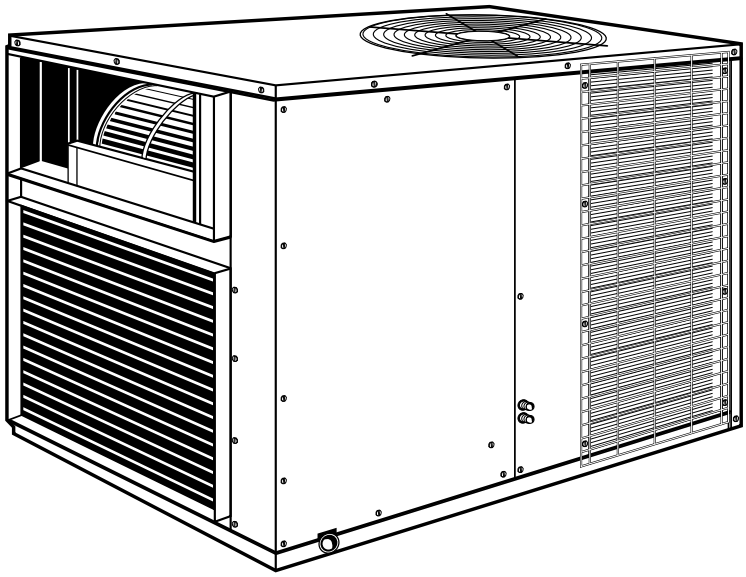
TRANE®

22-1333-09

13 Seer Horizontal Over/ Under Packaged Cooling Units

TCH024 - 042C
TCH048 - 060F

2, 2½, 3, 3½, 4, 5 Ton



General Features

It's Hard To Stop A Trane.®

Horizontal Packaged Cooling Units

Whether your requirement is residential or light commercial, our line of packaged air conditioners gives you the excellent performance and reliability you expect.

The efficiencies of our units meet or exceed virtually all local standards and are among the most competitive in the industry. We have also made installation easier and less costly by standardizing the cabinet and accessories.

Horizontal Packaged Cooling Unit, the simplest, most efficient, and reliable unit made.

Better Installability
These packaged cooling units have an over/under horizontal configuration which provides for efficient airflow delivery. This dedicated design eliminates the need for any unit conversion, saving field labor and installed cost.

Better Serviceability
Accessibility, already a standard feature in packaged cooling units, has been greatly enhanced. With a standardized cabinet, all components were designed to be in the same location, regardless of unit size. Our timesaving rotolock compressor fittings provide easy removal if service on the compressor is required.

The control panel features colored and numbered wire on all products. This aids in reducing troubleshooting time when wire tracing is required. And easy access to all major components can be accomplished by removing quick service access panels.

Better Performance
Our packaged cooling units combine full capacities and strong airflow to provide you with a product far superior in performance than the competition.

Unmatched Quality and Reliability
All major components on these products, including the compressor, have been designed and manufactured for maximum service. Every compressor is designed and manufactured to exacting specifications. Each design is life tested in extreme environments to ensure reliable and long lasting operation in normal applications. Each compressor has internal motor protection for added reliability.

Features and Benefits

The TCH024-042C units feature:

Design Features
- Compressor, hermetically sealed and manufactured to provide reliable, economical operation, internal pressure relief and internal overload protection
- Thermal expansion valve refrigerant control
- External pressure taps for refrigerant check
- Direct drive indoor fan motor
- Polarized plug for easy field connection of low voltage to supplementary heaters
- Copper tube, aluminum plate fin coils
- Low ambient cooling to 45°F as manufactured; to 0°F with accessory
- Over (supply) under (return) air configuration
- Heavy-gauge steel cabinet
- Weather-resistant powder paint finish
- Duct flanges
- Outdoor coil guard
- UL and ARI Certified

Accessories
- Supplemental Electric Heat
- Thermostats
- Low ambient cooling to 0°F

Contents

Features and Benefits

Optional Equipment

OPTIONAL EQUIPMENT FOR PACKAGE UNITS. (Check mark [✓] indicates accessories included.)

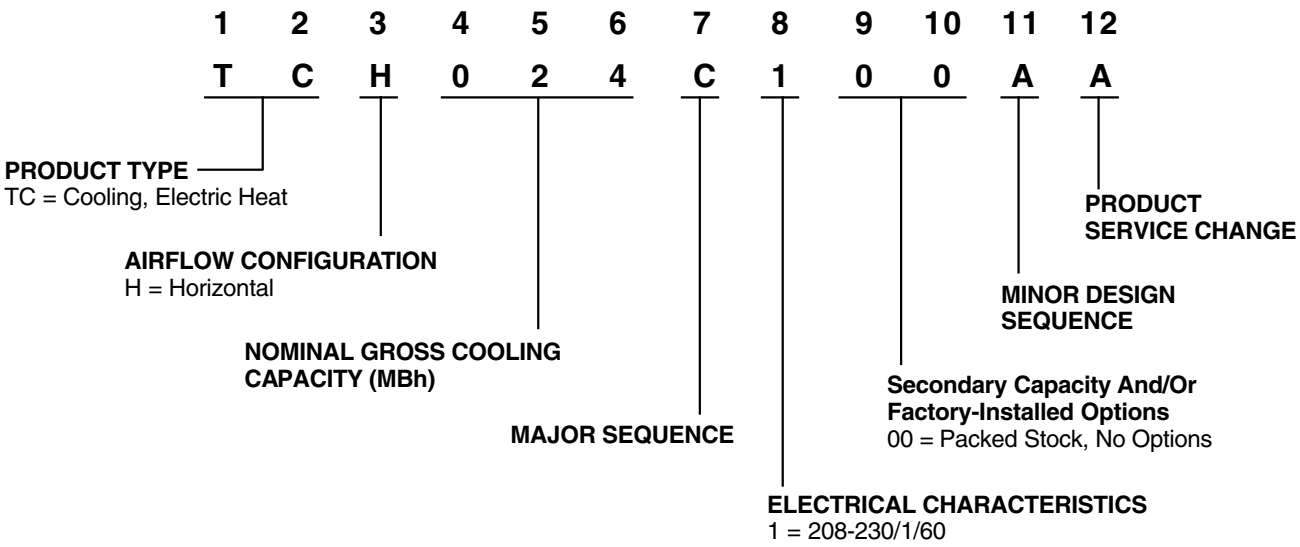
Electric Heat Fan Relay ..... BAY24X042 [ ]
Anti-Short Cycle Timer① ..... BAYASCT001 [ ]
Time Delay Relay ..... BAYRLAY002 [ ]
5 or 7 min. Anti-Short Cycle Timer① ..... BAY41X171A [ ]
Evaporator Defrost Control (Low Ambient Cooling) Kit ..... BAYLOAM011A [ ]

SUPPLEMENTARY HEATERS (Single Phase)
4.33/5.76 KW Heater TCH-C1 (208/240v) ..... BAYHTRC106A [ ]
6.12/8.16 KW Heater TCH036-042C1, 048-060F1 (208/240v) ..... BAYHTRC109A [ ]
7.93/10.56 KW Heater **TCH048F1 ONLY** (208/240v) ..... **BAYHTRC110A** [ ]
7.93/10.56 KW Heater TCH-C1 (208/240v) ..... BAYHTRC111A [ ]
12.98/17.28 KW Heater TCH030-042C, 048-060F1 (208/240v)② ..... BAYHTRC117A [ ]

NOTES:
① Do not use with programmable thermostats.
② This model has a fuse box factory provided.

Selection Procedure

Model Number Nomenclature



General Data

MODEL	TCH024C100A	TCH030C100A	TCH036C100B	TCH042C100A
RATED VOLTS/PH/HZ	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60
A.R.I. RATINGS (COOLING)①				
BTUH	25600	29600	35000	40500
Indoor Air Flow (CFM)	850	1000	1200	1400
Power Input (KW)	2.12	2.405	3.05	3.55
EER/SEER (BTU/WATT-HR.)⑥	12.00 / 13	12.15 / 13	11.35 / 13	11.37 / 13
Noise Rating No. (db.)②	78	75	75	77
POWER CONNS. — V/PH/HZ	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60
Min. Brch. Cir. Ampacity③	16	20	23	28
Fuse Size — Max. (Amps)	25	30	35	40
Fuse Size — Recmd. (Amps)	25	30	35	40
COMPRESSOR	CLIMATUFF®	CLIMATUFF®	CLIMATUFF®	CLIMATUFF®
No. Used — No. Speeds	1 - 1	1 - 1	1 - 1	1 - 1
Volts/PH/HZ	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60
R.L. Amps — L.R. Amps	10.3 - 56	12.2 - 67	14.7 - 83	16.5 - 95
OUTDOOR COIL — TYPE	PLATE FIN	PLATE FIN	PLATE FIN	PLATE FIN
Rows / F.P. I.	2 / 22	2 / 22	2 / 22	2 / 22
Face Area (Sq. Ft.)	11.20	11.2	11.20	12.3
Tube Size (In.)	0.375	0.375	0.375	0.375
INDOOR COIL—TYPE	PLATE FIN	PLATE FIN	PLATE FIN	PLATE FIN
Rows / F.P. I.	4 / 15	4 / 15	4 / 15	5 / 15
Face Area (Sq. Ft.)	3.44	3.44	3.44	3.44
Tube Size (In.)	0.375	0.375	0.375	0.375
Refrigerant Control	TXV-NB	TXV-NB	TXV-NB	TXV-NB
Drain Conn. Size (in.)	3/4 FEMALE PVC	3/4 FEMALE PVC	3/4 FEMALE PVC	3/4 FEMALE PVC
Duct Connections	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
OUTDOOR FAN — TYPE	PROPELLER	PROPELLER	PROPELLER	PROPELLER
No. Used / Dia. (in.)	1 / 20	1 / 20	1 / 20	1 / 20
Type Drive / No. Speeds	DIRECT / 1	DIRECT / 1	DIRECT / 1	DIRECT / 1
CFM @ 0.0 In. W.G.④	2500	2500	2500	2500
No. Motors — HP	1 - 1/5	1 - 1/5	1 - 1/5	1 - 1/5
Motor Speed R.P.M.	850	850	850	850
Volts/PH/HZ	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60
F.L. Amps — L.R. Amps	1.0 - 2.2	1.0 - 2.2	1.0 - 2.2	1.0 - 2.2
INDOOR FAN — TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
Dia. x Width (in.)	9 X 9	10 X 10	10 X 10	10 X 10
No. Used	1	1	1	1
Drive / Speeds (No.)	DIRECT / 2	DIRECT / 2	DIRECT / 2	DIRECT / VAR
CFM vs. in. W.G.⑤	SEE FAN PERFORMANCE TABLE	SEE FAN PERFORMANCE TABLE	SEE FAN PERFORMANCE TABLE	SEE FAN PERFORMANCE TABLE
No. Motors — HP	1 - 1/4	1 - .5	1 - 0.50	1 - .75
Motor Speed R.P.M.	1075	1050	1050	VARIABLE
Volts/PH/HZ	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60
F.L. Amps — L.R. Amps	1.8 - 3.4	4.1	4.1	6.8
FILTER—FURNISHED?	NO	NO	NO	NO
Type Recommended	THROWAWAY	THROWAWAY	THROWAWAY	THROWAWAY
Min Face Area				
Low Vel. (Sq. Ft.)⑦	2.67	3.33	4.00	4.67
REFRIGERANT				
Charge (lb. of R-22)	7 LBS., 8 OZ.	6 LBS., 13 OZ.	7 LBS., 0 OZ.	7 LBS., 5 OZ.
DIMENSIONS	H X W X D	H X W X D	H X W X D	H X W X D
Crated (in.)	34 X 33.8 X 48	34 X 33.8 X 48	34 X 33.8 X 48	34 X 33.8 X 48
Uncrated	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
WEIGHT				
Shipping (lbs.) / Net (lbs.)	326 / 279	328 / 281	333 / 286	340 / 293

① **Rated in accordance with A.R.I. Standard 210/240.**
② **Calculated in accordance with A.R.I. Standard 270.**
③ **Calculated in accordance with currently prevailing Nat'l Electrical Code.**
④ **Standard Air — Dry Coil — Outdoor.**
⑤ **Standard Air — Wet Coil — Indoor.**
⑥ **Rated in accordance with D.O.E. test procedure.**
⑦ **Filters must be installed in return air system. Square footages listed are based on 300 f.p.m. face velocity. If permanent filters are used size per manufacturer's recommendation with a clean resistance of 0.05" W.C.**

General Data

MODEL	TCH048F100A	TCH060F100A
RATED VOLTS/PH/HZ	208-230/1/60	208-230/1/60
A.R.I. RATINGS (COOLING)①		
BTUH	50000	62000
Indoor Air Flow (CFM)	1600	1925
Power Input (KW)	4.10	5.40
EER/SEER (BTU/WATT-HR.)⑥	12.35 / 13.75	11.45 / 13.00
Noise Rating No. (db.)②	84	84
POWER CONNS. — V/PH/HZ	208-230/1/60	208-230/1/60
Min. Brch. Cir. Ampacity③	37.0	48.0
Fuse Size — Max. (Amps)	50	60
Fuse Size — Recmd. (Amps)	50	60
COMPRESSOR	CLIMATUFF®	CLIMATUFF®
No. Used — No. Speeds	1 - 1	1 - 1
Volts/PH/HZ	208-230/1/60	208-230/1/60
R.L. Amps — L.R. Amps	21.2 - 137	28.8 - 148
OUTDOOR COIL — TYPE	PLATE FIN	PLATE FIN
Rows / F.P. I.	2 / 22	2 / 22
Face Area (Sq. Ft.)	14.31	14.31
Tube Size (In.)	3/8	3/8
INDOOR COIL—TYPE	PLATE FIN	PLATE FIN
Rows / F.P. I.	3 / 16	4 / 16
Face Area (Sq. Ft.)	5.31	5.31
Tube Size (In.)	3/8	3/8
Refrigerant Control	TXV NON-BLEED	TXV NON-BLEED
Drain Conn. Size (in.)	3/4 FEMALE PVC	3/4 FEMALE PVC
Duct Connections	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
OUTDOOR FAN — TYPE	PROPELLER	PROPELLER
No. Used / Dia. (in.)	1 / 22	1 / 22
Type Drive / No. Speeds	DIRECT / 1	DIRECT / 1
CFM @ 0.0 In. W.G.④	4100	4100
No. Motors — HP	1 - 1/2	1 - 1/2
Motor Speed R.P.M.	1080	1080
Volts/PH/HZ	200-230/1/60	200-230/1/60
F.L. Amps — L.R. Amps	3.0/3.4 - 6.8	3.0/3.3 - 6.6
INDOOR FAN — TYPE	CENTRIFUGAL	CENTRIFUGAL
Dia. x Width (in.)	11 X 11	11 X 11
No. Used	1	1
Drive / Speeds (No.)	DIRECT / VAR	DIRECT / VAR
CFM vs. in. W.G.⑤	SEE FAN PERFORMANCE TABLE	SEE FAN PERFORMANCE TABLE
No. Motors — HP	1 - 3/4	1 - 1
Motor Speed R.P.M.	VARIABLE	VARIABLE
Volts/PH/HZ	200-230/1/60	200-230/1/60
F.L. Amps — L.R. Amps	6.8	6.9
FILTER—FURNISHED?	NO	NO
Type Recommended	THROWAWAY	THROWAWAY
Min Face Area		
Low Vel. (Sq. Ft.)⑦	5.33	6.4
REFRIGERANT		
Charge (lb. of R-22)	11 LBS., 0 OZ.	10 LBS., 11 OZ.
DIMENSIONS	H X W X D	H X W X D
Crated (in.)	39-3/8 X 47 X 66	39-3/8 X 47 X 66
Uncrated	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
WEIGHT		
Shipping (lbs.) / Net (lbs.)	504 / 437	509 / 449

① **Rated in accordance with A.R.I. Standard 210/240.**
② **Calculated in accordance with A.R.I. Standard 270.**
③ **Calculated in accordance with currently prevailing Nat'l Electrical Code.**
④ **Standard Air — Dry Coil — Outdoor.**
⑤ **Standard Air — Wet Coil — Indoor.**
⑥ **Rated in accordance with D.O.E. test procedure.**
⑦ **Filters must be installed in return air system. Square footages listed are based on 300 f.p.m. face velocity. If permanent filters are used size per manufacturer's recommendation with a clean resistance of 0.05" W.C.**

Performance Data
Cooling

TCH024C1 AT 800 CFM (CAPACITIES ARE NET IN BTUH/1000-INDOOR FAN HEAT DEDUCTED)

O.D. D.B.	I.D. W.B.	TOTAL CAP.	SENS. CAP. AT ENTERING D.B. TEMP. 72	75	78	80	COMPR. KW
	59	23.1	19.2	21.5	23.5*	24.0*	1.43
85	63	24.8	16.0	18.4	20.8	22.4	1.43
	67	26.6	12.6	15.0	17.3	18.9	1.44
	59	22.1	18.7	21.1	22.6*	23.2*	1.63
95	63	23.8	15.6	18.0	20.3	21.9	1.63
	67	25.5	12.2	14.5	16.9	18.5	1.63
	63	22.6	15.1	17.5	19.8	21.4	1.88
105	67	24.2	11.7	14.0	16.4	18.0	1.87
	71	26.0	8.2	10.6	12.9	14.5	1.86
	63	21.4	14.6	17.0	19.4	20.9	2.13
115	67	23.0	11.2	13.6	15.9	17.5	2.11
	71	24.7	7.7	10.1	12.5	14.1	2.09

CORRECTION FACTORS FOR OTHER AIRFLOWS (MULTIPLY DATA BY FACTOR)

	AIRFLOW	TOTAL CAPACITY	SENSIBLE CAPACITY
LOW	700	0.98	0.94
HIGH	800	1.00	1.00

VALUES AT ARI RATING CONDITIONS

TOTAL NET CAPACITY = 25500 BTUH
AIRFLOW = 800 CFM
APP. DEW PT. = 55.6 DEG. F
COMPRESSOR POWER = 1630 WATTS
I.D. FAN POWER = 250 WATTS
O.D. FAN POWER = 240 WATTS
S.E.E.R. = 13.00 BTUH/WATT
E.E.R. = 12.08 BTUH/WATT
*** DRY COIL CONDITION (TOTAL CAPACITY = SENSIBLE CAPACITY)**
TOTAL CAPACITY, COMP. KW AND APP. DEW PT. ARE VALID ONLY FOR WET COIL
ALL TEMPERATURES IN DEGREES F.

TCH030C1 AT 1000 CFM (CAPACITIES ARE NET IN BTUH/1000-INDOOR FAN HEAT DEDUCTED)

O.D. D.B.	I.D. W.B.	TOTAL CAP.	SENS. CAP. AT ENTERING D.B. TEMP. 72	75	78	80	COMPR. KW
	59	27.0	22.7	25.5	27.5*	28.1*	1.73
85	63	28.8	18.9	21.7	24.6	26.5	1.74
	67	30.7	14.7	17.5	20.4	22.3	1.76
	59	25.9	22.2	25.1	26.6*	27.2*	1.94
95	63	27.7	18.4	21.3	24.1	26.0	1.96
	67	29.5	14.2	17.1	19.9	21.8	1.98
	63	26.4	17.9	20.7	23.6	25.5	2.22
105	67	28.1	13.7	16.5	19.4	21.3	2.24
	71	29.9	9.4	12.3	15.1	17.1	2.27
	63	25.1	17.4	20.2	23.1	25.0	2.47
115	67	26.7	13.2	16.0	18.9	20.8	2.50
	71	28.4	8.9	11.8	14.6	16.5	2.54

CORRECTION FACTORS FOR OTHER AIRFLOWS (MULTIPLY DATA BY FACTOR)

	AIRFLOW	TOTAL CAPACITY	SENSIBLE CAPACITY
LOW	875	0.98	0.93
HIGH	1000	1.00	1.00

VALUES AT ARI RATING CONDITIONS

TOTAL NET CAPACITY = 29500 BTUH
AIRFLOW = 1000 CFM
APP. DEW PT. = 56.0 DEG. F
COMPRESSOR POWER = 1980 WATTS
I.D. FAN POWER = 200 WATTS
O.D. FAN POWER = 240 WATTS
S.E.E.R. = 13.00 BTUH/WATT
E.E.R. = 12.26 BTUH/WATT
*** DRY COIL CONDITION (TOTAL CAPACITY = SENSIBLE CAPACITY)**
TOTAL CAPACITY, COMP. KW AND APP. DEW PT. ARE VALID ONLY FOR WET COIL
ALL TEMPERATURES IN DEGREES F.

TCH036C1 AT 1200 CFM (CAPACITIES ARE NET IN BTUH/1000-INDOOR FAN HEAT DEDUCTED)

O.D. D.B.	I.D. W.B.	TOTAL CAP.	SENS. CAP. AT ENTERING D.B. TEMP. 72	75	78	80	COMPR. KW
	59	32.4	27.3	30.7	33.1*	33.8*	2.17
85	63	34.7	22.7	26.1	29.5	31.8	2.20
	67	37.1	17.7	21.1	24.5	26.8	2.22
	59	31.1	26.7	30.1	32.0*	32.7*	2.43
95	63	33.3	22.1	25.5	29.0	31.2	2.47
	67	35.5	17.1	20.5	23.9	26.2	2.50
	63	31.7	21.5	24.9	28.3	30.6	2.79
105	67	33.8	16.5	19.9	23.3	25.6	2.83
	71	35.9	11.4	14.8	18.2	20.5	2.87
	63	30.1	20.8	24.2	27.6	29.9	3.10
115	67	32.0	15.8	19.2	22.6	24.9	3.16
	71	34.0	10.7	14.1	17.5	19.8	3.21

CORRECTION FACTORS FOR OTHER AIRFLOWS (MULTIPLY DATA BY FACTOR)

	AIRFLOW	TOTAL CAPACITY	SENSIBLE CAPACITY
LOW	1050	0.98	0.94
HIGH	1200	1.00	1.00

VALUES AT ARI RATING CONDITIONS

TOTAL NET CAPACITY = 35500 BTUH
AIRFLOW = 1200 CFM
APP. DEW PT. = 56.0 DEG. F
COMPRESSOR POWER = 2500 WATTS
I.D. FAN POWER = 300 WATTS
O.D. FAN POWER = 240 WATTS
S.E.E.R. = 13.00 BTUH/WATT
E.E.R. = 11.75 BTUH/WATT
*** DRY COIL CONDITION (TOTAL CAPACITY = SENSIBLE CAPACITY)**
TOTAL CAPACITY, COMP. KW AND APP. DEW PT. ARE VALID ONLY FOR WET COIL
ALL TEMPERATURES IN DEGREES F.

TCH042C1 AT 1400 CFM (CAPACITIES ARE NET IN BTUH/1000-INDOOR FAN HEAT DEDUCTED)

O.D. D.B.	I.D. W.B.	TOTAL CAP.	SENS. CAP. AT ENTERING D.B. TEMP. 72	75	78	80	COMPR. KW
	59	37.0	31.1	35.2	37.8*	38.6*	2.43
85	63	39.6	25.7	29.8	33.8	36.5	2.46
	67	42.4	19.8	23.8	27.9	30.6	2.49
	59	35.4	30.4	34.5	36.5*	37.3*	2.72
95	63	37.9	25.0	29.1	33.1	35.8	2.76
	67	40.5	19.1	23.1	27.2	29.9	2.80
	63	36.0	24.2	28.3	32.4	35.1	3.12
105	67	38.4	18.3	22.4	26.4	29.1	3.17
	71	40.9	12.3	16.4	20.4	23.1	3.22
	63	34.1	23.5	27.5	31.6	34.1*	3.47
115	67	36.3	17.6	21.6	25.7	28.4	3.53
	71	38.7	11.5	15.6	19.7	22.4	3.59

CORRECTION FACTORS FOR OTHER AIRFLOWS (MULTIPLY DATA BY FACTOR)

	AIRFLOW	TOTAL CAPACITY	SENSIBLE CAPACITY
LOW	1225	0.99	0.94
HIGH	1400	1.00	1.00

VALUES AT ARI RATING CONDITIONS

TOTAL NET CAPACITY = 40500 BTUH
AIRFLOW = 1400 CFM
APP. DEW PT. = 56.1 DEG. F
COMPRESSOR POWER = 2800 WATTS
I.D. FAN POWER = 500 WATTS
O.D. FAN POWER = 250 WATTS
S.E.E.R. = 13.00 BTUH/WATT
E.E.R. = 11.37 BTUH/WATT
*** DRY COIL CONDITION (TOTAL CAPACITY = SENSIBLE CAPACITY)**
TOTAL CAPACITY, COMP. KW AND APP. DEW PT. ARE VALID ONLY FOR WET COIL
ALL TEMPERATURES IN DEGREES F.

Performance Data
Cooling

TCH048F1 AT 1600 CFM (CAPACITIES ARE NET IN BTUH/1000-INDOOR FAN HEAT DEDUCTED)

O.D. D.B.	I.D. W.B.	TOTAL CAP.	SENS. CAP. AT ENTERING D.B. TEMP. 72	74	76	78	80	COMPR. KW	APP.DEW PT.
85	59	46.0	37.7	40.6	43.5	46.2*	47.3*	3.66	46.4
	63	49.4	32.0	34.9	37.8	40.7	43.6	3.69	50.3
	67	52.9	25.6	28.5	31.4	34.3	37.2	3.73	54.5
	71	56.5	19.1	22.0	24.9	27.8	30.7	3.76	58.8
90	59	45.0	37.3	40.2	43.1	45.4*	46.5*	3.84	46.8
	63	48.3	31.5	34.5	37.4	40.3	43.2	3.87	50.7
	67	51.8	25.2	28.1	31.0	33.9	36.8	3.91	54.8
	71	55.4	18.7	21.6	24.5	27.4	30.3	3.95	59.1
95	59	44.0	36.8	39.7	42.6	44.6*	45.7*	4.01	47.1
	63	47.3	31.1	34.0	36.9	39.8	42.7	4.05	51.0
	67	50.8	24.8	27.7	30.6	33.5	36.4	4.09	55.2
	71	54.3	18.3	21.2	24.1	27.0	30.0	4.14	59.4
100	59	42.9	36.3	39.2	42.1	43.7*	44.8*	4.23	47.5
	63	46.2	30.6	33.5	36.4	39.4	42.3	4.28	51.4
	67	49.6	24.3	27.2	30.1	33.0	35.9	4.32	55.5
	71	53.1	17.9	20.8	23.7	26.6	29.5	4.37	59.8
105	59	41.9	35.8	38.7	41.6	42.9*	43.9*	4.45	47.9
	63	45.1	30.2	33.1	36.0	38.9	41.8	4.50	51.8
	67	48.4	23.9	26.8	29.7	32.6	35.5	4.55	55.9
	71	51.9	17.4	20.3	23.2	26.2	29.1	4.60	60.2
115	59	39.7	34.9	37.8	40.0*	41.1*	42.1*	4.89	48.6
	63	42.8	29.2	32.1	35.0	37.9	40.8	4.95	52.5
	67	46.1	22.9	25.8	28.7	31.7	34.6	5.00	56.6
	71	49.5	16.5	19.4	22.4	25.3	28.2	5.06	60.9

CORRECTION FACTORS - OTHER AIRFLOWS
(MULTIPLY OR ADD AS INDICATED)

AIRFLOW	1400	1600
TOTAL CAP.	X0.98	X1.00
SENS. CAP.	X0.94	X1.00
COMPR.	KW X1.00	X1.00
A.D.P.	-1.6	0.0

VALUES AT ARI RATING CONDITIONS

TOTAL NET CAPACITY = 50800 BTUH
AIRFLOW = 1640 CFM
APP. DEW PT. = 55.5 DEG. F
COMPRESSOR POWER = 3360 WATTS
I.D. FAN POWER = 280 WATTS
O.D. FAN POWER = 460 WATTS
S.E.E.R. = 13.00 BTUH/WATT
E.E.R. = 12.41 BTUH/WATT
*** DRY COIL CONDITION (TOTAL CAPACITY = SENSIBLE CAPACITY)**
TOTAL CAPACITY,COMP. KW AND APP. DEW PT. ARE VALID ONLY FOR WET COIL
ALL TEMPERATURES IN DEGREES F.

TCH060F1 AT 1900 CFM (CAPACITIES ARE NET IN BTUH/1000-INDOOR FAN HEAT DEDUCTED)

O.D. D.B.	I.D. W.B.	TOTAL CAP.	SENS. CAP. AT ENTERING D.B. TEMP. 72	74	76	78	80	COMPR. KW	APP.DEW PT.
85	59	55.7	45.4	49.1	52.7	56.0*	57.4*	4.82	46.3
	63	60.0	38.3	42.0	45.6	49.2	52.9	4.86	50.2
	67	64.4	30.5	34.1	37.8	41.4	45.0	4.91	54.4
	71	69.0	22.5	26.1	29.8	33.4	37.0	4.96	58.7
90	59	54.7	45.0	48.6	52.2	55.1*	56.5*	5.05	46.6
	63	58.8	37.9	41.5	45.1	48.7	52.4	5.10	50.5
	67	63.2	30.0	33.6	37.3	40.9	44.5	5.15	54.7
	71	67.7	22.0	25.6	29.3	32.9	36.5	5.21	59.0
95	59	53.6	44.5	48.1	51.7	54.4*	55.6*	5.28	46.9
	63	57.7	37.4	41.0	44.6	48.2	51.9	5.34	50.8
	67	61.9	29.5	33.1	36.8	40.4	44.0	5.40	55.0
	71	66.3	21.5	25.1	28.8	32.4	36.0	5.46	59.3
100	59	52.4	43.9	47.6	51.2	53.4*	54.6*	5.56	47.2
	63	56.3	36.8	40.4	44.1	47.7	51.3	5.62	51.1
	67	60.5	29.0	32.6	36.2	39.9	43.5	5.69	55.4
	71	64.8	21.0	24.6	28.2	31.9	35.5	5.75	59.7
105	59	51.2	43.4	47.0	50.7	52.4*	53.6*	5.84	47.6
	63	55.0	36.3	39.9	43.5	47.2	50.8	5.91	51.5
	67	59.1	28.4	32.0	35.7	39.3	42.9	5.98	55.7
	71	63.2	20.4	24.0	27.7	31.3	34.9	6.05	60.0
115	59	48.7	42.3	46.0	49.0*	50.3*	51.5*	6.38	48.2
	63	52.4	35.2	38.8	42.4	46.1	49.7	6.47	52.1
	67	56.2	27.3	31.0	34.6	38.2	41.8	6.56	56.4
	71	60.2	19.3	23.0	26.6	30.2	33.8	6.66	60.7

CORRECTION FACTORS - OTHER AIRFLOWS
(MULTIPLY OR ADD AS INDICATED)

AIRFLOW	1675	1925
TOTAL CAP.	X0.99	X1.00
SENS. CAP.	X0.95	X1.01
COMPR. KW	X1.00	X1.00
A.D.P.	-1.5	0.1

VALUES AT ARI RATING CONDITIONS

TOTAL NET CAPACITY = 62000 BTUH
AIRFLOW = 1930 CFM
APP. DEW PT. = 55.2 DEG. F
COMPRESSOR POWER = 4485 WATTS
I.D. FAN POWER = 490 WATTS
O.D. FAN POWER = 430 WATTS
S.E.E.R. = 13.00 BTUH/WATT
E.E.R. = 11.45 BTUH/WATT
*** DRY COIL CONDITION (TOTAL CAPACITY = SENSIBLE CAPACITY)**
TOTAL CAPACITY,COMP. KW AND APP. DEW PT. ARE VALID ONLY FOR WET COIL
ALL TEMPERATURES IN DEGREES F.

Fan Performance Data

INDOOR BLOWER PERFORMANCE

TCH, WCH024C

MOTOR SPEED		EXTERNAL STATIC PRESSURE-IN. W.G.				
		0.2	0.3	0.4	0.5	0.6
② LOW	WATTS	273	258	245	229	---
	CFM	875	811	761	697	---
HIGH	WATTS	354	338	325	312	293
	CFM	1047	994	928	864	767

D672418

① - WET COIL, NO FILTERS

② - FACTORY SETTING

INDOOR BLOWER PERFORMANCE

TCH, WCH030C

MOTOR SPEED		EXTERNAL STATIC PRESSURE-IN. W.G.			
		0.2	0.3	0.4	0.5
② LOW	WATTS	220	225	245	---
	CFM	1060	1005	965	---
HIGH	WATTS	260	270	280	285
	CFM	1135	1090	1055	1015

D672417

① - WET COIL, NO FILTERS

② - FACTORY SETTING

INDOOR BLOWER PERFORMANCE

TCH, WCH036C

MOTOR SPEED		EXTERNAL STATIC PRESSURE (IN. WG)			
		0.2	0.3	0.4	0.5
② LOW	WATTS	325	330	340	350
	CFM	1205	1160	1115	1075
HIGH	WATTS	410	415	410	395
	CFM	1325	1275	1215	1150

D674375

① - WET COIL, NO FILTERS

② - FACTORY SETTING

Static Pressure Drop Through Electric Heaters

	NUMBER OF RACKS (SEE TABLE)		
	1	2	3
AIRFLOW CFM	AIR PRESSURE DROP inches of w.g.		
600	0.02	0.04	0.06
700	0.03	0.05	0.07
800	0.03	0.06	0.09
900	0.04	0.08	0.12
1000	0.05	0.10	0.15
1100	0.06	0.12	0.18
1200	0.07	0.14	0.21
1300	0.08	0.17	0.25
1400	0.10	0.20	0.30
1500	0.12	0.23	0.35

HEATER MODEL NO.	NO. OF RACKS
BAYTHTRC106A	1
BAYHTRC109A	1
BAYTHTRC111A	2
BAYTHTRC117A	3

INDOOR BLOWER PERFORMANCE

TCH, WCH042C

AIRFLOW SETTING	DIPSWITCH SETTINGS				EXTERNAL STATIC PRESSURE - IN. W.G.											
					.20 ①		.30 ①		.40 ①		.50 ①		.60 ①		.70 ①	
	1	2	3	4	CFM	PWR WATTS	CFM	PWR WATTS	CFM	PWR WATTS	CFM	PWR WATTS	CFM	PWR WATTS	CFM	PWR WATTS
350 CFM/TON	OFF	OFF	OFF	ON	1256	352	1265	392	1270	430	1265	465	1266	505	1266	530
400 CFM/TON	OFF	OFF	OFF	OFF	1386	480	1386	486	1395	535	1395	575	1389	594	1391	607
450 CFM/TON	OFF	OFF	ON	OFF	1557	530	1552	571	1551	604	1553	647	1555	690	1563	737

D672415 REV 0

① - WET COIL, NO FILTERS ② - FACTORY SETTING

From Dwg. 21A725766 Rev. 2

Fan Performance Data

INDOOR BLOWER PERFORMANCE

TCH, WCH048F

AIRFLOW SETTING	DIPSWITCH SETTINGS				EXTERNAL STATIC PRESSURE - IN. W.G.											
					.20 ①		.30 ①		.40 ①		.50 ①		.60 ①		.70 ①	
	1	2	3	4	CFM	PWR WATTS	CFM	PWR WATTS	CFM	PWR WATTS	CFM	PWR WATTS	CFM	PWR WATTS	CFM	PWR WATTS
350 CFM/TON	OFF	OFF	OFF	ON	1380	160	1390	195	1390	225	1390	260	1390	290	1365	335
400 CFM/TON ②	OFF	OFF	OFF	OFF	1613	225	1625	260	1640	305	1640	340	1640	370	1625	405
450 CFM/TON	OFF	OFF	ON	OFF	1760	270	1770	310	1775	345	1785	390	1785	435	1785	480

① - WET COIL, NO FILTERS ② - FACTORY SETTINGS

From Dwg. 670900

INDOOR BLOWER PERFORMANCE

TCH, WCH060F

AIRFLOW SETTING	DIPSWITCH SETTINGS				EXTERNAL STATIC PRESSURE - IN. W.G.																	
					.20 ①			.30 ①			.50 ①			.70 ①			.90 ①			1.0 ①		
	1	2	3	4	CFM	PWR WATTS	BHP	CFM	PWR WATTS	BHP	CFM	PWR WATTS	BHP	CFM	PWR WATTS	BHP	CFM	PWR WATTS	BHP	CFM	PWR WATTS	BHP
350 CFM/TON	OFF	OFF	OFF	ON	1740	285	.26	1750	330	.31	1725	395	.37	1710	470	.43	1675	550	.51	1650	590	.55
400 CFM/TON ②	OFF	OFF	OFF	OFF	1990	385	.36	2010	440	.41	2020	520	.48	2005	590	.55	1990	690	.64	1895	740	.68
450 CFM/TON	OFF	OFF	ON	OFF	2165	665	.62	2170	725	.67	2150	820	.76	2150	830	.77	2150	855	.79	---	---	---

① - WET COIL, NO FILTERS ② - FACTORY SETTINGS

From Dwg. 670899

Static Pressure Drop Through Electric Heaters

(INCHES OF WATER)

AIRFLOW CFM	Number of Heater Racks	
	1	2
600	.003	---
800	.004	---
1000	.005	.007
1200	.006	.008
1400	.007	.009
1600	.008	.01
2000	.01	.02

From Dwg. A730642

Electric Heater Data

Supplementary Heaters

Unit Model No.	Capacity at 208V Kw	Capacity at 208V Btuh	Capacity at 240V Kw	Capacity at 240V Btuh	Rated Voltage	Amps Per No. of Circuits	Amps Per Circuit at 208V	Ordering Circuit at 240V	Model Number
	4.33	14800	5.76	19600	208/240/1/60	1	20.8	24.0	BAYHTRC106A
TCH024C100A	7.93	27000	10.56	36000	208/240/1/60	1	38.1	44.0	BAYHTRC111A
	4.33	14800	5.76	19600	208/240/1/60	1	21.0	24.0	BAYHTRC106A
TCH030C1,036C1,042C1	6.12	20900	8.16	27800	208/240/1/60	1	29.4	34.0	BAYHTRC109A ③
	7.93	27000	10.56	36000	208/240/1/60	1	38.1	44.0	BAYHTRC111A
	12.98	44300	17.28	59000	208/240/1/60	1	62.4	72.0	BAYHTRC117A ①
	4.33	14800	5.76	19600	208/240/1/60	1	21.0	24.0	BAYHTRC106A
TCH048F1②	6.12	20900	8.16	27800	208/240/1/60	1	29.4	34.0	BAYHTRC109A ③
	7.93	27000	10.56	36000	208/240/1/60	1	38.1	44.0	BAYHTRC110A ②
	12.98	44300	17.28	59000	208/240/1/60	1	62.4	72.0	BAYHTRC117A ①
	4.33	14800	5.76	19600	208/240/1/60	1	21.0	24.0	BAYHTRC106A
TCH060F1	6.12	20900	8.16	27800	208/240/1/60	1	29.4	34.0	BAYHTRC109A ③
	7.93	27000	10.56	36000	208/240/1/60	1	38.1	44.0	BAYHTRC111A
	12.98	44300	17.28	59000	208/240/1/60	1	62.4	72.0	BAYHTRC117A ①

NOTE:
① Heater has a fuse box factory provided.
② BAYHTRC110A is used only in the TCH048F1 model.
③ BAYHTRC109A is used only in the TCH036-042C1 and TCH048-060F1 models.

Controls

Field Installed Control Options

Thermostats
Two stages heating/cooling or one stage heating/cooling thermostats are available in either manual or automatic changeover.

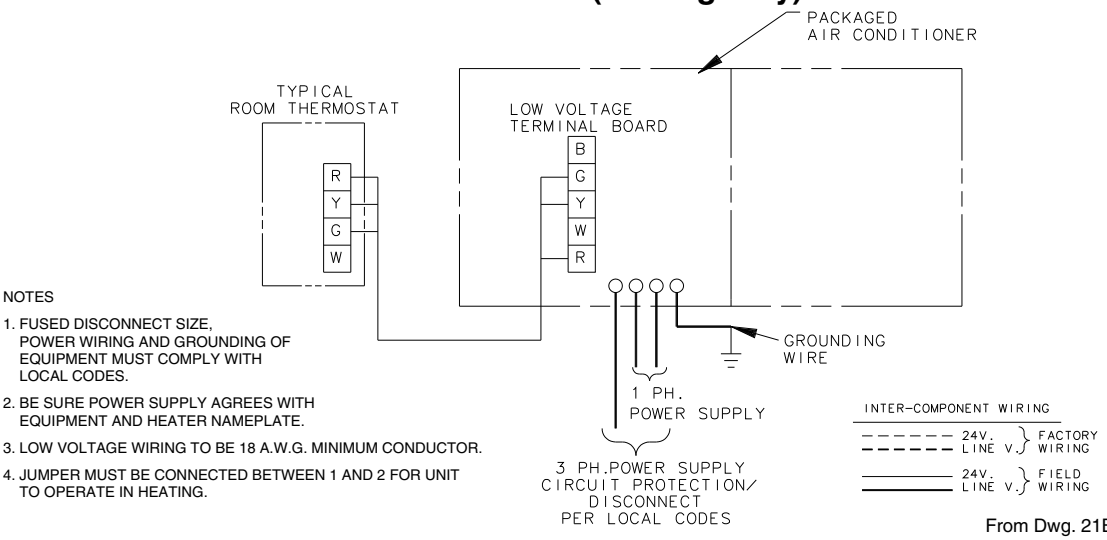
Programmable Electronic Night Setback Thermostat
Heating setback and cooling setup with 7-day, 5-1-1 programming capability. Available in two heating/cooling or one heating/cooling versions with automatic changeover.

Supplemental Electric Heater
Heater module mounts in unit discharge air passage. Each heater assembly includes automatically resetting heat limit switches for thermal protection. A polarized plug provides connection to unit low voltage control wiring.

Low Ambient Control Kit
Provides low ambient cooling operation to 0°F.

Hook Up Diagrams

TCH024-042C Units (Cooling Only)

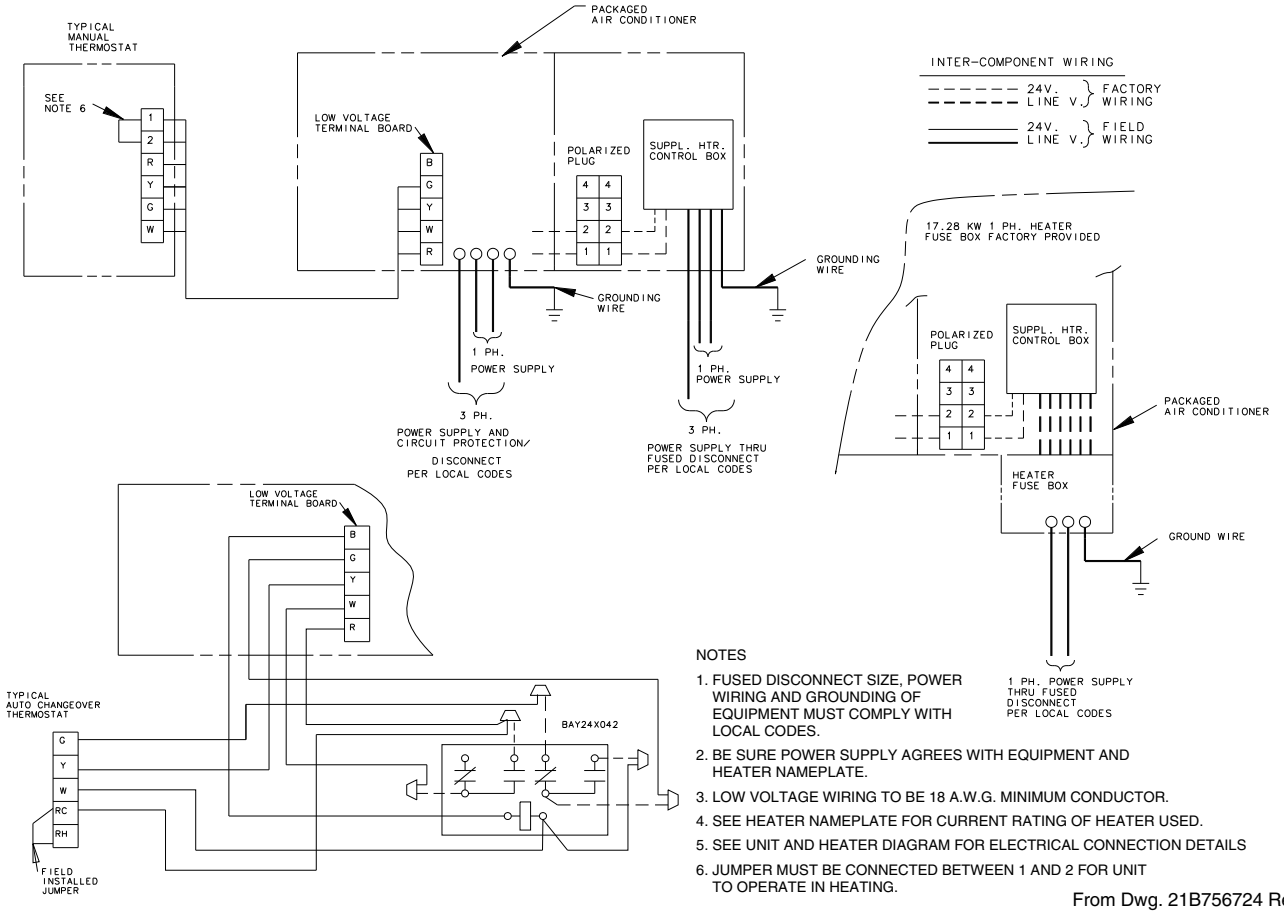


NOTES

1. FUSED DISCONNECT SIZE, POWER WIRING AND GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
2. BE SURE POWER SUPPLY AGREES WITH EQUIPMENT AND HEATER NAMEPLATE.
3. LOW VOLTAGE WIRING TO BE 18 A.W.G. MINIMUM CONDUCTOR.
4. JUMPER MUST BE CONNECTED BETWEEN 1 AND 2 FOR UNIT TO OPERATE IN HEATING.

From Dwg. 21B756744 Rev. 1

TCH024-042C Units (With Supplementary Heaters)



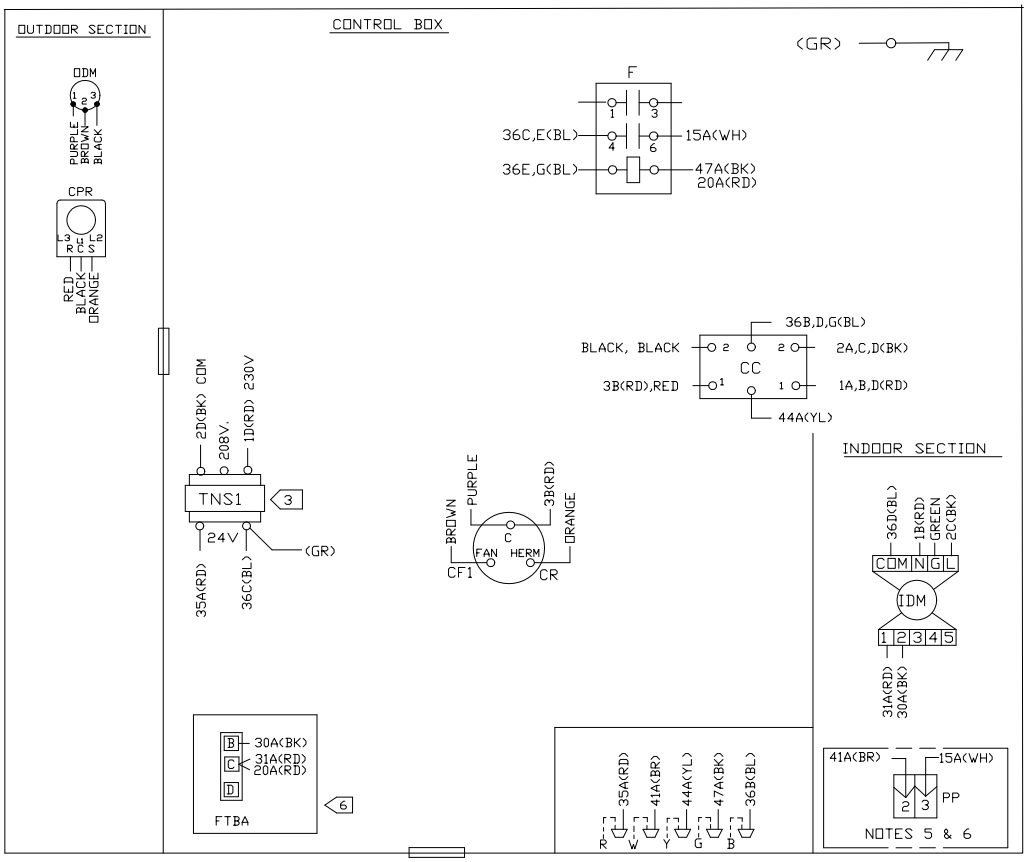
NOTES

1. FUSED DISCONNECT SIZE, POWER WIRING AND GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
2. BE SURE POWER SUPPLY AGREES WITH EQUIPMENT AND HEATER NAMEPLATE.
3. LOW VOLTAGE WIRING TO BE 18 A.W.G. MINIMUM CONDUCTOR.
4. SEE HEATER NAMEPLATE FOR CURRENT RATING OF HEATER USED.
5. SEE UNIT AND HEATER DIAGRAM FOR ELECTRICAL CONNECTION DETAILS
6. JUMPER MUST BE CONNECTED BETWEEN 1 AND 2 FOR UNIT TO OPERATE IN HEATING.

From Dwg. 21B756724 Rev. 0

Field Wiring

Wiring Diagram for Typical Units



1. CONNECTIONS SHOWN ARE FOR A TYPICAL MECHANICAL THERMOSTAT. SEE SCHEMATIC SUPPLIED WITH THERMOSTAT FOR PROPER CONNECTIONS. LOW VOLTAGE WIRING TO UNIT MAY BE NEC CLASS 2 AND MUST BE A MIN. OF 18 A.W.G..
2. MAXIMUM ADDITIONAL EXTERNAL LOAD (PILOT DUTY) BETWEEN "B" AND "R" OF 0.5 AMPS, 24 VAC IS AVAILABLE WHEN A HEATER IS INSTALLED.
3. FOR 208 VOLT OPERATION, MAKE THE FOLLOWING WIRING CHANGES:
   AT THE TNSI REMOVE ID(RD) WIRE AND CONNECT TO THE 208V TERMINAL ON THE TRANSFORMER.
4. IF ANY OF THE ORIGINAL WIRE AS SUPPLIED IN THIS UNIT MUST BE REPLACED, REPLACE IT WITH APPLIANCE WIRING MATERIAL RATED AT 105 C.
5. APPROVED SUPPLEMENTARY HEATERS FOR FIELD INSTALLATION IN UNIT.
6. SEE OPTIONAL HEATER ACCESSORY DIAGRAM FOR DETAILS OF HEATER WIRING.
7. DASHED LINES INDICATE RECOMMENDED FIELD WIRING.

MODELS
TCH030
TCH036

DEVICE	DESCRIPTION	LINE
AH	ELECTRIC HEAT CONTACTOR COIL	36
CC	COMPRESSOR CONTACTOR COIL	38
CF1	OUTDOOR FAN CAPACITOR	17
CN	CONNECTOR OR WIRE NUT	
CPR	COMPRESSOR	14-17
CR	COMPRESSOR RUN CAPACITOR	16
F	FAN RELAY	36
FTBA	FAN TERMINAL BLOCK	42,43
IDM	INDOOR FAN MOTOR	21-23
IOL	INTERNAL OVERLOAD	
ODM	OUTDOOR FAN MOTOR	18-20
PP	POLARIZED PLUG	36
TNS1	CONTROL POWER TRANSFORMER	26

Typical Wiring Diagram For Specific Wiring see individual Service Facts

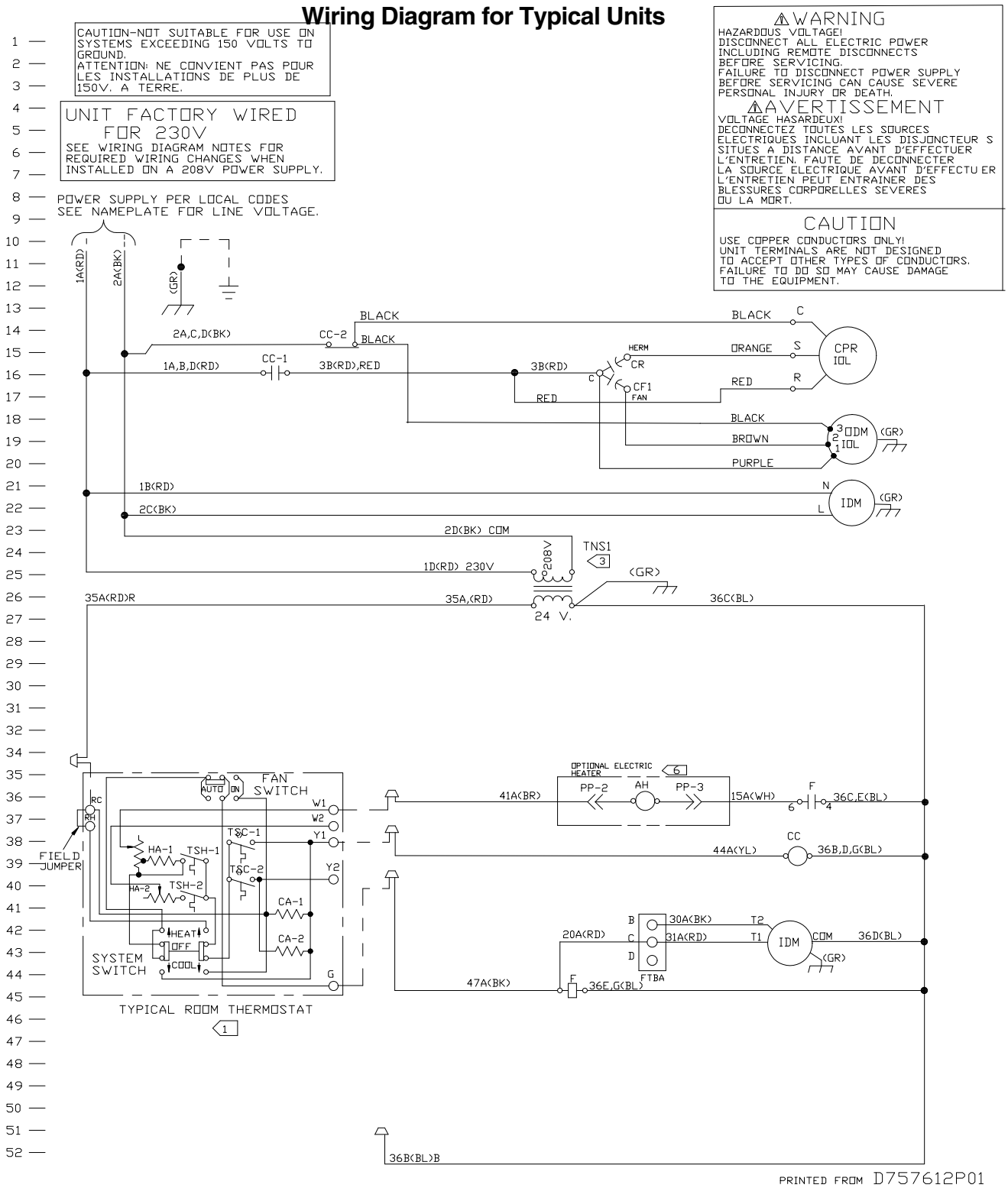
WIRE COLOR DESIGNATION			
ABBR	COLOR	ABBR	COLOR
BK	BLACK	PR	PURPLE
BL	BLUE	RD	RED
BR	BROWN	WH	WHITE
GR	GREEN	YL	YELLOW
OR	ORANGE		

D757612P01

(continued on next page)

Field Wiring

Wiring Diagram for Typical Units



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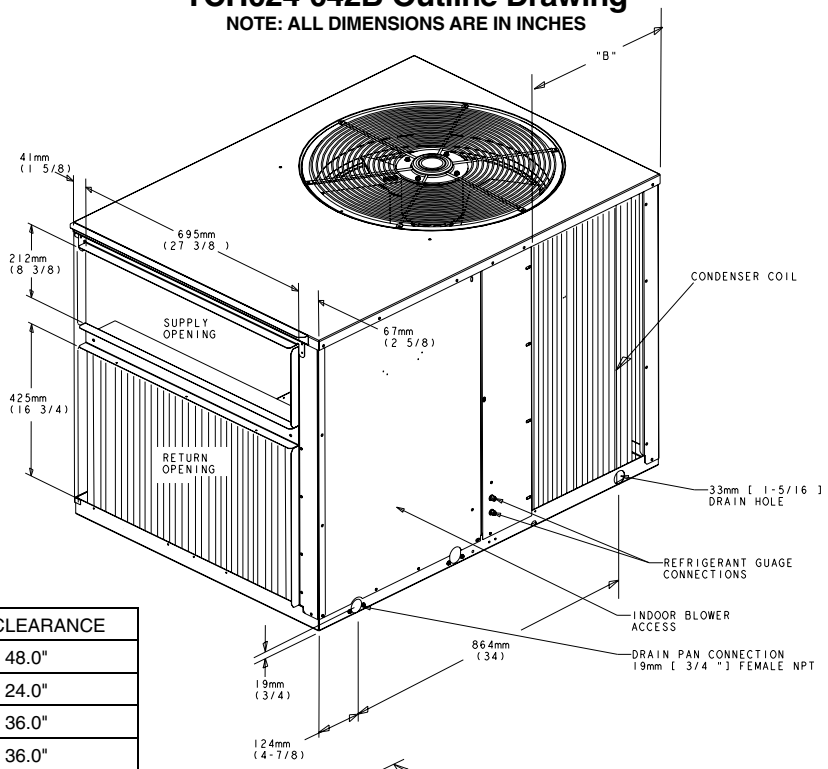
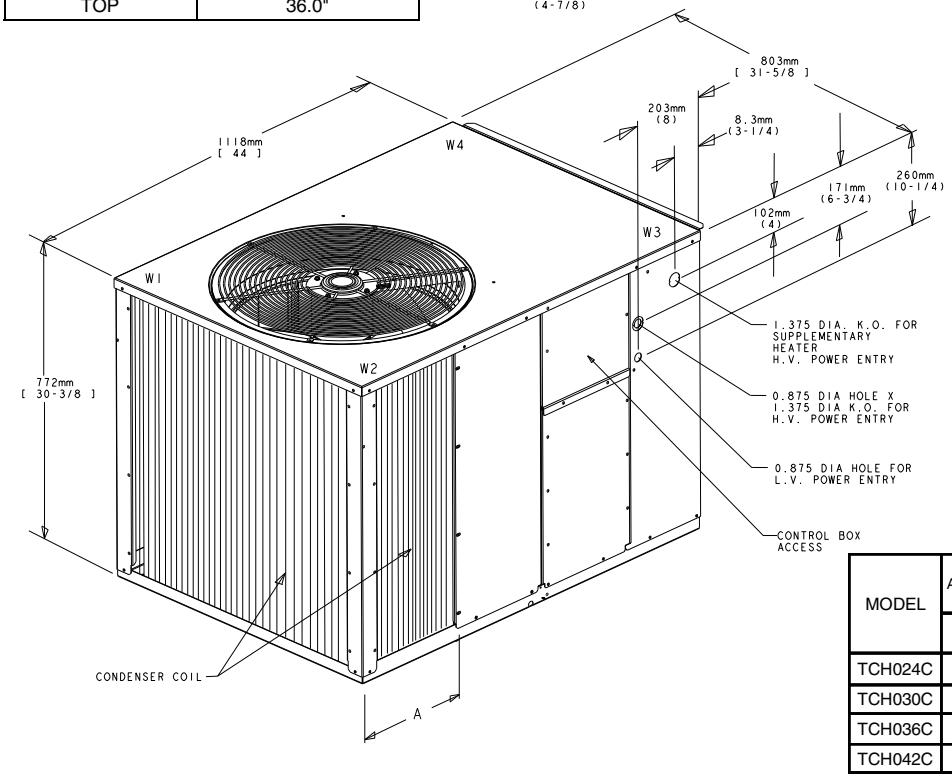
Dimensions

TCH024-042B Outline Drawing

NOTE: ALL DIMENSIONS ARE IN INCHES



INSTALLATION / SERVICE CLEARANCE	
BACK	48.0"
LEFT SIDE	24.0"
RIGHT SIDE	36.0"
TOP	36.0"

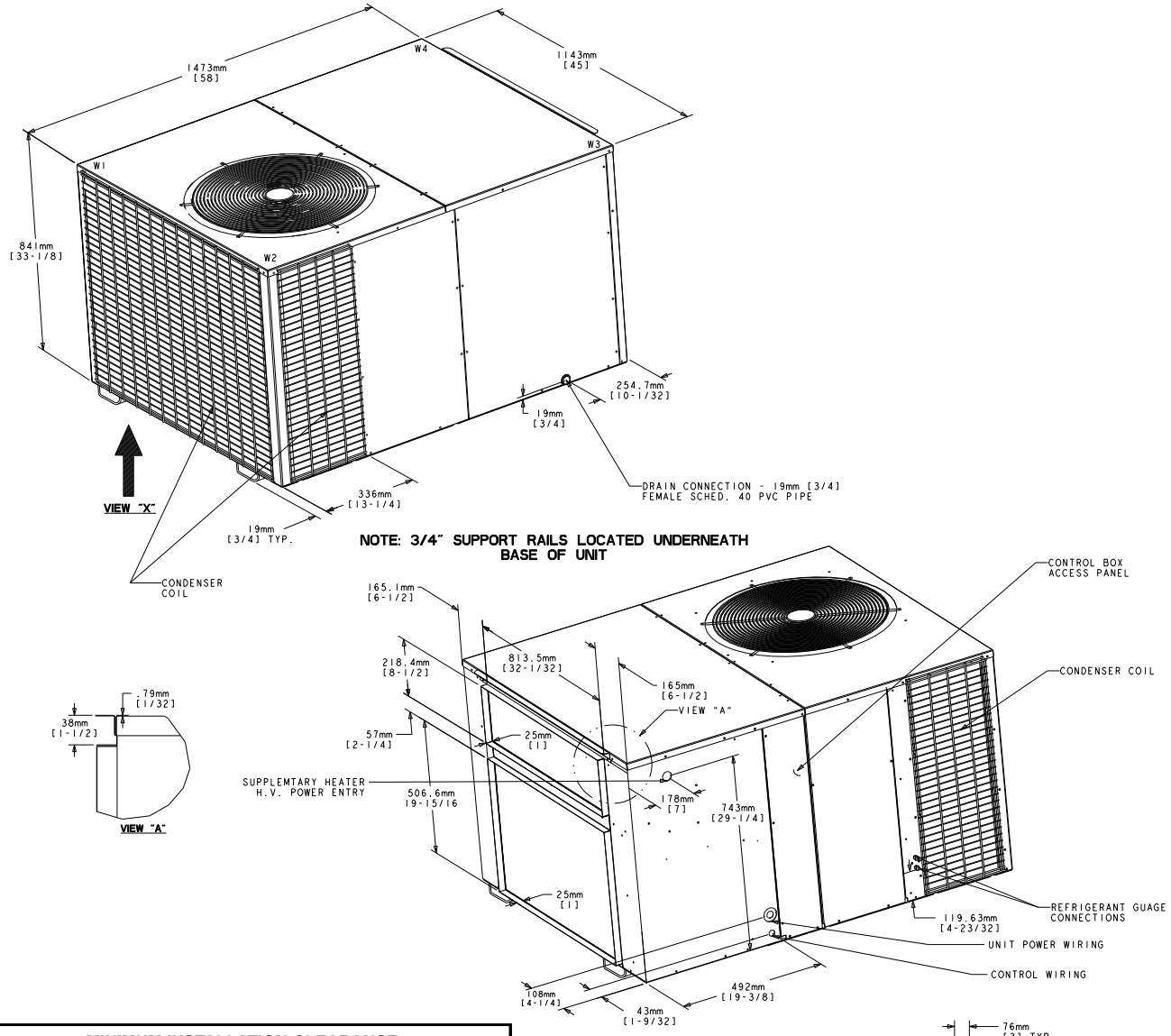


MODEL	APPROX. CORNER WTS - LBS.				TOTAL WEIGHT LBS.	COIL DIMENSION (IN)	
	W1	W2	W3	W4		A	B
TCH024C	76	73	63	68	279	14	16
TCH030C	77	71	62	70	281	14	16
TCH036C	79	75	66	73	293	14	16
TCH042C	80	79	72	77	308	20	16

Dimensions

TCH048-060F Outline Drawing

NOTE: ALL DRAWING DIMENSIONS ARE IN MM (INCHES)



MINIMUM INSTALLATION CLEARANCE			
E	**F**	**G**	**H**
12"	36"	24"	48"

TWO SIDES OF UNIT, OR TOP AND ONE SIDE SHOULD BE COMPLETELY UNOBSTRUCTED.

MODEL	APPROX. CORNER WTS - LBS.				TOTAL WEIGHT LBS.
	W1	W2	W3	W4	
TCH048F	126	126	95	95	443
TCH060F	112	112	111	111	450

From Dwg. 670886

Mechanical Specifications Options

General
All units shall be factory assembled, piped, internally wired and fully charged with R-22. Units shall be UL listed and carry a UL label. All units shall be factory run tested to check cooling operation, fan and blower rotation and control sequence. Units shall be designed to operate at ambient temperatures between 115°F and 45°F (as manufactured). Performance shall be rated in accordance with ARI standards. Units shall be designed for either rooftop or ground level installation.

Unit Casing
All components are mounted in a weather-resistant steel cabinet with a baked-on enamel finish. Access panels are provided for unit controls, indoor coil and supply air fan. Top cover (includes outdoor fan) shall be removable for access or installation of electric heaters and outdoor fan and compressor. Indoor air section is completely insulated with fireproof, permanent, odorless glass fiber material. Knockouts shall be provided for utility and control connections. Drain connections shall be provided to accommodate indoor coil water runoff. Coil guards are provided for the protection of the outdoor coil.

Compressor
Hermetically sealed, high efficiency compressor. Internal line break over current and over temperature protection and high and low pressure protection shall be standard.

Refrigerant Circuit
Units shall have refrigerant control. Service pressure tap ports shall be standard.

Indoor and Outdoor Coil
Indoor and outdoor coils shall be constructed of aluminum plate fins mechanically bonded to 0.375-inch seamless copper tubing.

Outdoor Fan
One, direct-drive, statically and dynamically balanced 20-inch propeller fan. Permanently lubricated weatherproof motors shall have built-in thermal overload protection.

Indoor Fan
Forward-curved, centrifugal-type fan with direct-drive motor. Motor shall be permanently lubricated and shall have built-in overload protection.

Accessories

Supplemental Electric Heater — Heater module shall mount in unit discharge air passage. Each heater assembly shall include automatically resetting heat limit switches for thermal protection. A polarized plug shall provide connection to unit low voltage control wiring.

Indoor Thermostat — One stage heating/one stage cooling or two stage heating/one stage cooling thermostatic control. Available in either manual or automatic changeover.

Low Ambient Control Kit — Shall provide low ambient cooling operation to 0°F.

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