

AMST SERIES

MULTI-POSITION, MULTI-SPEED, ECM-BASED AIR HANDLER WITH INTERNAL TXV 1½ TO 5 TONS



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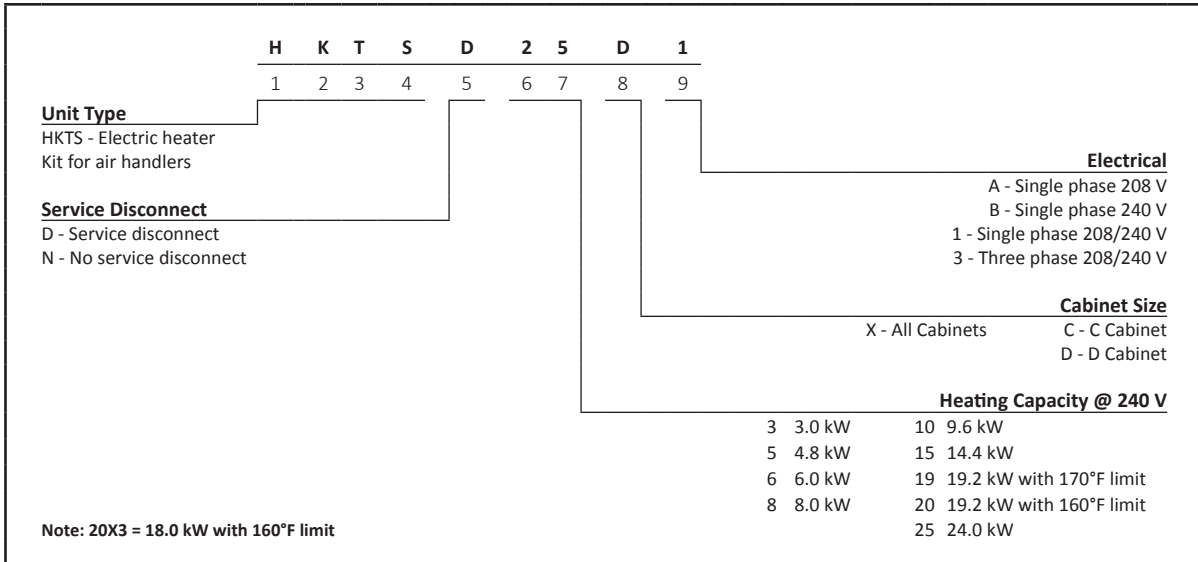
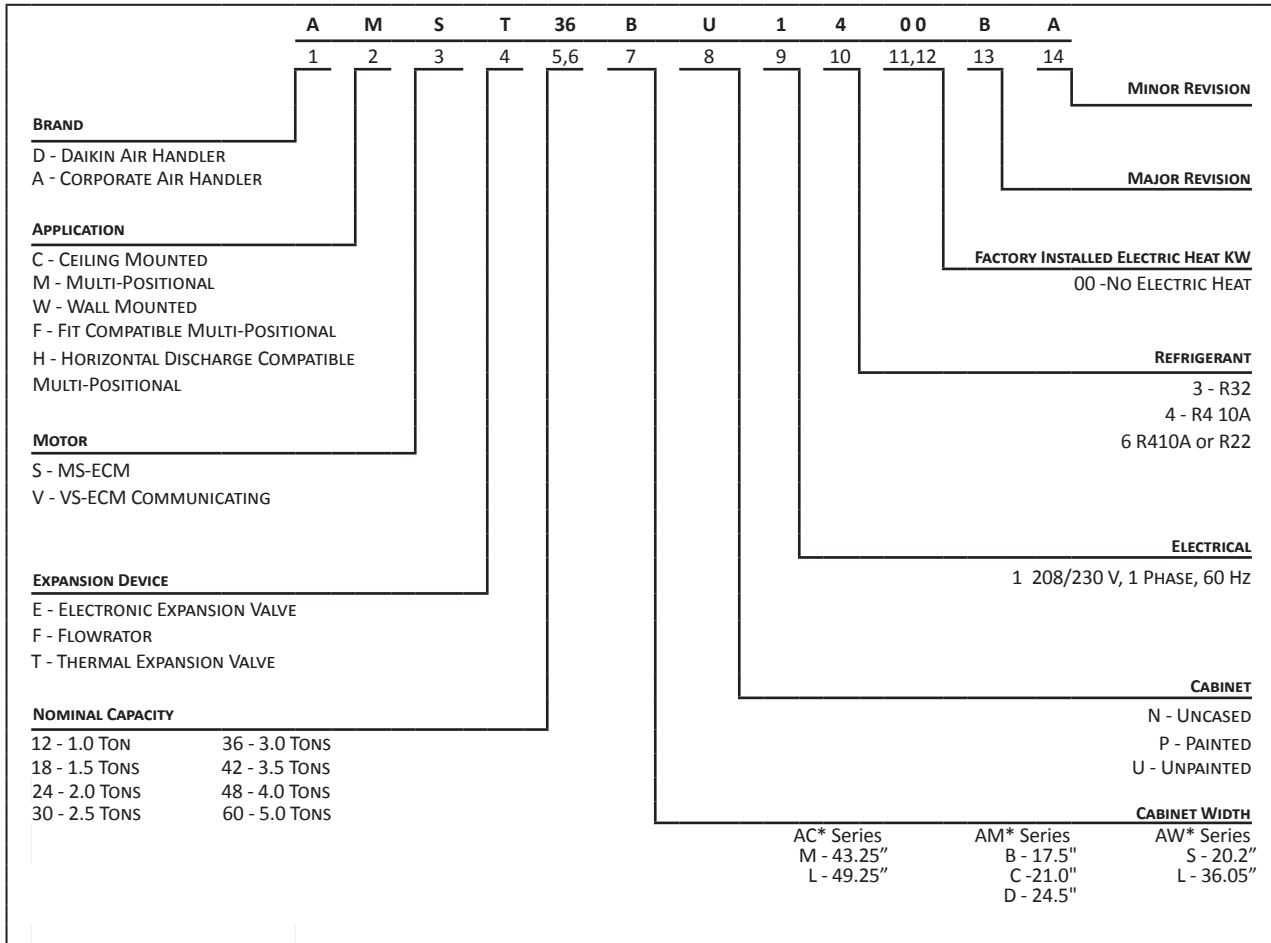
Product Features

- Internal factory-installed thermal expansion valves for cooling and heat pump applications
- Direct drive, multi-speed ECM blower motor
- All-aluminum evaporator coil
- Coil mounting track for quick repositioning
- Optimized for use with R-410A refrigerant
- Cabinet air leakage less than 2.0% at 1.0 inch H₂O when tested in accordance with ASHRAE standard 193
- Cabinet air leakage less than 1.4% at 0.5 inch H₂O when tested in accordance with ASHRAE standard 193
- AHRI certified; ETL listed
- UL 60335 2-40 Compliant
- Rigid SmartFrame™ cabinet
- Horizontal or vertical configuration capabilities
- 21" depth for easier attic access
- DecaBDE-free thermoplastic drain pan with secondary drain connections
- Screw-less sides and back helps to reduce condensation when installed in humid locations
- Foil-faced insulation covers the internal casing to reduce cabinet condensation
- Galvanized, leather grain-embossed finish
- Glue-less cabinet insulation retention
- Tool-less filter access
- Field Installed 3 kW – 25 kW electric heater kits available



* Complete warranty details available from your local dealer or at www.goodmanmfg.com. To receive the 10-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registration is not required in California or Québec. The duration of warranty coverage in Texas and Florida differs in some cases.

NOMENCLATURE

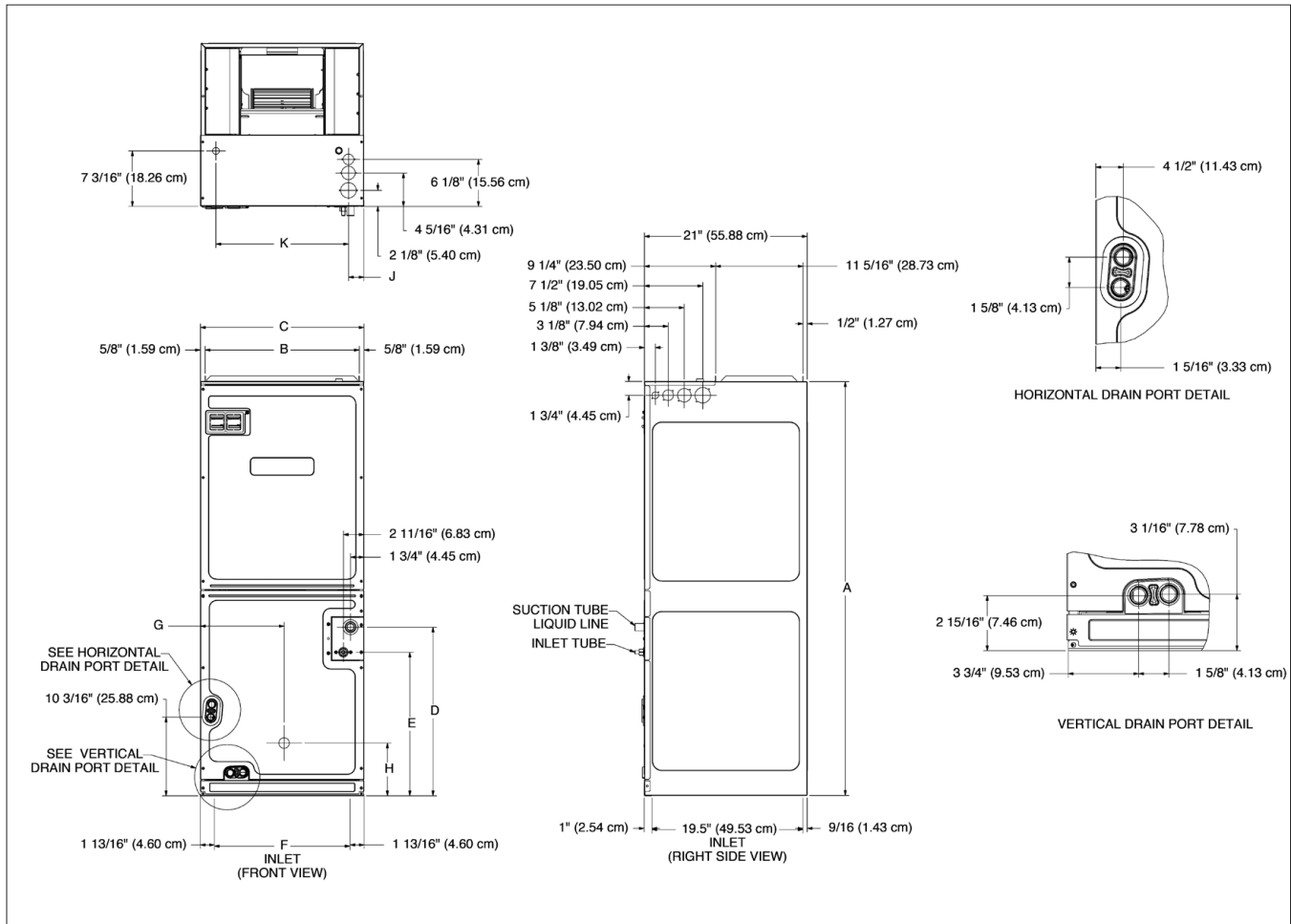


	AMST 24BU14*	AMST 30BU14*	AMST 36BU14*	AMST 36CU14*	AMST 42CU14*	AMST 48CU14*	AMST 48DU14*	AMST 60DU14*
NOMINAL RATINGS								
Cooling (Btu/h)	24,000	36,000	36,000	36,000	42,000	48,000	48,000	60,000
BLOWER								
Diameter	10"	10"	10"	10"	10"	10"	10"	11"
Width	6"	6"	6"	8"	8"	10"	10"	10"
COIL CONNECTIONS								
Liquid	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Suction	3/4"	3/4"	3/4"	3/4"	3/4"	7/8"	7/8"	7/8"
Coil Drain Connect (FPT)	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
ELECTRICAL DATA								
Voltage	208/230	208/230	208/230	208/230	208/230	208/230	208/230	208/230
Minimum Circuit Ampacity	5.8/5.8	5.6/5.6	5.6/5.6	7.1/7.1	5.9/5.9	7.1/7.1	8.6/8.6	8.6/8.6
Max. Overcurrent Device (Amps)	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
Minimum VAC	197	197	197	197	197	197	197	197
Maximum VAC	253	253	253	253	253	253	253	253
Blower Motor								
Full Load Amps (FLA)	4.6	4.5	4.5	5.7	5.7	5.7	6.9	6.9
Horsepower (HP)	¾	¾	¾	¾	¾	¾	1	1
SHIP WEIGHT (LBS.)								
	112	129	129	153	153	153	155	167

*Airflow rate @.3 static

Note: Assumes dry coil; SCFM correction for wet coil = 4% (208V / 240V)

DIMENSIONS



MODEL	A"	B"	C"	D"	E"	F"	G"	H"	J"	K"
AMST24BU*	45	16 ⁵ / ₁₆	17 ⁹ / ₁₆	15 ¹ / ₄	12	12 ¹ / ₂	9	12 ⁹ / ₁₆	2	13 ⁵ / ₈
AMST30BU*	53 ⁷ / ₁₆	16 ⁵ / ₁₆	17 ⁹ / ₁₆	23 ¹¹ / ₁₆	20 ¹ / ₁₆	12 ¹ / ₂	9	12 ³ / ₄	2	13 ⁵ / ₈
AMST36BU*	53 ⁷ / ₁₆	16 ⁵ / ₁₆	17 ⁹ / ₁₆	23 ¹¹ / ₁₆	20 ¹ / ₁₆	12 ¹ / ₂	9	12 ³ / ₄	2	13 ⁵ / ₈
AMST36CU*	49	19 ¹³ / ₁₆	21 ¹ / ₈	21 ¹² / ₁₆	17 ³ / ₄	16 ¹ / ₁₆	9	12 ³ / ₄	2	17 ⁵ / ₈
AMST42CU*	53 ⁷ / ₁₆	19 ¹³ / ₁₆	21 ¹ / ₈	21 ¹² / ₁₆	18 ¹ / ₂	16 ¹⁰ / ₁₆	9	12 ³ / ₄	2	17 ⁵ / ₈
AMST48CU*	58	19 ¹³ / ₁₆	21 ¹ / ₈	26 ³ / ₁₆	22 ¹⁵ / ₁₆	14 ¹⁰ / ₁₆	10 ¹³ / ₁₆	6 ¹³ / ₁₆	2	17 ⁵ / ₈
AMST48DU*	53 ⁷ / ₁₆	23 ¹ / ₄	24 ⁵ / ₈	21 ¹ / ₁₆	18 ¹ / ₄	17 ¹¹ / ₁₆	12 ⁹ / ₁₆	6 ¹⁵ / ₁₆	2	20 ⁵ / ₈
AMST06DU*	58	23 ¹ / ₄	24 ⁵ / ₈	26	22 3/4	17 ¹¹ / ₁₆	12 ⁹ / ₁₆	13 ¹³ / ₁₆	2	20 ⁵ / ₈

MODEL NUMBER	SPEED TAP	STATIC PRESSURE (IN W.C)								
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
AMST24 BU1400B*	T1	720	690	625	605	525	505	385	370	265
	T2	850	825	770	750	675	665	590	575	470
	T3	900	875	830	815	750	740	670	655	550
	T4	1,030	1,005	960	950	900	890	825	820	760
	T5	825	800	745	730	660	645	560	550	460
	T6	935	910	865	850	790	780	715	705	620
	T7	1,100	1,080	1,035	1,020	970	960	902	900	840
	T8	1,045	1,025	985	970	920	910	820	845	785
	T9	1,215	1,195	1,155	1,145	1,105	1,095	1,045	1,040	980
AMST30 BU1400B*	T1	750	725	670	655	585	570	465	455	360
	T2	920	895	845	830	780	770	710	700	615
	T3	985	960	915	900	850	840	785	775	710
	T4	1,185	1,165	1,125	1,115	1,070	1,060	1,015	1,010	960
	T5	1,070	1,050	1,005	995	945	935	890	885	830
	T6	620	585	515	458	375	310	260	245	145
	T7	840	815	760	745	685	670	590	580	480
	T8	855	830	780	765	705	695	625	615	515
	T9	995	970	925	910	860	850	800	790	730
AMST36 BU1400B*	T1	750	725	670	655	585	570	465	455	360
	T2	920	895	845	830	780	770	710	700	615
	T3	985	960	915	900	850	840	785	775	710
	T4	1,185	1,165	1,125	1,115	1,070	1,060	1,015	1,010	960
	T5	1,070	1,050	1,005	995	945	935	890	885	830
	T6	620	585	515	485	375	310	260	245	145
	T7	840	815	760	745	685	670	590	580	480
	T8	855	830	780	765	705	695	625	615	515
	T9	995	970	925	910	860	850	800	790	730
AMST36 CU1400B*	T 1	1,120	1,085	1,020	1,000	910	890	770	760	680
	T 2	1,285	1,255	1,190	1,170	1,100	1,085	990	980	885
	T 3	1,430	1,400	1,345	1,330	1,260	1,250	1,175	1,165	1,065
	T 4	1,735	1,410	1,660	1,645	1,580	1,570	1,510	1,500	1,440
	T 5	1,830	1,805	1,755	1,740	1,685	1,675	1,605	1,595	1,525
	T6	1,165	1,130	1,055	1,035	960	940	825	815	715
	T7	1,450	1,425	1,370	1,355	1,285	1,275	1,200	1,190	1,095
	T8	1,070	1,035	960	935	830	810	700	690	610
	T9	1,735	1,410	1,660	1,645	1,580	1,570	1,510	1,500	1,440
AMST42 CU1400B*	T1	1,165	1,140	1,085	1,065	990	975	895	880	765
	T2	1,210	1,185	1,130	1,110	1,040	1,025	950	935	830
	T3	1,215	1,190	1,135	1,120	1,055	1,040	960	945	835
	T4	1,495	1,470	1,425	1,415	1,365	1,355	1,305	1,295	1,220
	T5	1,435	1,410	1,360	1,345	1,295	1,285	1,220	1,210	1,140
	T6	1,410	1,385	1,335	1,325	1,280	1,270	1,195	1,185	1,115
	T7	1,495	1,470	1,425	1,415	1,365	1,355	1,305	1,295	1,220
	T8	1,230	1,205	1,150	1,135	1,070	1,060	990	975	850
	T9	1,784	1,743	1,697	1,652	1,616	1,576	1,532	1,486	1,443

AIRFLOW DATA (CONT.)

MODEL NUMBER	SPEED TAP	STATIC PRESSURE (IN W.C)								
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
AMST48 CU1400B*	T1	1,635	1,610	1,560	1,545	1,480	1,470	1,400	1,390	1,315
	T2	1,580	1,550	1,490	1,470	1,400	1,390	1,315	1,305	1,230
	T3	1,635	1,610	1,560	1,545	1,480	1,470	1,400	1,390	1,315
	T4	1,851	1,810	1,768	1,733	1,704	1,662	1,613	1,486	1,358
	T5	1,820	1,795	1,750	1,735	1,680	1,670	1,605	1,595	1,525
	T6	1,465	1,435	1,375	1,355	1,280	1,265	1,165	1,155	1,065
	T7	1,725	1,700	1,650	1,635	1,570	1,560	1,495	1,485	1,420
	T8	1,755	1,730	1,680	1,665	1,595	1,585	1,515	1,505	1,425
	T9	1,325	1,295	1,230	1,210	1,130	1,115	1,025	1,015	930
AMST48 DU1400B*	T1	1,425	1,395	1,335	1,320	1,250	1,240	1,165	1,155	1,070
	T2	1,510	1,480	1,425	1,410	1,345	1,335	1,270	1,260	1,185
	T3	1,605	1,580	1,525	1,510	1,450	1,440	1,375	1,365	1,300
	T4	1,875	1,855	1,810	1,795	1,735	1,725	1,670	1,665	1,605
	T5	1,755	1,730	1,680	1,665	1,605	1,595	1,535	1,525	1,465
	T6	1,350	1,320	1,260	1,245	1,175	1,160	1,085	1,075	980
	T7	1,140	1,105	1,040	1,020	935	915	805	790	685
	T8	1,605	1,580	1,525	1,510	1,450	1,440	1,375	1,365	1,300
	T9	1,605	1,580	1,525	1,510	1,450	1,440	1,375	1,365	1,300
AMST60 DU1400B*	T1	1,215	1,175	1,095	1,070	975	950	790	780	700
	T6	1,815	1,785	1,725	1,710	1,650	1,640	1,570	1,560	1,490
	T7	1,360	1,325	1,250	1,230	1,145	1,125	1,010	990	850
	T8	2,070	2,045	1,995	1,980	1,930	1,920	1,855	1,845	1,785
	T9	1,970	1,945	1,895	1,880	1,815	1,805	1,740	1,730	1,600

NOTES

1. Airflow data indicated is at 230V without air filter in place.
2. The chart is for information only. For satisfactory operation, external static pressure must not exceed value shown on rating plate. The shaded area indicates ranges in excess of maximum design external static pressure.
3. Use the CFM adjustment factors of 0.98 for horizontal left and 0.96 for horizontal right & downflow orientations
4. When applying a humidistat (normally closed), refer to the installation and operating instructions. The humidistat can adjust the cooling airflow to 85%.

See notes on page 7.

HEATER KIT MODEL	CIRCUIT 1 (208V/240V)			CIRCUIT 2 (208V/240V)			SINGLE-POINT KIT (208V/240V)	
	HEATER AMPS	MCA ¹	MOP ²	HEATER AMPS	MCA ¹	MOP ²	MCA ¹	MOP ²
AMST24BU1400BA	0/0	5.8/5.8	15/15	---	---	---	---	---
HKTSN03X1	10.8/12.5	19/21.4	20/25	---	---	---	---	---
HKTS*05X1	17.3/20	27/30.8	30/35	---	---	---	---	---
HKTSN06X1	21.7/25	32.8/37	35/40	---	---	---	---	---
HKTS*08X1	28.9/33.3	41.9/47	45/50	---	---	---	---	---
HKTS*10X1	34.7/40	49.1/56	50/60	---	---	---	---	---
HKTSD15XA/B	34.7/40	49.1/56	50/60	17.3/20	21.7/25	25/25	70.8/80.8	80/90
AMST30BU1400BA	0/0	5.6/5.6	15/15	---	---	---	---	---
HKTSN03X1	10.8/12.5	19/21.3	20/25	---	---	---	---	---
HKTS*05X1	17.3/20	27/30.6	30/35	---	---	---	---	---
HKTSN06X1	21.7/25	32.7/37	35/40	---	---	---	---	---
HKTS*08X1	28.9/33.3	42/47.3	45/50	---	---	---	---	---
HKTS*10X1	34.7/40	49/55.6	50/60	---	---	---	---	---
HKTSD15XA/B	34.7/40	49.1/56	50/60	17.3/20	21.7/25	25/25	70.6/80.6	80/90
AMST36BU1400BA	0/0	5.6/5.6	15/15	---	---	---	---	---
HKTSN03X1	10.8/12.5	19/21.3	20/25	---	---	---	---	---
HKTS*05X1	17.3/20	27/30.6	30/35	---	---	---	---	---
HKTSN06X1	21.7/25	32.7/37	35/40	---	---	---	---	---
HKTS*08X1	28.9/33.3	42/47.3	45/50	---	---	---	---	---
HKTS*10X1	34.7/40	49/55.6	50/60	---	---	---	---	---
HKTSD15XA/B	34.7/40	49.1/56	50/60	17.3/20	21.7/25	25/25	70.6/80.6	80/90
AMST36CU1400BA	0/0	7.1/7.1	15/15	---	---	---	---	---
HKTSN03X1	10.8/12.5	20.7/23	25/25	---	---	---	---	---
HKTS*05X1	17.3/20	29/32.1	30/35	---	---	---	---	---
HKTSN06X1	21.7/25	34/38.4	35/40	---	---	---	---	---
HKTS*08X1	28.9/33.3	43/48.8	45/50	---	---	---	---	---
HKTS*10X1	34.7/40	50.5/57	60/60	---	---	---	---	---
HKTS*15X3 ^	0/0	7.1/7.1	15/15	30/34.6	37.5/43.3	40/45	---	---
HKTSD15XA/B	34.7/40	50.5/57.1	60/60	17.3/20	21.7/25	25/25	72.1/82.1	80/90
HKTSD19CA/B	34.7/40	50.5/57.1	60/60	34.7/40	43.3/50	45/50	93.9/107	100/110
AMST42CU1400BA	0/0	5.9/5.9	15/15	---	---	---	---	---
HKTSN03X1	10.8/12.5	19/21.5	20/25	---	---	---	---	---
HKTS*05X1	17.3/20	28/30.9	30/35	---	---	---	---	---
HKTSN06X1	21.7/25	33/37.1	35/40	---	---	---	---	---
HKTS*08X1	28.9/33.3	42/47.5	45/50	---	---	---	---	---
HKTS*10X1	34.7/40	49/55.9	50/60	---	---	---	---	---
HKTS*15X3 ^	0/0	5.9/5.9	15/15	30/34.6	37.5/43.3	40/45	---	---
HKTSD15XA/B	34.7/40	49.2/55.9	50/60	17.3/20	21.7/25	25/25	70.9/80.9	80/90
HKTSD19CA/B	34.7/40	49.2/55.9	50/60	34.7/40	43.3/50	45/50	92.5/106	100/110

HEAT KIT DATA (CONT.)

HEATER KIT MODEL	CIRCUIT 1 (208V/240V)			CIRCUIT 2 (208V/240V)			SINGLE-POINT KIT (208V/240V)	
	HEATER AMPS	MCA ¹	MOP ²	HEATER AMPS	MCA ¹	MOP ²	MCA ¹	MOP ²
AMST48CU1400BA	0/0	7.1/7.1	15/15	---	---	---	---	---
HKTSN03X1	10.8/12.5	20.7/23	25/25	---	---	---	---	---
HKTS*05X1	17.3/20	29/32.1	30/35	---	---	---	---	---
HKTSN06X1	21.7/25	34/38.4	35/40	---	---	---	---	---
HKTS*08X1	28.9/33.3	43/48.8	45/50	---	---	---	---	---
HKTS*10X1	34.7/40	50.5/57	60/60	---	---	---	---	---
HKTS*15X3 ^	0/0	7.1/7.1	15/15	30/34.6	37.5/43.3	40/45	---	---
HKTSD15XA/B	34.7/40	50.5/57	60/60	17.3/20	21.7/25	25/25	72.1/82.1	80/90
HKTSD19CA/B	34.7/40	50.5/57.1	60/60	34.7/40	43.3/50	45/50	93.9/107	100/110
AMST48DU1400BA	0/0	8.6/8.6	15/15	---	---	---	---	---
HKTSN03X1	10.8/12.5	22/24.3	25/25	---	---	---	---	---
HKTS*05X1	17.3/20	30.3/34	35/35	---	---	---	---	---
HKTSN06X1	21.7/25	36/39.9	40/40	---	---	---	---	---
HKTS*08X1	28.9/33.3	45/50.3	45/60	---	---	---	---	---
HKTS*10X1	34.7/40	52/58.6	60/60	---	---	---	---	---
HKTS*15X3 ^	0/0	8.6/8.6	15/15	30/34.6	37.5/43.3	40/45	---	---
HKTSD15XA/B	34.7/40	52/58.6	60/60	17.3/20	21.7/25	25/25	73.6/83.6	80/90
AMST60DU1400BA	0/0	8.6/8.6	15/15	---	---	---	---	---
HKTSN03X1	10.8/12.5	22/24.3	25/25	---	---	---	---	---
HKTS*05X1	17.3/20	30.3/34	35/35	---	---	---	---	---
HKTSN06X1	21.7/25	36/39.9	40/40	---	---	---	---	---
HKTS*08X1	28.9/33.3	45/50.3	45/60	---	---	---	---	---
HKTS*10X1	34.7/40	52/58.6	60/60	---	---	---	---	---
HKTS*15X3 ^	0/0	8.6/8.6	15/15	30/34.6	37.5/43.3	40/45	---	---
HKTSD15XA/B	34.7/40	52/58.6	60/60	17.3/20	21.7/25	25/25	73.6/83.6	80/90
HKTS*20X3 ^	0/0	8.6/8.6	15/15	37.5/43.3	46.9/54.1	50/60	---	---
HKTSD20DA/B	34.7/40	52/58.6	60/60	34.7/40	43.3/50	45/50	95.3/109	100/110
HKTSD25DA/B	52/60	73.6/83.6	80/90	35/40	43.3/50	45/50	117/134	125/150

¹Minimum Circuit Ampacity (Heater Amps + Motor Amps) X 1.25

²Maximum Overcurrent Protection = 2.25 X Motor Amps + Heater Amps

^ Three-phase Heater Kits (Circuit 1: Single-phase for Air Handlers Circuit 2: Three-phase for Heater Kits)

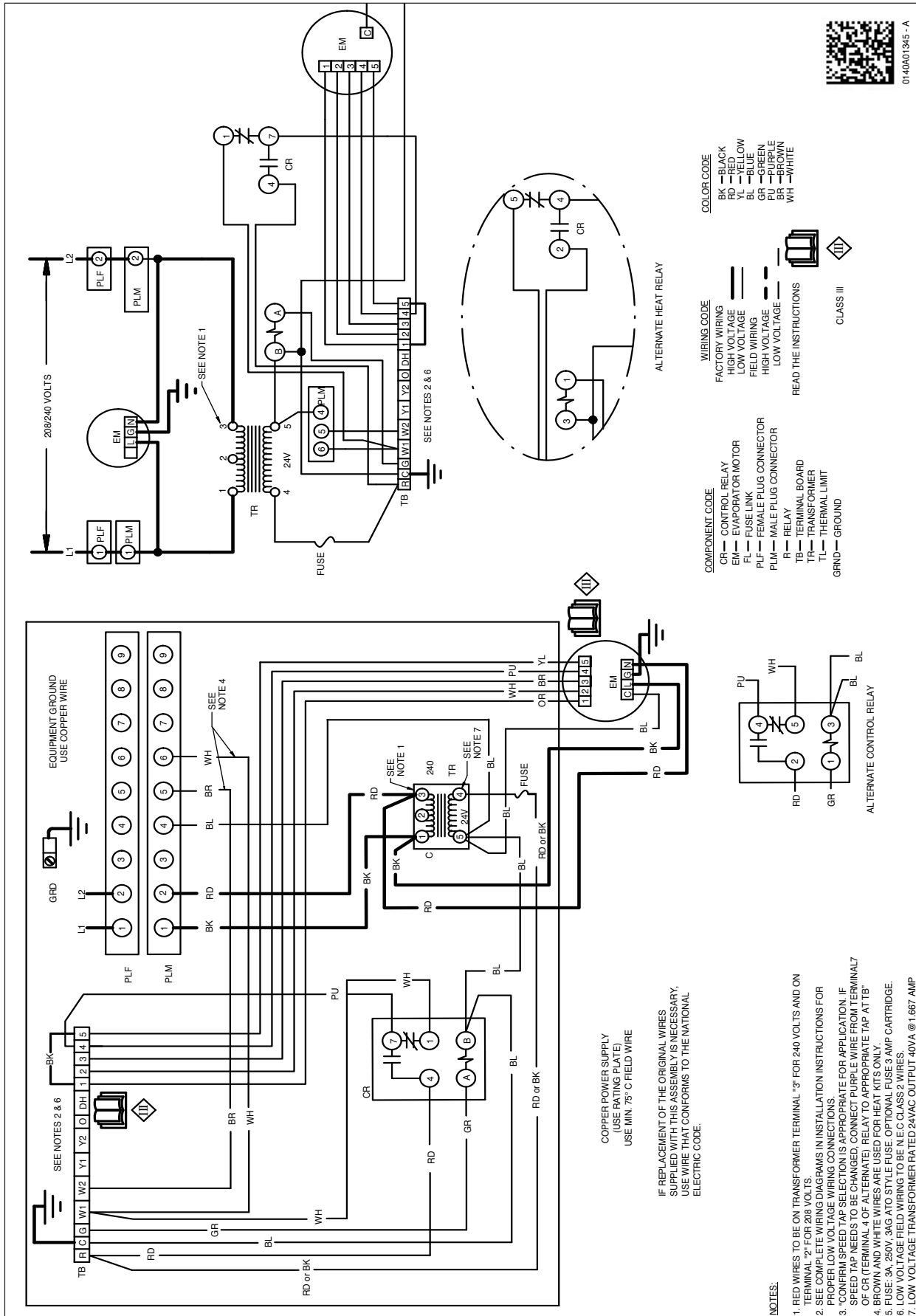
* D - Service disconnect, N - No service disconnect

--- indicates Not Required

HEATING KW CORRECTION FACTOR

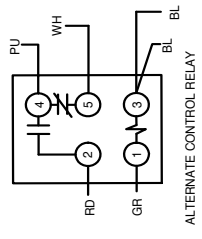
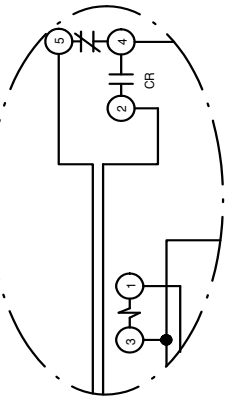
SUPPLY VOLTAGE	240	230	220	210	208
CORRECTION FACTOR	1.00	0.92	0.84	0.77	0.75

Multiply the 240-volt heating capacity by correction factors.



0140001345-A

- COMPONENT CODE**
- CR— CONTROL RELAY
 - EM— EVAPORATOR MOTOR
 - FL— FUSE LINK
 - PLF— FEMALE PLUG CONNECTOR
 - PLM— MALE PLUG CONNECTOR
 - R— RELAY
 - TR— TERMINAL BOARD
 - TR— TRANSFORMER
 - TL— THERMAL LIMIT
 - GRND— GROUND
- WIRING CODE**
- FACTORY WIRING
 - HIGH VOLTAGE
 - LOW VOLTAGE
 - FIELD WIRING
 - HIGH VOLTAGE
 - LOW VOLTAGE
- COLOR CODE**
- BK —BLACK
 - RD —RED
 - BL —BLUE
 - GR —GREEN
 - PU —PURPLE
 - BR —BROWN
 - WH —WHITE
- READ THE INSTRUCTIONS**
- CLASS III



- NOTES:**
1. RED WIRES TO BE ON TRANSFORMER TERMINAL "3" FOR 240 VOLTS AND ON TERMINAL "2" FOR 208 VOLTS.
 2. SEE COMPLETE WIRING DIAGRAMS IN INSTALLATION INSTRUCTIONS FOR PROPER LOW VOLTAGE WIRING CONNECTIONS.
 3. CONFIRM SPEED TAP SELECTION IS APPROPRIATE FOR APPLICATION. IF SPEED TAP NEEDS TO BE CHANGED, CONNECT PURPLE WIRE FROM TERMINAL 4 OF CR (TERMINAL 4 OF ALTERNATE) RELAY TO APPROPRIATE TAP AT TB*
 4. BROWN AND WHITE WIRES ARE USED FOR HEAT KITS ONLY.
 5. FUSE: 3A, 250V, 3AG ATO STYLE FUSE, OPTIONAL FUSE 3 AMP CARTRIDGE.
 6. LOW VOLTAGE FIELD WIRING TO BE N.E.C CLASS 2 WIRES.
 7. LOW VOLTAGE TRANSFORMER RATED 24VAC OUTPUT 40VA @ 1.687 AMP

COPPER POWER SUPPLY
(USE RATING PLATE)
USE MIN. 75° C FIELD WIRE

IF REPLACEMENT OF THE ORIGINAL WIRES
SUPPLIED WITH THIS ASSEMBLY IS NECESSARY,
USE WIRE THAT CONFORMS TO THE NATIONAL
ELECTRIC CODE.

WARNING

High Voltage: Disconnect all power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury, or death.

Wiring is subject to change. Always refer to the wiring diagram on the unit for the most up-to-date wiring.

DOWNFLOW KITS

DFKE-02	DFKE-03
AMST24BU1400**	AMST48CU1400**
AMST30BU1400**	AMST48DU1400**
AMST36BU1400**	AMST60DU1400**
AMST36CU1400**	
AMST42CU1400**	

HIGH HUMIDITY KIT

HHK0004	HHK0005	HHK0006	HHK0007
AMST24BU1400**	AMST36CU1400**	AMST48DU1400**	AMST60DU1400**
AMST30BU1400**	AMST42CU1400**		
AMST36BU1400**	AMST48CU1400**		

CONDENSATE MANAGEMENT KIT

CMK0018	CMK0019	CMK0020
AMST24BU1400**	AMST30BU1400**	AMST48CU1400**
AMST36CU1400**	AMST36BU1400**	AMST48DU1400**
	AMST42CU1400**	AMST60DU1400**

FILTERS

CHASSIS	PART #	SIZE
B	ALFH16201E	16.0" x 20.0"
C	ALFH1912201E	19.5" x 20.0"
D	ALFH20231E	23.0" x 20.0"

SINGLE POINT WIRING KIT (SPW-01)

HEATER KIT MODEL	SPWK-B	SPWK-C	SPWK-D
HKTSD15XA	AMST24BU1400**	AMST36CU1400** AMST42CU1400** AMST48CU1400**	AMST48DU1400** AMST60DU1400**
HKTSD15XB	AMST30BU1400**		
HKTSD19CA	AMST36BU1400**		
HKTSD19CB			
HKTSD20DA			AMST48DU1400** AMST60DU1400**
HKTSD20DB			
HKTSD25DA			AMST60DU1400**
HKTSD25DB			

