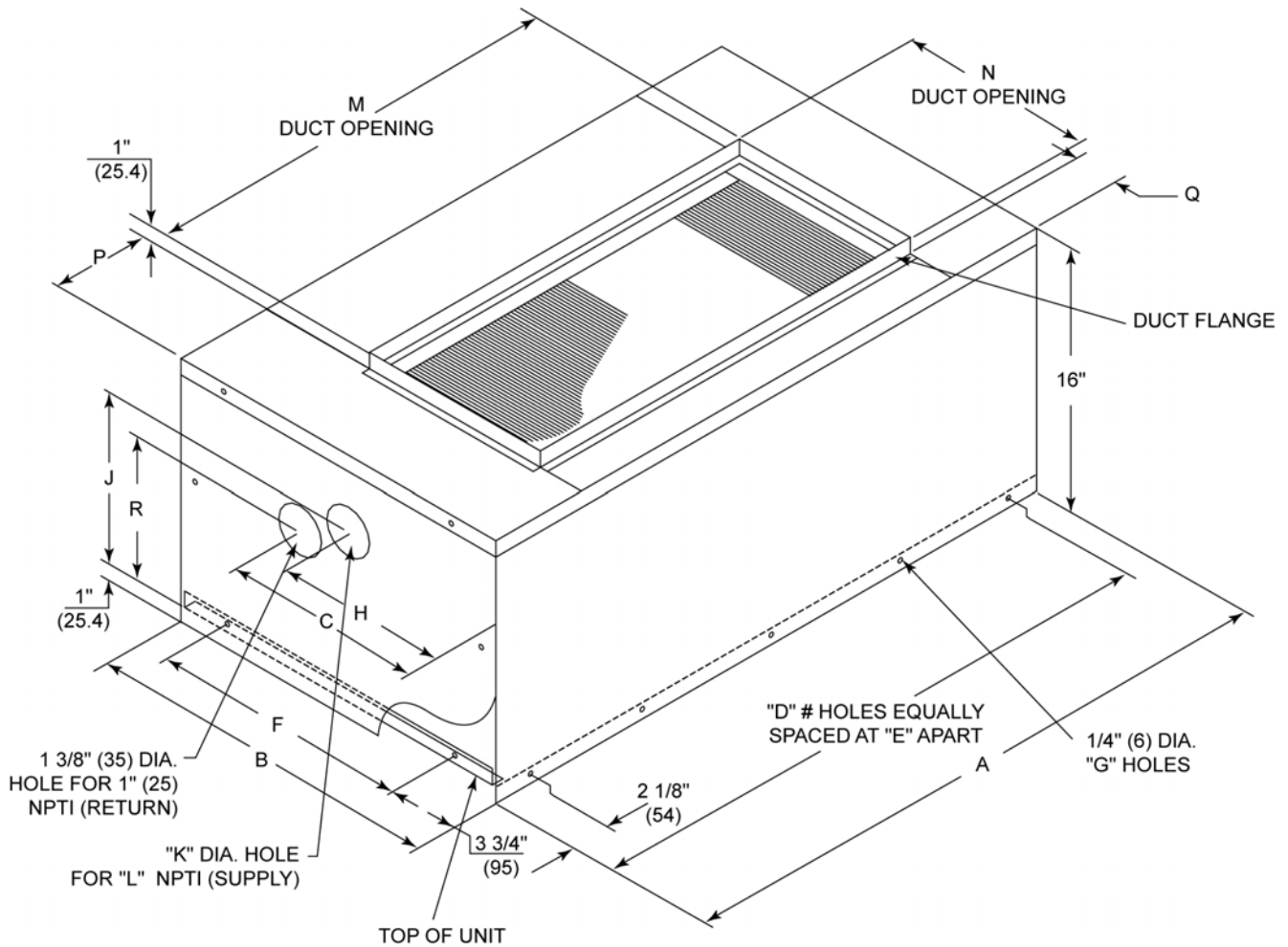


Figure 44. Steam Coil. All dimensions are in inches.

Table 62. Air Handler Dimensions (in.)

Tons	Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
5	BAYWATRO12	38 (965)	22 1/8 (562)	13 3/4 (349)	5 (127)	9 (229)	14 1/16 (357)	14 (356)	10 3/8 (264)	11 3/8 (289)	2 (51)	1 1/2 (38)	26 (660)	12 (305)	6 (152)	2 7/8 (73)	9 3/4 (248)
7 1/2	BAYWATRO13	47 5/8 (1210)	25 3/16 (640)	19 3/4 (502)	5 (127)	10 7/8 (276)	17 1/8 (435)	14 (356)	13 3/8 (340)	11 3/8 (289)	2 1/2 (64)	2 (51)	30 (762)	18 (457)	8 7/8 (225)	2 7/8 (73)	9 3/4 (248)
10	BAYWATRO14	63 5/8 (1616)	25 3/16 (640)	19 3/4 (502)	6 (152)	11 7/8 (302)	17 1/8 (435)	16 (406)	13 3/8 (340)	11 1/8 (283)	2 1/2 (64)	2 (51)	36 (914)	18 (457)	13 7/8 (352)	2 7/8 (73)	9 3/4 (248)
15	BAYWATRO15	79 5/8 (2022)	27 3/4 (705)	24 7/8 (632)	6 (152)	15 (381)	19 3/4 (502)	16 (406)	18 1/2 (470)	11 1/8 (283)	2 1/2 (64)	2 (51)	51 (1295)	18 (457)	14 1/8 (359)	1 7/8 (48)	9 3/4 (248)
20	BAYWATRO16	92 5/8 (2353)	30 5/8 (778)	25 7/8 (657)	7 (178)	14 3/4 (375)	22 1/2 (572)	18 (457)	19 1/2 (495)	12 (305)	2 1/2 (64)	2 (51)	64 (1626)	18 (457)	14 1/8 (359)	3 3/4 (95)	10 7/8 (276)

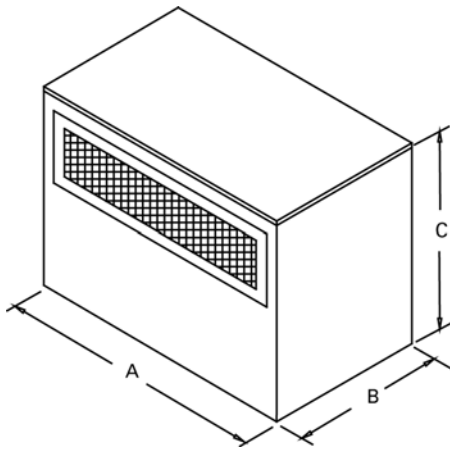


Figure 45. Discharge Plenum and Grille

Table 63. Discharge Plenum and Grille Dimensions (in.) - No Heat

Tons	Model No.	A	B	C
5	BAYPLNM015	37 15/16	21 15/16	28
7½	BAYPLNM016	47 1/2	25	28
10	BAYPLNM017	63 1/2	25	28

Table 64. Hydronic Discharge Plenum and Grille Dimensions (in.).

Tons	Model No.	A	B	C
5	BAYPLNM020	37 7/8	21 7/8	14 3/4
7½	BAYPLNM021	47 1/2	25	14 3/4
10	BAYPLNM022	63 1/2	25	14 3/4
15	BAYPLNM018 ⁽¹⁾	79 1/2	27 11/16	22
20	BAYPLNM019 ⁽¹⁾	92 1/2	30 7/16	24

⁽¹⁾ For use with hydronic heat or no heat.

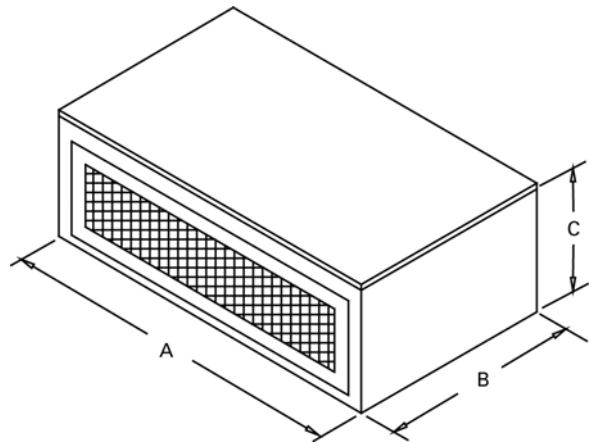


Figure 46. Hydronic Discharge Plenum and Grille

Table 65. Discharge Plenum and Grille Dimensions (in.). For use with Electric Heat.

Tons	Model No.	A	B	C
5	BAYPLNM025	37 15/16	21 15/16	29
7½	BAYPLNM026	47 1/2	25	29
10	BAYPLNM027	63 1/2	25	29
15	BAYPLNM028	79 1/2	27 11/16	35
20	BAYPLNM029	92 1/2	30 7/16	35

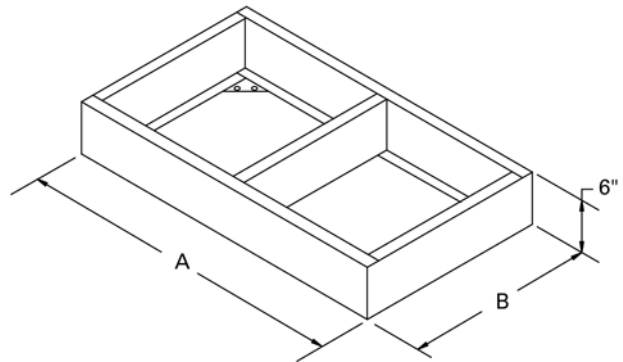


Figure 47. Subbase

Table 66. Subbase Dimensions (in.)

Tons	Model No.	A	B
5	BAYBASE001	38	22
7½	BAYBASE002	47 1/2	25
10	BAYBASE003	63 1/2	25
15	BAYBASE004	79 1/2	27 5/8
20	BAYBASE005	92 1/2	30 7/16

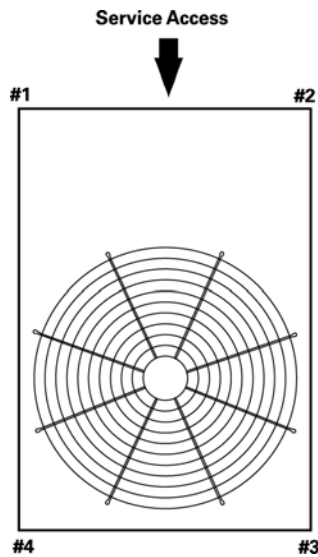
Weights

Table 67. Unit and Corner Weights (lbs.)

Tons	Unit Model No.	Shipping Max (lbs.)	Net Max (lbs.)	Corner Weights			
				1	2	3	4
7 1/2	TTA090A	370	326	105	83	61	77
10	TTA120A	443	399	149	116	78	100
	TTA120B	481	427	133	135	87	85
	TTA120C	492	437	139	122	87	95
12 1/2	TTA150B	481	427	133	135	87	85
15	TTA180B or C	764	679	196	193	144	146
20	TTA240B	915	830	247	247	168	168
	TTA240F	920	835	292	181	222	140

Table 68. Accessory Weights (lbs.)

Tons	Unit Model No.	RIS Isolators	Steel Spring Isolators	Anti Short Cycle Timer	Coil Guard	Thermostats	Low Ambient
7 1/2	TTA090A	2	12	1	8	1	23
10	TTA120A	2	12	1	11	1	23
	TTA120B						
	TTA120C						
12 1/2	TTA150B	2	12	1	20	1	23
15	TTA180B or C	2	12	1	22	1	23
20	TTA240B	2	12	1	34	1	23
	TTA240F	2	12	1	45	1	42



**Figure 48. 7 1/2, 10 and 12 1/2 Tons
TTA090A, 120A; TTA120B;
TTA120C; TTA150B**

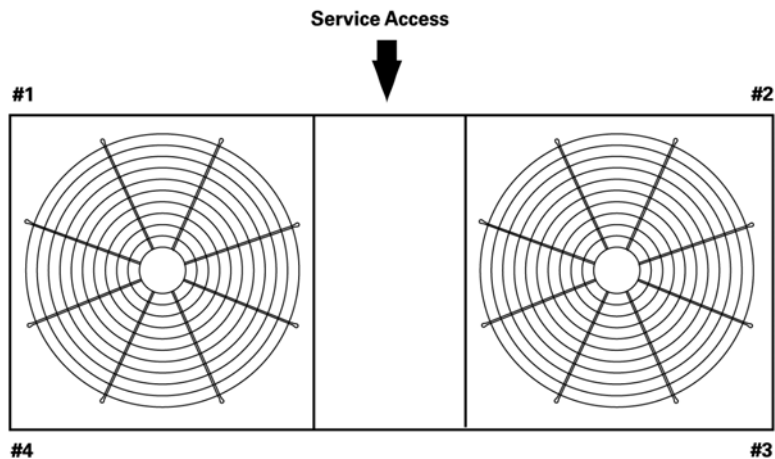


Figure 49. 15 and 20 Ton TTA180B, 240B; TTA 180C, TTA 240F

Table 69. Unit and Corner Weights (lbs.)

Tons	Unit Model No.	Ship Max (lbs.)	Net Max (lbs.)	Corner Weights				Corner Weights - Horizontal			
				1	2	3	4	A	B	C	D
5	TWE060A, B	298	232	59	59	59	59	54	64	64	54
7½	TWE090A, B	388	317	79	79	79	79	73	81	84	77
10	TWE120A, B	439	392	98	98	98	98	95	101	101	95
15	TWE180B	754	692	173	173	173	173	156	174	190	170
20	TWE240B, E	857	787	109	262	154	262	192	229	130	236
10	TXE120B	264	190	-	-	-	-	-	-	-	-

Notes: If application requires steam or hot water heating coils, field supplied isolators must be utilized.

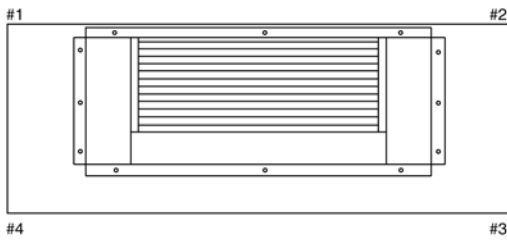


Figure 50. Vertical - 5, 7½ & 10 Ton TWE060A, 060B, 090A, 090B, 120A, 120B

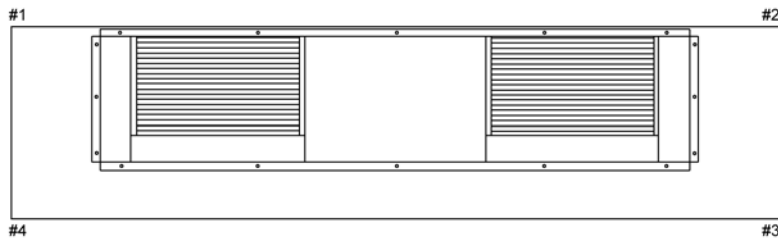


Figure 51. Vertical - 15 & 20 Ton TWE180B, 240B, 240E

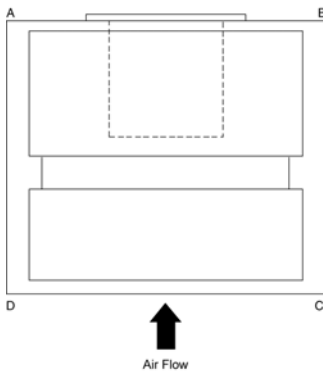


Figure 52. Horizontal - 5, 7½ & 10 Ton TWE060A, 060B, 090A, 090B, 120A, 120B

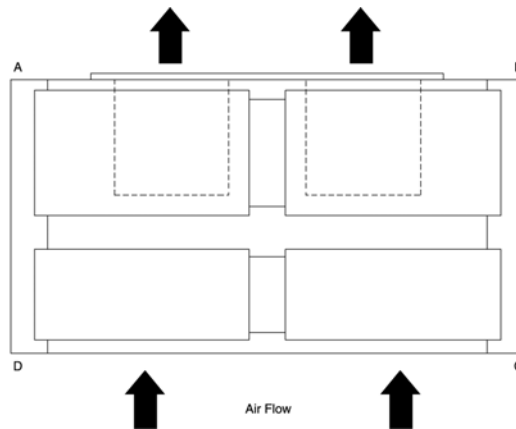


Figure 53. Horizontal - 15 & 20 Ton TWE180B, 240B, 240E



Weights

Accessories

Table 70. Accessory Weights (net lbs.)

Tons	Unit Model No.	Hot Water Coil	Steam Coil	Discharge Plenum and Grille ⁽ⁱ⁾	Discharge Plenum and Grille ⁽ⁱⁱ⁾	Discharge Plenum and Grille ⁽ⁱⁱⁱ⁾	Return Air Grille	Electric Heat Min/Max	Subbase	Oversized Motor	RIS Isolator Floor Mount	RIS Isolator Suspended Mount
5	TWE060A,B	82	90	63	58	93	3	32/43	14	31	2	9
7½	TWE090A,B	111	126	78	73	123	5	27/45	19	48	2	6
10	TWE120A,B	159	142	97	92	156	7	27/45	23	50	2	7
15	TWE180B	198	220	—	230	230	10	79/100	27	80	2	7
20	TWE240B,E	233	251	—	145	264	12	79/100	31	88	2	9

Tons	Unit Model No.	Steel Spring Isolator Floor Mount	Steel Spring Isolator Suspended Mount	Control Transformer
5	TWE060A,B	12	6	—
7½	TWE090A,B	12	6	4
10	TWE120A,B	12	6	4
15	TWE180B	12	6	—
20	TWE240B,E	12	6	—

(i) For use with Hydronic Heat.
(ii) For use when no heat is supplied.
(iii) For use with electric heat.



Mechanical Specifications

General

Units shall be assembled on sturdy steel mounting/lifting rails and shall be weather proofed. Units shall include hermetic scroll compressors, plate fin condenser coils, fans and motors, controls and holding charge of nitrogen. Operating range shall be between 115°F and 50°F in cooling as standard from the factory. Units shall be UL 1995 listed, certified and rated in accordance with ARI Standard 340/360 or 365.

Casing

Unit casing shall be constructed of zinc coated heavy gauge, galvanized steel. Exterior surfaces shall be finished with a weather-resistant baked enamel finish. Units surface shall be tested 500 hours in salt spray test. Units shall have removable end panels which allow access to all major components and controls.

Refrigeration System – Single Compressor

TTA090A, TTA120A units shall have a single refrigeration circuit. Each refrigeration circuit has an integral subcooling circuit. A refrigeration filter drier shall be provided as standard. The TTA090A, TTA120A units shall have both a liquid line and suction gas line service valve with gauge port.

TTA090A, TTA120A units shall have one direct-drive hermetic scroll compressor with centrifugal oil pump providing positive lubrication to moving parts. Motor shall be suction gas-cooled and shall have a voltage utilization range of plus or minus 10 percent of unit nameplate voltage.

Crankcase heater, internal temperature and current-sensitive motor overloads shall be included for maximum protection. Scroll type compressor shall provide inherently low vibration and noise by having no suction and discharge valves. External high and low pressure cutout devices shall be provided. Evaporator defrost control provided in indoor blower coil shall prevent

compressor slugging by temporarily interrupting compressor operation when low evaporator coil temperatures are encountered.

Refrigeration System – Dual Compressor

TTA120B, TTA150B, TTA180B, TTA240B units shall have two separate and independent refrigeration circuits. Each refrigeration circuit shall have an integral subcooling circuit. A refrigeration filter drier shall be provided as standard. Units shall have both a liquid line and suction gas line service valve with gauge port.

TTA120B, TTA150B, TTA180B, and TTA240B units shall have two Trane direct-drive hermetic scroll compressors with centrifugal oil pump and provide positive lubrication to all moving parts. Motor shall be suction gas-cooled and shall have a voltage utilization range of plus or minus 10 percent of nameplate voltage. Crankcase heater, internal temperature and current-sensitive motor overloads shall be included for maximum protection.

Scroll compressor shall provide inherently low vibration and noise by having no suction and discharge valves. External high and low pressure cutout devices shall be provided. Evaporator defrost control provided in indoor blower coil shall prevent compressor slugging by temporarily interrupting compressor operation when low evaporator coil temperatures are encountered.

Refrigeration System — Dual Manifolder Compressors

TTA 120C, TTA180C and TTA240F units shall have a single refrigeration circuit with an integral subcooling circuit. A refrigeration filter drier shall be provided as standard. Units shall have both a liquid line and suction gas line service valve with gauge port.

The units shall have two scroll compressors manifolded together. Motor shall be suction gas-cooled

and shall have a voltage utilization range of plus or minus 10 percent of nameplate voltage. Crankcase heater, internal temperature and current-sensitive motor overloads shall be included for maximum protection. Scroll type compressor shall provide inherently low vibration and noise by having no suction and discharge valves. External high and low pressure cutout devices shall be provided. Evaporator defrost control provided in the indoor blower coil shall prevent compressor slugging by temporarily interrupting compressor operation when low evaporator coil temperatures are encountered.

Condenser Coil

Coils shall be internally enhanced 3/8 inch copper tubes mechanically bonded to configured aluminum plate fins. Coils shall be factory pressure and leak tested to 660 psig. Metal grilles with PVC coating for coil protection are optional.

Condenser Fan And Motor(s)

Direct-drive, statically and dynamically balanced 26 or 28 inch propeller fan(s) shall be used in draw-through vertical discharge position. Either permanently lubricated totally enclosed or open construction motors shall be provided and shall have built in current and thermal overload protection. Motor(s) shall be either ball or sleeve bearing type.

Controls

Condensing units shall be completely factory wired with necessary controls and contactor pressure lugs or terminal block for power wiring. Unit shall provide an external location for mounting a fused disconnect device.

A choice of microprocessor or electro-mechanical controls shall be available. The 24-volt electro-mechanical control circuit shall include control transformer and contactor pressure lugs for power wiring. Units shall have single point power entry as standard.



Mechanical Specifications

Condensing Units

The microprocessor controls shall provide for all 24-volt control functions. The resident control algorithms shall make all heating, cooling and/or ventilating decisions in response to electronic signals from sensors measuring indoor and outdoor temperatures. The control algorithm maintains accurate temperature control, minimizes drift from set point, and provides better building comfort. A centralized microprocessor shall provide anti-short cycle timing and time delay between compressors to provide a higher level of machine protection.

Time delay timers shall be provided to help prevent compressors in dual compressor units from simultaneous start-up. An anti-short cycle timer shall be available as an optional accessory.

Zone Sensor

This field-installed control shall be provided to interface with the Micro equipped units and shall be available in either manual, automatic programmable with night setback, with system malfunction lights, or remote sensor options.

Thermostat

Two stage heating and cooling operation or one stage heating and cooling shall be available for field installation in either manual or automatic changeover. Automatic programmable electronic with night setback shall also be available.

LonTalk® Communication Interface

This factory- or field-installed option shall be provided to allow the unit to communicate as a Tracer™ LCI-R device or directly with generic LonTalk Network Building Automation System Controls.

Low Ambient Operation

Standard units shall start and operate to approximately 50°F when matched with air handlers and coils. Optional head pressure control accessory permits operation to 0°F.

FACTORY INSTALLED ACCESSORIES

Black Epoxy Coated Condenser Coil — The black epoxy coils have a thermoset vinyl coating that is bonded to the aluminum fin stock prior to the fin-stamping process. The pre-coated coils are an economical option for protection in mildly corrosive environments.

ACCESSORIES

Low Ambient Head Pressure Control — Shall control unit outdoor fan motor in response to outdoor ambient temperature and discharge line pressure or liquid temperature. Accessory provides unit cooling operation to outdoor temperatures of 0°F.

Vibration Isolation Packages — Shall reduce transmission of noise and vibration to building structures, equipment and adjacent spaces. Packages shall be available in either neoprene-in-shear or spring-flex types.

Hot Gas Bypass Kit — Shall be available to provide capacity modulation.

Time Delay Relay — Shall prevent compressors in dual compressor unit from coming online simultaneously. Timer shall be 24-volt, 60 cycle, with four minute timing period.

Anti-Short-Cycle Timer — Shall prevent rapid on-off compressor cycling in light load conditions by not allowing compressor to operate for 5-7 minutes upon shutdown. Shall consist of a solid state timing device, 24-volt, 60 cycle with either 5 or 7 minute fixed-off timing period.

Condenser Coil Guard — Metal grille with PVC coating shall be provided to alleviate coil damage.



Mechanical Specifications

Air Handlers

General

Air handler units shall be completely factory assembled including coil, condensate drain pan, fan motor(s), filters and controls in an insulated casing that can be applied in either vertical or horizontal configuration. Units shall be rated and tested in accordance with ARI standard 210/240, 340/360. Units shall be UL listed and labeled in accordance with UL 465/1995 for indoor blower coil units.

Casing

Unit casing shall be constructed of zinc coated, heavy gauge, galvanized steel. Exterior surfaces shall be finished with a weather-resistant baked enamel finish. Casing shall be completely insulated with cleanable, foil faced, fire-retardant, permanent, odorless glass fiber material. All insulation edges shall be either captured or sealed. Knockouts shall be provided for unit electrical power and refrigerant piping connections. Captive screws shall be standard on all access panels.

Refrigeration System

The TWE060A, TWE090A, TWE120A units shall have a single refrigeration circuit and the TWE060B, TWE090B, TWE120B, TWE180B, TWE240B, TWE240E units shall have dual refrigeration circuits. Each refrigeration circuit is controlled by a factory-installed thermal expansion valve.

Evaporator Coil

Configured aluminum fin surface shall be mechanically bonded to 3/8" internally enhanced copper tubing and factory pressure and leak tested at 660 psig. Coil is arranged for draw-through airflow and shall provide a double sloped condensate drain pan constructed of PVC plastic. The drain pan shall be removable for cleaning. The condensate drain pan can be installed in any of four positions allowing for vertical or horizontal application and providing external connections on either side of the unit.

Evaporator Fan

Double inlet, double width, forward curved, centrifugal-type fan(s) with adjustable belt drive shall be standard. Thermal overload protection shall be standard on motor. Fan and motor bearings shall be permanently lubricated. Oversized motors shall be available as an option for high static application. All indoor fan motors meet the U.S. Energy Policy Act of 1992 (EPACT).

Controls

Magnetic evaporator fan contactor, low voltage terminal strip, check valve(s), and single point power entry shall be included. All necessary controls shall be factory installed and wired. Evaporator defrost control shall be included to prevent compressor slugging by temporarily interrupting compressor operation when low evaporator coil temperatures are encountered.

Filters

One inch, throw-away filters shall be standard on TWE060A, TWE060B, TWE090A, TWE090B, TWE120A AND TWE120B model air handlers. Filters shall be accessible from the side coil access panel. Filter rack can be field converted to two inch capability. Two inch, throw-away filters shall be standard on TWE180B, TWE240B and TWE240E models.

ACCESSORIES

Hydronic Heat Coils

One row steam and two row hot water coils shall be available for mounting on the discharge outlet of the air handler. Coils shall be shipped completely factory assembled within a heavy gauge sheet metal casing, finished with enamel to match the blower coil unit. Coils shall be applied in either vertical or horizontal airflow configurations.

Electric Heaters

UL and CSA approved electric heat modules shall be available for installation directly on fan discharge. Electric Heaters shall be available in a

wide range of capacities with one or two stage control, single-point electric power connection and terminal strip connections. Electric heater elements shall be constructed of heavy duty nickel chromium elements internally wye connected on 480/600 volt, three phase and delta connected on 208/240 volt, three phase. Each 208/240 volt heater shall have pilot duty with secondary backup fuse links for automatic reset of high limit controls. Each 480/600 volt heater shall have automatic line break high limit controls.

Evaporator Coils

Shall be completely factory assembled including the expansion valves and drain pans. The TXE120B coil shall be dual refrigerant circuits. Unit casing shall be constructed of zinc coated, heavy gauge, galvanized steel. Exterior surfaces shall be finished with an enamel finish. Casing shall be completely insulated with foil faced, fire-retardant, permanent, odorless glass fiber material. The coils shall be convertible to either vertical and/or horizontal airflow configuration. Aluminum fin surface shall be mechanically bonded to 3/8" OD copper tubing. Coils shall be factory pressure and leak tested.



Discharge Plenums and Grilles

Accessory discharge plenums shall be available for vertical, free discharge applications. Plenums shall be constructed of heavy-gauge, zinc coated galvanized steel finished with baked enamel to match the air handler unit. Grilles shall be satin finished aluminum and have four-way adjustable louvers.

Return Air Grilles

Accessory return air grille shall be provided for vertical front, free return applications. Grilles shall be installed in place of the front lower side panel. Grille shall be satin finished aluminum with non-adjustable louvers.

Mounting Subbase

Available for vertical floor mount configurations. Subbase shall be constructed of heavy gauge, zinc coated galvanized steel with baked enamel finish to match air handler unit. Subbase is required in the vertical air flow application for condensate drain trapping and when isolators are required.

Vibration Isolators

Shall reduce transmission of noise and vibration to building structures, equipment and adjacent spaces. Packages shall be available in either neoprene-in shear or spring-flex types in floor or suspended mountings.

Oversized Motors

Field installed oversized motors shall be available for high static pressure applications.

CONTROL OPTIONS

Standard Indoor Thermostats

Two stage heating and cooling operation or one stage heating and cooling thermostats shall be available in either manual or automatic changeover.

Programmable Electronic Night Setback Thermostat

Shall provide heating setback and cooling setup with 7-day programming capability.



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