



Product Catalog

Packaged Rooftop Air Conditioners
Precedent™ — Cooling and Gas/Electric
3 – 10 Tons — 60 Hz



Table 2. General data - 5 tons - standard efficiency

	5 Tons	
	T/YSC060E1	T/YSC060E3,4,W
Cooling Performance^(a)		
Gross Cooling Capacity	59,900	62,270
EER/SEER ^(b)	11.0/13.0	11.0/13.0
Nominal cfm/ARI Rated cfm	2,000/2,000	2,000/2,000
ARI Net Cooling Capacity	58,000	60,000
System Power (kW)	5.25	5.46
Compressor		
Number/Type	1/Scroll	1/Scroll
Sound		
Outdoor Sound Rating (dB) ^(c)	82	82
Outdoor Coil - Type	Lanced	Lanced
Tube Size (in.)	0.3125	0.3125
Face Area (sq. ft.)	10.96	10.96
Rows/FPI	3/16	3/16
Indoor Coil - Type	Lanced	Lanced
Tube Size (in.)	0.3125	0.3125
Face Area (sq. ft.)	7.71	7.71
Rows/FPI	4/16	4/16
Refrigerant Control	Thermal Expansion Valve	Thermal Expansion Valve
Drain Connection Number/Size (in.)	1 $\frac{3}{4}$ NPT	1 $\frac{3}{4}$ NPT
Outdoor Fan - Type	Propeller	Propeller
Number Used/Diameter (in.)	1/22	1/22
Drive Type/No. Speeds	Direct/1	Direct/1
cfm	3,271	3,245
Number Motors/hp	0.40	0.40
Motor rpm	1,075	1,075
Indoor Fan - Type (Standard)	FC Centrifugal	FC Centrifugal
Number Used/Diameter (in.)/Width (in.)	1/11x11	1/11x11
Drive Type/No. Speeds/rpm	Direct/5 ^(d)	Belt/Variable/1,750
Motor hp	1.0	1.0
Motor Frame Size	48	56
Filters^(e)		
Type Furnished	Throwaway	Throwaway
Number Size Recommended	(2) 20x30x2	(2)20x30x2
Refrigerant Charge ^(f)		
Pounds of R-410A	9.5	9.4

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General Data

Table 2. General data - 5 tons - standard efficiency (continued)

	5 Tons	
	T/YSC060E1	T/YSC060E3,4,W
Heating Performance^(g)		
(Gas/Electric Only)		
Heating Input		
Low Heat Input (Btu)	60,000	60,000
Mid Heat Input (Btu)	80,000	80,000
High Heat Input (Btu)	130,000	130,000
Heating Output		
Low Heat Input (Btu)	48,000	48,000
Mid Heat Input (Btu)	65,000	64,000
High Heat Input (Btu)	104,000	104,000
AFUE^(h)		
Low Heat Input (Btu)	78	80
Mid Heat Input (Btu)	79	80
High Heat Input (Btu)	78	80
Steady State Efficiency%		
Low Heat Input (Btu)	80	80
Mid Heat Input (Btu)	81	80
High Heat Input (Btu)	80	80
No. Burners		
Low Heat Input (Btu)	2	2
Mid Heat Input (Btu)	2	2
High Heat Input (Btu)	3	3
No. Stages		
Low Heat Input (Btu)	1	1
Mid Heat Input (Btu)	1	1
High Heat Input (Btu)	1	1
Gas Supply Line Pressure		
Natural (minimum/maximum)	4.5/14.0	4.5/14.0
LP (minimum/maximum)	11.0/14.0	11.0/14.0
Gas Connection Pipe Size (in)		
Low Heat	1/2	1/2
Mid Heat	1/2	1/2
High Heat	1/2	1/2

- (a) 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. Units are suitable for operation to ±20% of nominal cfm. Units are certified in accordance with the Unitary Air-Conditioner Equipment certification program, which is based on ARI Standard 210/240.
- (b) EER and/or SEER are rated at ARI conditions and in accordance with DOE test procedures.
- (c) Outdoor Sound Rating shown is tested in accordance with ARI Standard 270. For additional information refer to Table 141, p. 179.
- (d) For multispeed direct drive rpm TSC values, reference Table 31, p. 73. For multispeed direct drive rpm YSC (low & medium gas heat) values reference Table 32, p. 74. For multispeed direct drive rpm YSC (high gas heat) values reference Table 33, p. 75.
- (e) Optional 2" MERV 7 and MERV 13 filters also available.
- (f) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.
- (g) Heating performance limit settings and rating data were established and approved under laboratory test conditions using American National Standards Institute standards. Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level. Applicable to Gas/Electric units only.
- (h) AFUE is rated in accordance with DOE test procedures.

Table 3. General data - 6-7½ tons - standard efficiency

	6 Tons	7½ Tons	7½ Tons
	T/YSC072E3,4,W	T/YSC090E3,4,W	T/YSC092E3,4,W
Cooling Performance^(a)			
Gross Cooling Capacity	75,000	89,000	94,000
EER ^(b)	11.2	11.2	11.2
Nominal cfm/ARI Rated cfm	2,400/2,100	3,000/2,400	3,000/2,625
ARI Net Cooling Capacity	71,200	83,000	89,000
IEER ^(c)	13.0	12.2	13.0
System Power (kW)	6.36	7.48	7.97
Compressor			
Number/Type	1/Scroll	1/Scroll	2/Scroll
Sound			
Outdoor Sound Rating (dB) ^(d)	89	89	91
Outdoor Coil - Type			
Configuration	Lanced	Lanced	Lanced
Tube Size (in.) OD	0.3125	0.3125	0.3125
Face Area (sq. ft.)	17	17	17.5
Rows/FPI	3/16	3/16	3/16
Indoor Coil - Type			
Configuration	Lanced	Lanced	Lanced
Tube Size (in.)	0.3125	0.3125	0.3125
Face Area (sq. ft.)	9.89	9.89	12.36
Rows/FPI	3/16	4/16	3/16
Refrigerant Control	Thermal Expansion Valve	Thermal Expansion Valve	Thermal Expansion Valve
Drain Connection Number/Size (in.)	1¾ NPT	1¾ NPT	1¾ NPT
Outdoor Fan - Type			
Number Used/Diameter (in.)	Propeller	Propeller	Propeller
Drive Type/No. Speeds	1/26	1/26	1/26
cfm	Direct/1	Direct/1	Direct/1
Motor hp	6,037	6,037	6,610
Motor rpm	0.7	0.7	0.75
	1,100	1,100	1,100
Indoor Fan - Type			
Number Used/Diameter (in.)/Width (in.)	FC Centrifugal	FC Centrifugal	FC Centrifugal
Drive Type/No. Speeds/rpm	1/12x12	1/12x12	1/15x15
Motor hp (Standard/Oversized)	Belt/Variable/1,750	Belt/Variable/1,750	Belt/Variable/1,750
Motor Frame Size (Standard/Oversized)	1.0/2.0	1.0/3.0	1.0/3.0
	56/56	56/56	56/56
Filters^(e)			
Type Furnished	Throwaway	Throwaway	Throwaway
Number Size Recommended	(4) 16x25x2	(4) 16x25x2	(4) 20x25x2
Refrigerant Charge ^(f)			
Pounds of R-410A	10.5	11.8	6.9/6.2

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General Data

Table 3. General data - 6-7½ tons - standard efficiency (continued)

	6 Tons	7½ Tons	7½ Tons
	T/YSC072E3,4,W	T/YSC090E3,4,W	T/YSC092E3,4,W
Heating Performance⁽⁹⁾			
(Gas/Electric Only)			
Heating Input			
Low Heat Input (Btu)	80,000	120,000	120,000
Mid Heat Input (Btu)	120,000	150,000/105,000	150,000/105,000
High Heat Input (Btu)	150,000/105,000	200,000/140,000	200,000/140,000
Heating Output			
Low Heat Input (Btu)	64,000	96,000	96,200
Mid Heat Input (Btu)	96,000	120,000/84,000	120,000/84,000
High Heat Input (Btu)	120,000/84,000	160,000/112,000	160,000/112,000
AFUE^(h)			
Low Heat Input (Btu)	80	80	80
Mid Heat Input (Btu)	80	80	80
High Heat Input (Btu)	80	80	80
Steady State Efficiency%			
Low Heat Input (Btu)	80	80	80
Mid Heat Input (Btu)	80	80	80
High Heat Input (Btu)	80	80	80
No. Burners			
Low Heat Input (Btu)	2	3	3
Mid Heat Input (Btu)	3	3	3
High Heat Input (Btu)	3	4	4
No. Stages			
Low Heat Input (Btu)	1	1	1
Mid Heat Input (Btu)	1	2	2
High Heat Input (Btu)	2	2	2
Gas Supply Line Pressure			
Natural (minimum/maximum)	4.5/14.0	4.5/14.0	4.5/14.0
LP (minimum/maximum)	11.0/14.0	11.0/14.0	11.0/14.0
Gas Connection Pipe Size (in)			
Low Heat	1/2	1/2	1/2
Mid Heat	1/2	3/4	3/4
High Heat	3/4	3/4	3/4

(a) 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. Units are suitable for operation to ±20% of nominal cfm. Units are certified in accordance with the Unitary Air-Conditioner Equipment certification program, which is based on ARI Standard 340/360.

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

(c) Integrated Efficiency Ratio (IEER) is rated in accordance with ARI Standard 340/360. The IEER rating requires that the unit efficiency be determined at 100%, 75%, 50% and 25% load (net capacity) at the specified in ARI Standard.

(d) Outdoor Sound Rating shown is tested in accordance with ARI Standard 270. For additional information refer to Table 1.41, p. 179.

(e) Optional 2" MERV 7 and MERV 13 filters also available.

(f) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

(g) Heating performance limit settings and rating data were established and approved under laboratory test conditions using American National Standards Institute standards. Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level. Applicable to Gas/Electric units only.

(h) AFUE is rated in accordance with DOE test procedures.

Table 4. General data - 8½-10 tons - standard efficiency

	8½ Tons	10 Tons
	T/YSC102E3,4,W	T/YSC120F3,4,W
Cooling Performance^(a)		
Gross Cooling Capacity	102,000	119,000
EER ^(b)	11.2	11.3
Nominal cfm/ARI Rated cfm	3,400/2,975	4,000/3,500
ARI Net Cooling Capacity	96,600	113,000
IEER ^(c)	13.0	12.5
System Power (kW)	8.62	10.0
Compressor		
Number/Type	2/Scroll	2/Scroll
Sound		
Outdoor Sound Rating (dB) ^(d)	89	88
Outdoor Coil - Type		
Configuration	Lanced	Microchannel
Tube Size (in.)	Intertwined	Full Face
Tube Size (in.)	0.3125	1
Face Area (sq. ft.)	19.83	20.77
Rows/FPI	3/16	1/20
Indoor Coil - Type		
Configuration	Lanced	Lanced
Tube Size (in.)	Face-Split	Intertwined
Tube Size (in.)	0.3125	0.3125
Face Area (sq. ft.)	12.36	12.36
Rows/FPI	4/16	4/16
Refrigerant Control	Thermal Expansion Valve	Thermal Expansion Valve
Drain Connection Number/Size (in.)	1¼ NPT	1¼ NPT
Outdoor Fan - Type		
Number Used/Diameter (in.)	Propeller	Propeller
Drive Type/No. Speeds	1/26	1/26
cfm	Direct/1	Direct/1
Motor hp	6,610	6,800
Motor rpm	0.75	0.75
	1,100	1,100
Indoor Fan - Type		
Number Used/Diameter (in.)/Width (in.)	FC Centrifugal	BC Plenum
Drive Type/No. Speeds/rpm	1/15x15	1/19.7x15
Motor hp (Standard/Oversized)	Belt/Variable/1,750	Direct/Variable ^(e)
Motor Frame Size (Standard/Oversized)	2.0/3.0	3.75/—
	56/56	—/—
Filters^(f)		
Type Furnished	Throwaway	Throwaway
Number Size Recommended	(4) 20x25x2	(4) 20x25x2
Refrigerant Charge (g)		
Pounds of R-410A	8.37/7.56	5.5/4.2

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General Data

Table 4. General data - 8½-10 tons - standard efficiency (continued)

	8½ Tons	10 Tons
	T/YSC102E3,4,W	T/YSC120F3,4,W
Heating Performance^(h)		
(Gas/Electric Only)		
Heating Input		
Low Heat Input (Btu)	120,000	150,000/105,000
Mid Heat Input (Btu)	150,000/105,000	200,000/140,000
High Heat Input (Btu)	200,000/140,000	250,000/175,000
Heating Output		
Low Heat Input (Btu)	96,000	120,000/84,000
Mid Heat Input (Btu)	120,000/84,000	160,000/112,000
High Heat Input (Btu)	160,000/112,000	200,000/140,000
AFUE%⁽ⁱ⁾		
Low Heat Input (Btu)	80	80
Mid Heat Input (Btu)	80	80
High Heat Input (Btu)	80	80
Steady State Efficiency%		
Low Heat Input (Btu)	80	80
Mid Heat Input (Btu)	80	80
High Heat Input (Btu)	80	80
No. Burners		
Low Heat Input (Btu)	3	3
Mid Heat Input (Btu)	3	4
High Heat Input (Btu)	4	5
No. Stages		
Low Heat Input (Btu)	1	2
Mid Heat Input (Btu)	2	2
High Heat Input (Btu)	2	2
Gas Supply Line Pressure		
Natural (minimum/maximum)	4.5/14.0	4.5/14.0
LP (minimum/maximum)	11.0/14.0	11.0/14.0
Gas Connection Pipe Size (in)		
Low Heat	1/2	3/4
Mid Heat	3/4	3/4
High Heat	3/4	3/4

- (a) 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. Units are suitable for operation to ±20% of nominal cfm. Units are certified in accordance with the Unitary Air-Conditioner Equipment certification program, which is based on ARI Standard 340/360.
- (b) EER is rated at ARI conditions and in accordance with DOE test procedures.
- (c) Integrated Efficiency Ratio (IEER) is rated in accordance with ARI Standard 340/360. The IEER rating requires that the unit efficiency be determined at 100%, 75%, 50% and 25% load (net capacity) at the specified in ARI Standard.
- (d) Outdoor Sound Rating shown is tested in accordance with ARI Standard 270. For additional information refer to Table 141, p. 179.
- (e) For multispeed direct drive rpm T/YSC values, reference Table 140, p. 178.
- (f) Optional 2" MERV 7 and MERV 13 filters also available.
- (g) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.
- (h) Heating performance limit settings and rating data were established and approved under laboratory test conditions using American National Standards Institute standards. Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level. Applicable to Gas/Electric units only.
- (i) AFUE is rated in accordance with DOE test procedures.



Electrical Data

Table 151. Unit wiring - standard efficiency

Tons	Unit Model Number	Voltage Range	Standard Indoor Fan Motor ^(a)		Oversized Indoor Fan Motor	
			MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker
3	T/YSC036E1	187-253	27.2	40	—	—
3	T/YSC036E3	187-253	23.0	35	—	—
3	T/YSC036E4	414-506	11.7	15	—	—
3	T/YSC036EW	517-633	9.4	15	—	—
4	T/YSC048E1	187-253	35.2	50	—	—
4	T/YSC048E3	187-253	25.2	35	—	—
4	T/YSC048E4	414-506	12.5	15	—	—
4	T/YSC048EW	517-633	9.0	15	—	—
5	T/YSC060E1	187-253	43.8	70	—	—
5	T/YSC060E3	187-253	29.5	45	—	—
5	T/YSC060E4	414-506	15.5	25	—	—
5	T/YSC060EW	517-633	10.1	15	—	—
6	T/YSC072E3	187-253	36.5	50	37.8	60
6	T/YSC072E4	414-506	18.2	25	19.4	25
6	T/YSC072EW	517-633	12.7	20	13.5	20
7½	T/YSC090E3	187-253	38.2	60	44.0	60
7½	T/YSC090E4	414-506	19.5	30	22.4	35
7½	T/YSC090EW	517-633	14.7	20	16.7	25
7½ ^(b)	T/YSC092E3	187-253	41.2	50	47.0	60
7½ ^(b)	T/YSC092E4	414-506	19.5	25	22.4	25
7½ ^(b)	T/YSC092EW	517-633	15.0	20	17.3	20
8½	T/YSC102E3	187-253	46.3	60	49.4	60
8½	T/YSC102E4	414-506	22.4	25	23.4	30
8½	T/YSC102EW	517-633	17.5	20	18.7	20
10	T/YSC120F3	187-253	49.6	60	—	—
10	T/YSC120F4	414-506	22.7	30	—	—
10	T/YSC120FW	517-633	18.9	25	—	—

(a) No optional motors available for 3-5 tons. The standard motor for the 1-phase models is a Multispeed Direct Drive Motor. The standard motor for 3-phase (3-8½ ton models) is a Belt Drive Motor.

(b) Dual refrigeration system.



Model Number Description

Y	S	D	1	5	0	F	3	R	Z	B	0	0
1	2	3	4	5	6	7	8	9	10	11	12	13

Digit 1 — Unit Type

- T = Packaged Cooling, Electric Heat
- Y = Packaged Gas/Electric

Digit 2 — Efficiency

- S = Standard Efficiency
- H = High Efficiency

Digit 3 — Airflow Configuration

- D = Downflow
- H = Horizontal

Digit 4, 5, 6 — Nominal Gross Cooling Capacity (MBH)

- 150 = 12½ Tons
- 180 = 15 Tons
- 210 = 17½ Tons
- 240 = 20 Tons
- 300 = 25 Tons

Digit 7 — Major Design Sequence

- F = Microchannel Type Condenser Coils

Digit 8 — Voltage Selection

- 3 = 208-230/60/3
- 4 = 460/60/3
- W = 575/60/3
- K = 380/60/3

Digit 9 — Unit Controls

- R = Reliatel

Digit 10 — Heating Capacity

Note: (Applicable to Digit 1 T models only)

- 0 = No Heat
- G = 18 kW Electric Heat
- K = 27 kW Electric Heat
- N = 36 kW Electric Heat
- P = 54 kW Electric Heat
- R = 72 kW Electric Heat

Note: (Applicable to Digit 1 Y models only)

- H = Gas Heat - High
- L = Gas Heat - Low
- V = Gas Heat - SS Ht Ex - Modulating
- X = Gas Heat - SS Ht Ex - Low
- Z = Gas Heat - SS Ht Ex - High

Digit 11 — Minor Design Sequence

Digit 12, 13 — Service Sequence

- 00 = None
- 01 = 18mm Microchannel Condenser Coil

Note: '01' only available on select models.

Digit 14 — Fresh Air Selection

- 0 = No Fresh Air
- D = Econ Dry Bulb w/ Barometric Relief¹
- F = Econ Reference Enthalpy w/ Barometric Relief¹
- H = Econ Comparative Enthalpy w/ Barometric Relief¹

Digit 15 — Supply Fan/Drive Type/Motor

- 0 = Standard Motor
- 1 = Oversized Motor⁶
- 3 = High Efficiency Motor⁶
- 6 = Single Zone Variable Air Volume Standard Motor
- 7 = Multi-Speed Standard Motor
- 8 = Single Zone Variable Air Volume Oversized Motor
- 9 = Multi-Speed Oversized Motor
- A = Single Zone Variable Air Volume Standard Motor w/ Shaft Grounding Ring
- B = Multi-Speed Standard Motor w/ Shaft Grounding Ring
- C = Single Zone Variable Air Volume Oversized Motor w/ Shaft Grounding Ring
- D = Multi-Speed Oversized Motor w/ Shaft Grounding Ring
- E = VAV Supply Air Temperature Control - Standard Motor
- F = VAV Supply Air Temperature Control - Oversized Motor
- G = VAV Supply Air Temperature Control - Standard Motor w/ Shaft Grounding Ring
- H = VAV Supply Air Temperature Control - Oversized Motor w/ Shaft Grounding Ring

Digit 16 — Hinged Service Access / Filters

- 0 = Standard Panels/Standard Filters
- A = Hinged Access/Standard Filters
- B = Standard Panels/MERV 8 Filters⁶
- C = Hinged Access/MERV 8 Filters⁶
- D = Standard Panels/MERV 13 Filters⁶
- E = Hinged Access/MERV 13 Filters⁶

Digit 17 — Condenser Coil Protection

- 0 = Standard Coil
- 1 = Standard Coil With Hail Guard
- 4 = CompleteCoat™ Condenser Coil
- 5 = CompleteCoat™ Condenser Coil with Hail Guard

Digit 18 — Through The Base Provisions

Note: Applicable to Digit 1, T or Y models.

- 0 = No Through The Base Provisions
- A = Through The Base Electric¹²

Note: Applicable to Digit 1, Y models only.

- B = Through The Base Gas
- C = Through The Base Electric/Gas¹²
- D = Through The Base Access

Digit 19 — Disconnect Switch/Circuit Breaker¹¹

- 0 = No Disconnect/circuit break
- 1 = Unit Mounted Non-Fused Disconnect Switch
- 2 = Unit Mounted Circuit Breaker

Digit 20 — Convenience Outlet Option

- 0 = Without Convenience Outlet
- A = Unpowered Convenience Outlet⁵
- B = Powered Convenience Outlet⁵

Digit 21 — Communications Options

- 0 = Without Communications Options
- 1 = Trane Communications Interface^{6, 17}
- 2 = Lontalk Communications Interface⁶
- 3 = Novar 2024 Controls Interface¹⁹
- 4 = Novar 3051 Controls Interface¹⁹
- 5 = Novar 3051 Communications Interface with Demand Control Ventilation¹⁹
- 6 = Building Automation Control Network Communications Interface

Digit 22 — Refrigeration System Option

- 0 = Standard refrigeration system
- A = Thermal Expansion Valve (TXV)¹⁴
- B = Dehumidification (Hot Gas Reheat)^{4, 14}

Digit 23 — Refrigeration Controls

- 0 = Without Refrigeration Controls
- 1 = Frostat^{9, 21}

Digit 24 — Smoke Detector^{2, 10}

- 0 = Without Smoke Detector
- A = Return Air Smoke Detector
- B = Supply Air Smoke Detector
- C = Return/Supply Air Smoke Detector
- D = Plenum Smoke Detector²²

Digit 25 — System Monitoring Controls

- 0 = No Monitoring Controls
- 1 = Clogged Filter Switch⁹
- 2 = Fan Failure Switch⁹



General Data

Table 1. General data—cooling 12½–15 tons standard efficiency

	12½ Tons Downflow & Horizontal Units		15 Tons Downflow & Horizontal Units	
	TS*150F3,4,W,K	YS*150F3,4,W,K	TS*180F3,4,W,K	YS*180F3,4,W,K
Cooling Performance^(a)				
Gross Cooling Capacity	150,000	150,000	186,000	186,000
EER (Downflow/Horizontal) ^(b)	11	11	11	11
Nominal Airflow CFM / ARI Rated CFM	5,000 / 4,400	5,000 / 4,400	6,000 / 5,300	6,000 / 5,300
ARI Net Cooling Capacity	140,000	140,000	176,000	176,000
Integrated Energy Efficiency Ratio (IEER) (One Speed Fan / Multi or Variable Speed Fan) ^(c)	12.2/13.5	12.2/13.5	12.2/13.2	12.2/13.2
Percent Capacity @ part load (Stage 1/Stage 2)	55/100	55/100	68/100	68/100
System Power (kW)	12.73	12.73	16.00	16.00
Compressor				
Number/Type	2 / Scrolls	2 / Scrolls	2 / Scrolls	2 / Scrolls
Sound				
Outdoor Sound Rating (BELS) ^(d)	9.2	9.2	9.2	9.2
Outdoor Coil				
Type	Microchannel 25mm/18mm	Microchannel 25mm/18mm	Microchannel 25mm/18mm	Microchannel 25mm/18mm
Coil Width (in.)	1.0/0.71	1.0/0.71	1.0/0.71	1.0/0.71
Face Area (sq. ft.)	25.9/25.9	25.9/25.9	35.2/35.2	35.2/35.2
Rows/FPI	1/20 / 1/23	1/20 / 1/23	1/20 / 1/23	1/20 / 1/23
Indoor Coil				
Type	Hi-Performance	Hi-Performance	Hi-Performance	Hi-Performance
Tube Size (in.) ID	0.3125	0.3125	0.3125	0.3125
Face Area (sq. ft.)	17.50	17.50	26.00	26.00
Rows/FPI	3 / 15	3 / 15	3 / 15	3 / 15
Refrigerant Control	Short Orifice	Short Orifice	Short Orifice	Short Orifice
Drain Connection Number/Size (in.)	1/1.00 NPT	1/1.00 NPT	1/1.00 NPT	1/1.00 NPT
Outdoor Fan				
Type	Propeller	Propeller	Propeller	Propeller
Number Used/Diameter (in.)	2 / 26	2 / 26	2 / 26	2 / 26
Drive Type/No. Speeds	Direct / 1	Direct / 1	Direct / 1	Direct / 1
cfm	11,000	11,000	11,000	11,000
Number Motors/hp	2 / 0.50	2 / 0.50	2 / 0.50	2 / 0.50
Motor rpm	1,100	1,100	1,100	1,100
Indoor Fan				
Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
Number Used/Diameter (in.)	1 / 15x15	1 / 15x15	1 / 18x18	1 / 18x18
Drive Type/No. Speeds	Belt / 1	Belt / 1	Belt / 1	Belt / 1
Number Motors	1	1	1	1
Motor hp (Standard/Oversized) ^(e)	3.0 / 5.0	3.0 / 5.0	3.0 / 5.0	3.0 / 5.0
Motor rpm (Standard/Oversized)	1,740 / 3,450	1,740 / 3,450	1,740 / 3,450	1,740 / 3,450
Motor Frame Size (Standard/Oversized)	145T / 145T	145T / 145T	145T / 145T	145T / 145T

Table 1. General data—cooling 12½–15 tons standard efficiency

	12½ Tons Downflow & Horizontal Units		15 Tons Downflow & Horizontal Units	
	TS*150F3,4,W,K	YS*150F3,4,W,K	TS*180F3,4,W,K	YS*180F3,4,W,K
Filters				
Type Furnished ^(f)	Throwaway	Throwaway	Throwaway	Throwaway
Number Size Recommended				
Downflow	(2)20x20x2 (4)20x25x2	(2)20x20x2 (4)20x25x2	(4)20x20x2 (4)20x25x2	(4)20x20x2 (4)20x25x2
Horizontal	(2)20x20x2 (4)20x25x2	(2)20x20x2 (4)20x25x2	(8)20x25x2	(8)20x25x2
Refrigerant Charge (Pounds of R-410A)^(g)				
25mm Coil: Cir#1 / Cir#2	6.25/5.85	6.25/5.85	11.4 / 6.0	11.4 / 6.0
18mm Coil: Cir#1 / Cir#2	6.6/6.2	6.6/6.2		

(a) 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. Units are suitable for operation to ±20% of nominal cfm. Certified in accordance with the Unitary Large Equipment Certification Program, which is based on ARI Standard 340/360-93.

(b) EER is rated at ARI conditions and in accordance with ARI Standard 210/240 or 360.

(c) Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI standard 210/240 or 360.

(d) Outdoor Sound Rating shown is tested in accordance with ARI Standard 270 or 370.

(e) For 380V/60Hz units, the oversized motor (Indoor Fan) is used as the standard motor. Refer to oversized motor data.

(f) An optional 2-inch pleated filter is also available.

(g) Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

* Indicates both downflow and horizontal units.

Table 2. General data—heating—12½–15 tons standard efficiency

	12½ Tons Downflow & Horizontal Units			15 Tons Downflow & Horizontal Units		
	Heating Performance^(a)(Gas/Electric Only)					
Heating Models	Low	High	Modulating Turn Down = 5:1	Low	High	Modulating Turn Down = 5:1
Heating Input (Btu/h)	150,000	250,000	350,000	250,000	350,000	350,000
1st Stage (Btu)	100,000	175,000	70,000	175,000	250,000	70,000
Heating Output (Btu/h)	122,000	203,000	283,500	203,000	284,000	283,500
1st Stage (Btu)	81,000	142,000	56,700	142,000	203,000	56,700
AFUE% (DF/HF)^(b)						
Downflow/Horizontal	81.0/81.0	80.7/79.9	80.1/79.1	80.7/79.9	80.1/79.1	80.1/79.1
Steady State Efficiency%	81.0	81.0	81.0	81.0	81.0	81.0
No. Burners	1	1	1	1	1	1
No. Stages	2	2	N/A	2	2	N/A
Gas Supply Line Pressure (in. wc)	2.5/14.0	2.5/14.0	2.5/14.0	2.5/14.0	2.5/14.0	2.5/14.0
Natural or LP (minimum/maximum)	Natural or LP	Natural or LP	Natural Only	Natural or LP	Natural or LP	Natural Only
Gas Connection Pipe Size (in.)	1/2	1/2	3/4	1/2	3/4	3/4

(a) Heating Performance limit settings and rating data were established and approved under laboratory test conditions using American National Standards Institute standards. Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level.

(b) AFUE is rated in accordance with DOE test procedures.



Weights

Table 91. Maximum unit & corner weights (lb) and center of gravity dimensions (in.) cooling with optional electric heat units only

Tons	Unit Model No.	Weights (lb) ^{(a), (b)}		Corner Weights ^(c)				Center of Gravity (in.)	
		Shipping	Net	A	B	C	D	Length	Width
12½	TS*150F	1781	1413	475	368	263	308	50"	29"
	TH*150F	2433	1981	630	517	378	454	56"	36"
	THD150F (Reheat Units)	2451	2000	636	522	382	458	56"	36"
15	TS*180F	2281	1822	618	493	336	378	57"	33"
	TH*180F	2435	1984	631	518	379	454	56"	36"
	THD180F (Reheat Units)	2445	2002	637	523	382	458	57"	36"
17½	TS*210F	2292	1863	591	510	372	388	61"	35"
	TH*210F	2495	2051	652	535	392	470	57"	35"
	THD210F (Reheat Units)	2513	2069	658	540	396	474	58"	35"
20	TS*240F	2353	1925	614	514	375	422	57"	35"
	TH*240F	2498	2053	653	536	392	470	57"	35"
	THD240F (Reheat Units)	2516	2071	659	541	396	474	58"	35"
25	TS*300F	2337	1878	595	510	372	402	60"	35"
	TH*300F	2505	2027	640	532	390	465	57"	35"

(a) Weights are approximate. Horizontal and downflow unit and corner weights may vary slightly.

(b) Weights do not include additional factory or field installed options/accessories. For option/accessory additional weights, reference Table 93, p. 133 to be added to unit weights.

(c) Corner weights are given for information only. 12½–25 ton models must be supported continuously by a curb or equivalent frame support.

* Indicates both downflow and horizontal units.

