



Packaged Rooftops

Precedent™ 3-5 Tons — 60 Hz
13 SEER R-22, R-410A
15 SEER R-410A

YR: 2007

5 TONS



Packaged Cooling, Heat Pumps (T*C), (WSC)



Packaged Gas/Electric (Y*C)

MODEL #: YHC063A4RMA13D001A1A003AC

S/N: 720101486L



Model Number Description

Y H C 063 A 4 R M A 13 D 0 0 1 A 1 A D 0 3 A 0
T H C 033 A 3 R B A ** C 0 0 0 A 1 0 0 0 1 A 1
1 2 3 456 7 8 9 10 11 12,13 14 15 16 17 18 19 20 21 22 23 24 25

DIGIT 1 – UNIT TYPE

- T DX Cooling
- Y DX Cooling, Gas Heat
- W Packaged Heat Pump²

DIGIT 2 – EFFICIENCY

- S Standard Efficiency
(13 SEER R-410A)
- H High Efficiency
(13 SEER R-22)
(15 SEER R-410A)

DIGIT 3 – AIRFLOW

- C Convertible

DIGIT 4,5,6 – NOMINAL GROSS COOLING CAPACITY (MBh)

- 033/036 3 Tons
- 043/048 4 Tons
- 063/060 5 Tons

DIGIT 7 – MAJOR DESIGN SEQUENCE

- A R-22 Refrigerant
- E R-410A Refrigerant

DIGIT 8 – VOLTAGE SELECTION

- 1 208/230/60/1
- 3 208-230/60/3
- 4 460/60/3
- W 575/60/3

DIGIT 9 – UNIT CONTROLS

- E Electromechanical¹
- R ReliaTel™ Microprocessor

DIGIT 10 – HEATING CAPACITY

- 0=No Electric Heat
- A=5 kW (1 phase)²
- B=6 kW (3 phase)
- C=9 kW (3 phase)⁴
- D=10 kW (1 phase)²
- E=12 kW (3 phase)
- F=14 kW (1 phase)²
- G=18 kW (1&3 phase)
- J=23 kW (3 phase)

Note: Applicable to Digit 1, Y models only.

- L Low
- M Medium
- H High
- X Low, Stainless Steel Heat Exchanger
- Y Medium, Stainless Steel Heat Exchanger
- Z High, Stainless Steel Heat Exchanger

DIGIT 11 – MINOR DESIGN SEQUENCE

- A First Sequence

DIGIT 12,13 – SERVICE SEQUENCE

- ** Factory Assigned 13

DIGIT 14 – FRESH AIR SELECTION

- 0 No Fresh Air
- A Manual Outside Air Damper 0-50%⁶
- B Motorized Outside Air Damper 0-50%
- C Economizer, Dry Bulb 0-100% without Barometric Relief¹⁰
- D Economizer, Dry Bulb 0-100% with Barometric Relief¹⁰
- E Economizer, Reference Enthalpy 0-100% without Barometric Relief^{5,10}
- F Economizer, Reference Enthalpy 0-100% with Barometric Relief^{5,10}
- G Economizer, Comparative Enthalpy 0-100% without Barometric Relief^{5,10}
- H Economizer, Comparative Enthalpy 0-100% with Barometric Relief^{5,10}

DIGIT 15 – SUPPLY FAN/DRIVE TYPE/MOTOR

- 0 Standard Drive⁸
- 2) Optional Belt Drive Motor²²

DIGIT 16 – HINGED SERVICE ACCESS/FILTERS

- 0 Standard Panels/Standard Filters
- A Hinged Access Panels/Standard Filters
- B Standard Panels/2" Pleated Filters
- C Hinged Access Panels/2" Pleated Filters

DIGIT 17 – CONDENSER COIL PROTECTION

- 0 Standard Coil
- 1 Standard Coil with Hail Guard
- 2 Black Epoxy Pre-Coated Condenser Coil
- 3 Black Epoxy Pre-Coated Condenser 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 Electric¹¹

Note: (Applicable to Digit 1, Y models only)

- B Through the Base Gas Piping
- C Through the Base Electric and Gas Piping¹⁹

DIGIT 19 – DISCONNECT/CIRCUIT BREAKER/PHASE MONITOR (THREE-PHASE ONLY)

- 0 No Disconnect/No Circuit Breaker No Phase Monitor
- 1 Unit Mounted Non-Fused Disconnect¹¹
- 2 Unit Mounted Circuit Breaker¹¹
- 3 Phase Monitor²³
- 4 Phase Monitor & Non-Fused Disconnect Switch²³
- 5 Phase Monitor & Circuit Breaker²³

DIGIT 20 – CONVENIENCE OUTLET

- 0 No Convenience Outlet
- A Unpowered Convenience Outlet
- B Powered Convenience Outlet (three-phase only)¹²

DIGIT 21 – COMMUNICATIONS OPTIONS⁵

- 0 No Communications Interface
- 1 Trane Communications Interface
- 2 LonTalk® Communications Interface
- 3 Novar 2024 Controls¹
- 4 Novar 3051 Controls¹

DIGIT 22 – REFRIGERATION SYSTEM OPTION

- 0 Standard Refrigeration System¹³
- A Thermal Expansion Valve (TXV)
- B Dehumidification (Hot Gas Reheat Coil)^{1,4,9,21}

Model Number Description

DIGIT 23 - REFRIGERATION CONTROLS

Note: Applicable to Digit 7 = A

- 0 No Refrigeration Control⁷
- 2 Froststat¹⁴
- 3 Crankcase Heater³
- 6 Froststat¹⁴ and Crankcase Heater³

Note: Applicable to Digit 7 = E

- 0 No Refrigeration Control⁷
- 1 Froststat¹⁴
- 2 Crankcase Heater³
- 3 Froststat¹⁴ and Crankcase Heater³

DIGIT 24 - SMOKE DETECTOR^{5,20}

- 0 No Smoke Detector
- A Return Air Smoke Detector^{15,16}
- B Supply Air Smoke Detector
- C Supply and Return Air Smoke Detectors^{15,16}

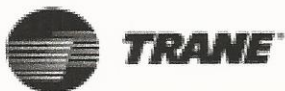
DIGIT 25 - MONITORING CONTROLS⁵

- 0 No Monitoring Control¹⁷
- 1 Clogged Filter Switch¹⁷
- 2 Fan Failure Switch¹⁷
- 3 Discharge Air Sensing Tube¹⁷
- 4 Clogged Filter Switch and Fan Fail Switch¹⁷
- 5 Clogged Filter Switch and Discharge Air Sensing Tube¹⁷
- 6 Fan Fail Switch and Discharge Air Sensing Tube¹⁷
- 7 Clogged Filter and Fan Fail Switches and Discharge Air Sensing Tube¹⁷
- 8 Novar Return Air Sensor¹⁸

Model Number Notes

- 1. Not available for 3-5 tons, R-410A Heat Pumps.
- 2. Available for R-410A units only.
- 3. Standard on 4 tons, 3-phase Heat Pumps and 5 ton Heat Pumps.
- 4. Available for R-22 units only.
- 5. Not available with electromechanical controls.
- 6. Manual outside air damper will ship factory supplied within the unit, but must be field installed.

- 7. High pressure control is standard on all units.
- 8. Multispeed direct drive standard on single-phase. Belt drive standard on three-phase R-22 and 13 SEER, R-410A units.
- 9. Requires the use of 2" pleated filters.
- 10. Economizer with Barometric Relief is for downflow configured units only. Order Economizer without Barometric Relief for horizontal configuration. Barometric Relief for horizontal configured units must be ordered as field installed accessory.
- 11. Through the base electric required when ordering disconnect/circuit breaker options.
- 12. Requires use of Disconnect or Circuit Breaker.
- 13. Standard metering devices are TXVs.
- 14. Froststat cannot be field installed in electro-mechanical units.
- 15. The return air smoke detector may not fit up or work properly on the Precedent units when used in conjunction with 3rd party accessories such as bolt on heat wheels, economizers and power exhaust. Do not order the return air smoke detectors when using this type of accessory.
- 16. Return Air Smoke Detector cannot be ordered with Novar Controls.
- 17. These options are standard when ordering Novar Controls.
- 18. This option is used when ordering Novar Controls.
- 19. Includes gas piping and shutoff (field assembly required).
- 20. Not available with high temperature stat accessory.
- 21. Requires hinged access panels.
- 22. Belt Drive Optional on three-phase 15 SEER, R-410A units.
- 23. Phase Monitor not offered on 7th digit = E (R-410A) models.



General Data

Table 1. General Data — 3-5 Tons — R-22 Refrigerant

	3 Tons	4 Tons	5 Tons
	T/YHC033A3,4,W	T/YHC043A3,4,W	T/YHC063A3,4,W
Cooling Performance⁽¹⁾			
Gross Cooling Capacity	38,000	49,800	62,400
SEER ⁽²⁾	13.0	13.0	13.0
Nominal CFM / ARI Rated CFM	1,200/1,200	1,600/1,600	2,000/2,000
ARI Net Cooling Capacity	36,600	47,500	59,500
System Power (kW)	3.33	4.48	5.56
Compressor			
Number/Type	1/Scroll	1/Scroll	1/Scroll
Sound			
Outdoor Sound Rating (dB) ⁽³⁾	83	85	84
Outdoor Coil			
Type	Lanced	Lanced	Lanced
Tube Size (in.)	0.3125	0.3125	0.3125
Face Area (sq. ft.)	7.19	9.59	10.96
Rows/FPI	2/17	3/17	3/17
Indoor Coil			
Type	Lanced	Lanced	Lanced
Tube Size (in.)	0.3125	0.3125	0.3125
Face Area (sq. ft.)	6.68	6.68	7.71
Rows/FPI	3/16	4/16	4/16
Refrigerant Control	Thermal Expansion Valve	Thermal Expansion Valve	Thermal Expansion Valve
Drain Connection Number/Size (in.)	1 3/4 NPT	1 3/4 NPT	1 3/4 NPT
Outdoor Fan			
Type	Propeller	Propeller	Propeller
Number Used/Diameter (in.)	1/22	1/22	1/22
Drive Type/No. Speeds ⁽⁴⁾	Direct/1	Direct/1	Direct/1
CFM	2,550	3,050	3,370
Number Motors/HP	1/0.20	1/0.33	1/0.33
Motor RPM	1,115	1,115	1,115
Belt Drive Indoor Fan			
Type	FC Centrifugal	FC Centrifugal	FC Centrifugal
Number Used/Diameter (in.)	1/11x11	1/11x11	1/11x11
Drive Type/Number Speeds	Belt/Variable Sheave	Belt/Variable Sheave	Belt/Variable Sheave
Number Motors	1	1	1
Motor HP	1.00	1.00	1.00
Standard Motor RPM	1,750	1,750	1,750
Motor Frame Size	56	56	56
Filters^{(5),(6)}			
Type Furnished	Throwaway	Throwaway	Throwaway
Number Size Recommended	(2) 20x25x1	(2) 20x25x1	(2) 20x30x1 ⁽⁷⁾
Optional Hot Gas Reheat Coil			
Type	Lanced	Lanced	Lanced
Tube Size (in.) OD	0.375	0.375	0.375
Face Area (sq. ft.)	2.22	2.22	2.22
Rows/FPI	1/16	1/16	2/16
Refrigerant Charge (Lbs. of R-22)⁽⁸⁾			
Standard	5.3	7.7	8.4
Optional Hot Gas Reheat Coil	5.3	8.5	10.7



General Data

(3-5 Tons R-22 Refrigerant)

Table 1. (continued) General Data — 3-5 Tons — R-22 Refrigerant

	3 Tons	4 Tons	5 Tons
Heating Performance⁽⁹⁾			
(Gas/Electric Only)			
Heating Input			
Low Heat Input (Btu)	60,000	60,000	60,000
Mid Heat Input (Btu)	80,000	80,000	80,000
High Heat Input (Btu)	120,000	120,000	130,000
Heating Output			
Low Heat Input (Btu)	48,000	48,000	48,000
Mid Heat Input (Btu)	64,000	64,000	64,000
High Heat Input (Btu)	96,000	96,000	104,000
AFUE⁽¹⁰⁾			
Low Heat Input (Btu)	81	81	81
Mid Heat Input (Btu)	81	81	81
High Heat Input (Btu)	81	81	80
Steady State Efficiency%			
Low Heat Input (Btu)	81	81	81
Mid Heat Input (Btu)	81	81	81
High Heat Input (Btu)	81	81	80
No. Burners			
Low Heat Input (Btu)	2	2	2
Mid Heat Input (Btu)	2	2	2
High Heat Input (Btu)	3	3	3
No. Stages			
Low Heat Input (Btu)	1	1	1
Mid Heat Input (Btu)	1	1	1
High Heat Input (Btu)	1	1	1
Gas Supply Line Pressure			
Natural (minimum/maximum)	4.5/14.0	4.5/14.0	4.5/14.0
LP (minimum/maximum)	10.0/14.0	10.0/14.0	10.0/14.0
Gas Connection Pipe Size (in.)			
Low Heat	1/2	1/2	1/2
Mid Heat	1/2	1/2	1/2
High Heat	1/2	1/2	1/2

(1) 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 $\pm 20\%$ of nominal cfm. Units are certified in accordance with the Unitary Air-Conditioner Equipment certification program, which is based on ARI Standard 210/240 except AK (380V/60 Hz).

(2) EER and/or SEER are rated at ARI conditions and in accordance with DOE test procedures.

(3) Outdoor Sound Rating shown is tested in accordance with ARI Standard 270. For additional information refer to Table 102.

(4) With Dehumidification (Hot Gas Reheat) option: Direct/2 speed.

(5) Optional 2" pleated filters also available.

(6) 20x25x1 filters standard on T/YHC033A & T/YHC043A Low, Medium Heat Models. 20x30x1 filters standard on YHC033 & YHC043A.

(7) 2" pleated filters is a factory installed option. 2" pleated filters is standard with the Dehumidification (Hot Gas Reheat) option.

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

(9) 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.

(10) AFUE and Steady State Efficiency is rated in accordance with DOE test procedures.

Dimensional Data

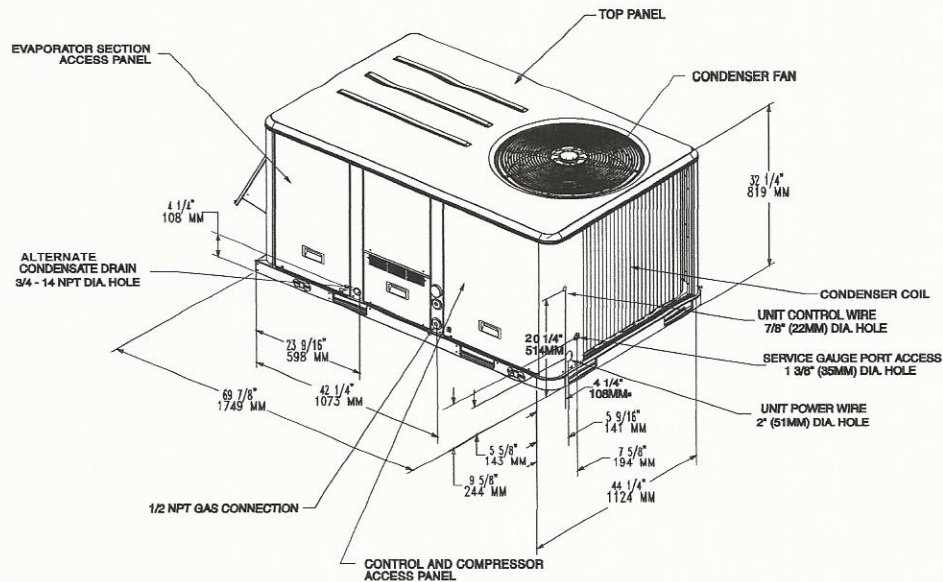


Figure 2. Cooling and Gas/Electric - 3-4 Tons - Low & Medium Heat - R-22

* All dimensions are in inches/millimeters.

**1/2 NPT Gas Connection = (Y_C Models only); 2" Electrical Connection: Single Point Power When Heat Installed (T_C Models only.)

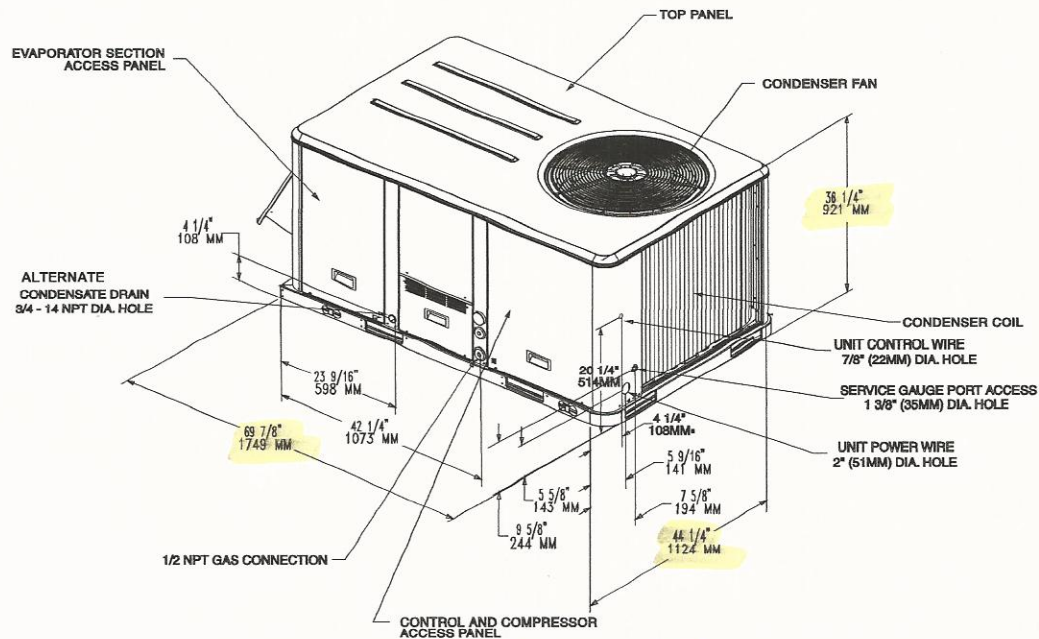


Figure 3. Cooling and Gas/Electric - 5 Tons - High Heat - R-22; Cooling and Gas/Electric 3-5 Tons — Standard Efficiency R-410A Cooling and Gas/Electric; 3 Tons High Efficiency R-410A

* All dimensions are in inches/millimeters.

**1/2 NPT Gas Connection = (Y_C Models only); 2" Electrical Connection: Single Point Power When Heat Installed (T_C Models only.)

Weights

Table 136. Maximum Unit & Corner Weights (Lbs) and Center of Gravity Dimensions (in.)

Unit		Maximum Model Weights ⁽ⁱ⁾		Corner Weights ⁽ⁱⁱ⁾			Center of Gravity (in.)		
Tons	Model No.	Shipping	Net	A	B	C	D	Length	Width
R-22 Refrigerant									
3	THC033A	566	464	140	119	109	96	32	19
	YHC033A	627	537	159	139	126	111	32	19
4	THC043A	598	507	147	124	122	112	31	20
	YHC043A	669	577	167	144	139	127	32	20
5	THC063A	648	557	167	135	130	125	31	19
	YHC063A	704	612	180	151	144	137	32	20
R-410A Refrigerant									
3	TSC036E1, E3, E4, EW	555	480	157	122	95	107	31	19
	YSC036E1, E3, E4, EW	607	532	165	137	95	134	31	19
	WSC036E1, E3, E4, EW	589	514	177	107	113	117	29	20
4	TSC048E1, E3, E4, EW	586	511	167	129	101	114	31	19
	YSC048E1, E3, E4, EW	638	563	175	145	101	142	31	19
	WSC048E1, E3, E4, EW	600	525	181	109	115	119	29	20
5	TSC060E1, E3, E4, EW	636	561	183	142	111	125	31	19
	YSC060E1, E3, E4, EW	688	613	190	158	110	155	31	19
	WSC060E1, E3, E4, EW	825	682	228	177	114	163	38	24

(i) Weights are approximate.

(ii) Corner weights are given for information only.

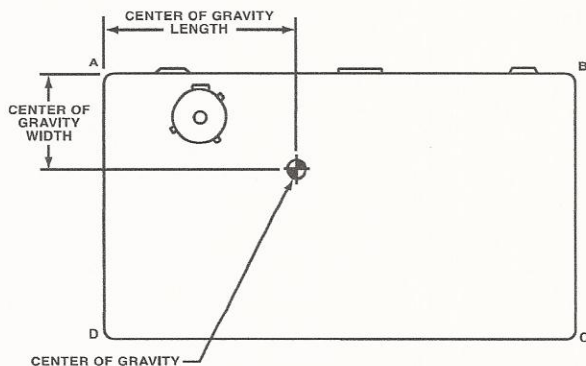


Table 137. Maximum Unit & Corner Weights (Lbs) and Center of Gravity Dimensions (in.)

Tons	Unit Model No.	Maximum Model Weights ⁽ⁱ⁾		Corner Weights ⁽ⁱⁱ⁾				Center of Gravity (in.)	
		Shipping	Net	A	B	C	D	Length	Width
3	THC036E1,3,4	566	472	109	85	186	92	40	26
	YHC036E1,3,4	637	544	127	103	204	110	39	26
4	THC048E1,3,4	798	653	155	127	248	123	40	25
	YHC048E1,3,4	869	725	173	145	266	141	40	25
5	THC060E1,3,4	823	676	204	74	327	71	41	26
	YHC060E1,3,4	894	748	222	92	345	89	41	26

(i) Weights are approximate.

(ii) Corner weights are given for information only.