



Air Conditioning & Heating

# AWUF SERIES WALL-MOUNT AIR HANDLER 1½ TO 3 TONS



### Standard Features

- Equipped with a Check Flowrate for cooling-only and heat pump operation
- Direct-drive, multi-speed motors allows air volume variation for heating/cooling
  - Multi-speed ECM: AWUF19, 25, 31, 32, 37
  - Multi-speed PSC motor: AWUF18, 24, 30, 36
- Sequence-controlled, rust-resistant nickel chromium heating elements of 3, 5, 8, and 10 kW
- Factory-installed pull-type disconnect
- Aluminum tubing coils on all models
- AHRI Certified
- ETL Listed
- Thermoplastic drain pan with bottom primary and secondary drain connections
- Built-in filter rack (filter included)
- Large chassis (2½- and 3-ton units) – front return only
- Small chassis (1½- and 2-ton units) – front or bottom return
- Wall-hanging bracket provided

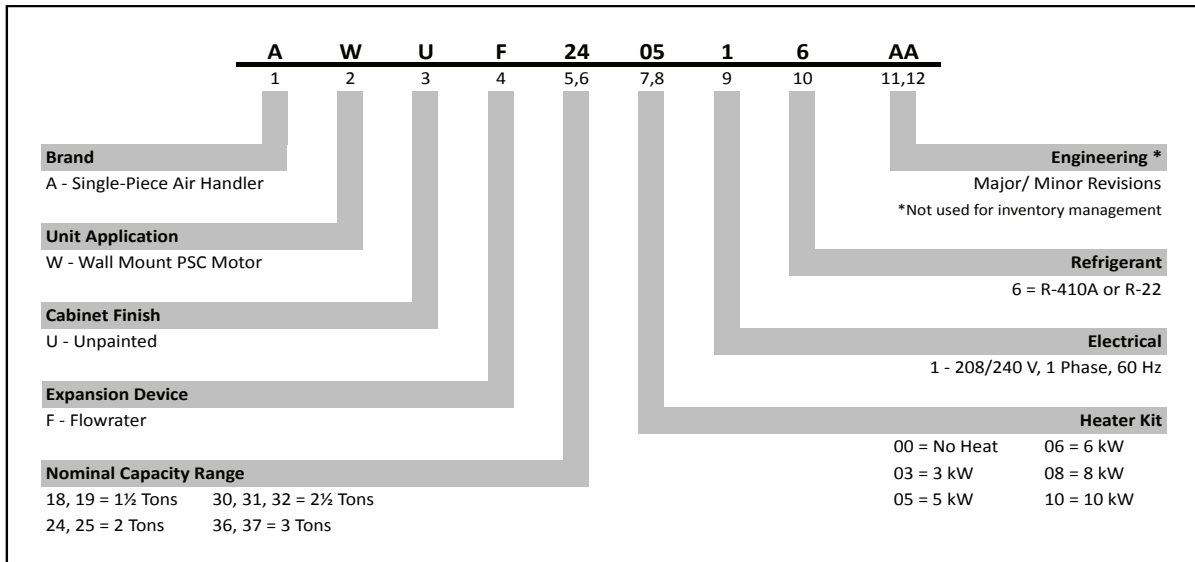
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\* Complete warranty details available from your local dealer or at [www.goodmanmfg.com](http://www.goodmanmfg.com). To receive the 10-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registration is not required in California or Quebec.

NOMENCLATURE



HEATING CAPACITY CORRECTION FACTOR\*

SUPPLY VOLTAGE	240	230	220	210	208
CORRECTION FACTOR	1.00	.92	.84	.76	.74

\* Multiply 240-volt capacity by correction factor

**SPECIFICATIONS**

	AWUF 180316B	AWUF 180516B	AWUF 180816B	AWUF 190316A	AWUF 190516A	AWUF 190816A	AWUF 240316B	AWUF 240516B	AWUF 240816B	AWUF 241016B
<b>NOMINAL RATINGS</b>										
Cooling (BTU/h)	18,000	18,000	18,000	18,000	18,000	18,000	24,000	24,000	24,000	24,000
Electric Heat (kW)	3	5	8	3	5	8	3	5	8	10
<b>BLOWER</b>										
Diameter	9	9	9	10	10	10	10	10	10	10
Width	6	6	6	6	6	6	6	6	6	6
<b>COIL CONNECTIONS</b>										
Liquid	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Suction	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"
Coil Drain Connection (FPT)	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
<b>ELECTRICAL DATA</b>										
Voltage	230/208	230/208	230/208	230/208	230/208	230/208	230/208	230/208	230/208	230/208
Minimum Circuit Ampacity (230V)	17.3	26.6	39.6	18.9	28.3	41.3	17.3	26.6	39.6	52.7
Minimum Circuit Ampacity (208V)	15.1	23.3	34.6	16.8	24.9	36.2	15.1	23.3	34.6	45.9
Max. Overcurrent Device (240V)	20	30	40	20	30	45	20	30	40	60
Max. Overcurrent Device (208V)	20	25	35	20	25	40	20	25	35	50
Minimum VAC	197	197	197	197	197	197	197	197	197	197
Maximum VAC	253	253	253	253	253	253	253	253	253	253
<b>BLOWER MOTOR</b>										
Full Load Amps (FLA)	1.3	1.3	1.3	2.6	2.6	2.6	1.3	1.3	1.3	1.3
Horsepower (HP)	1/5	1/5	1/5	1/3	1/3	1/3	1/5	1/5	1/5	1/5
<b>SHIP WEIGHT (LBS)</b>										
	84	84	84	84	84	84	84	84	84	84

**SPECIFICATIONS (CONT.)**

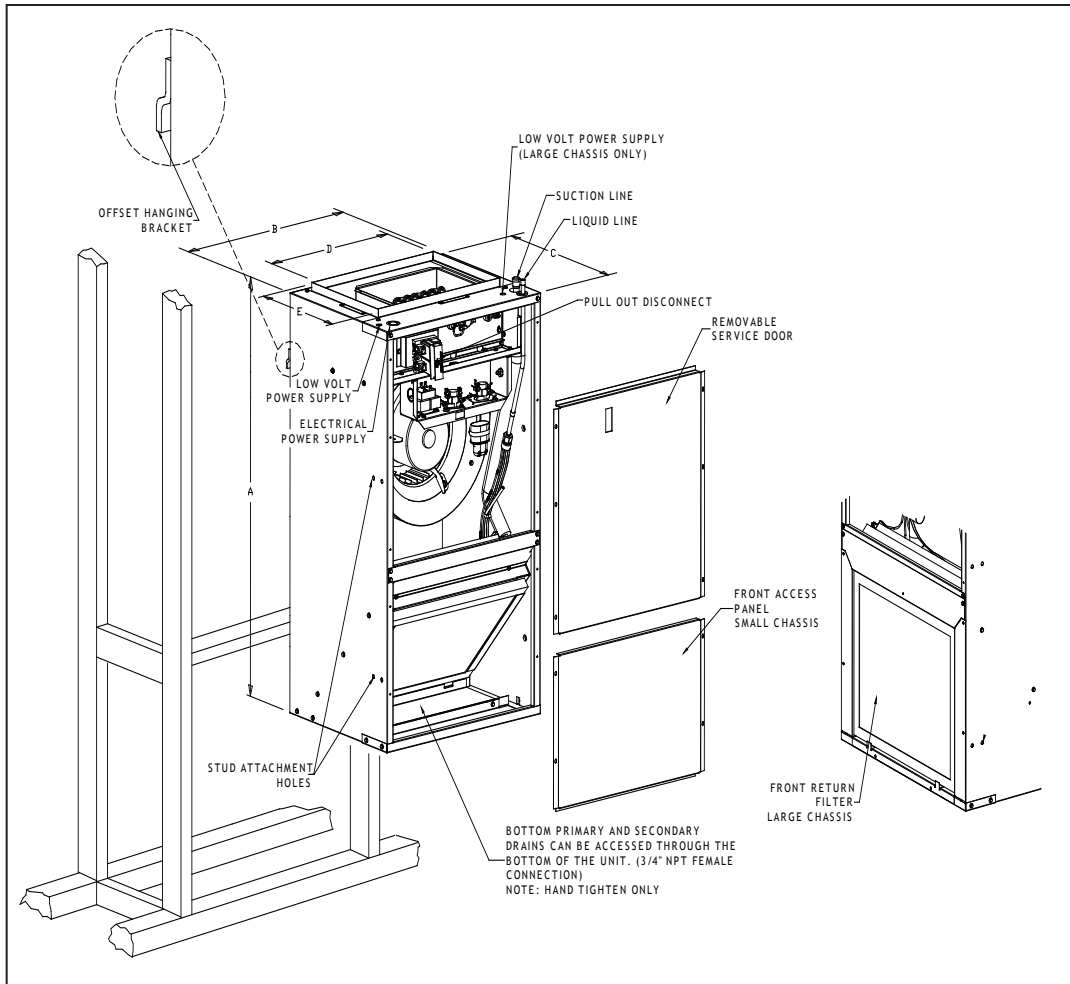
	AWUF 250316B	AWUF 250516B	AWUF 250816B	AWUF 251016B	AWUF 300316B	AWUF 300516B	AWUF 300816B	AWUF 301016B	AWUF 310516A*	AWUF 310816A*
<b>NOMINAL RATINGS</b>										
Cooling (BTU/h)	24,000	24,000	24,000	24,000	30,000	30,000	30,000	30,000	30,000	30,000
Electric Heat (kW)	3	5	8	10	3	5	8	10	5	8
<b>BLOWER</b>										
Diameter	10	10	10	10	9	9	9	9	10	10
Width	6	6	6	6	8	8	8	8	8	8
<b>COIL CONNECTIONS</b>										
Liquid	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Suction	5/8"	5/8"	5/8"	5/8"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Coil Drain Connection (FPT)	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
<b>ELECTRICAL DATA</b>										
Voltage	230/208	230/208	230/208	230/208	230/208	230/208	230/208	230/208	230/208	230/208
Minimum Circuit Ampacity (230V)	18.9	28.3	41.3	54.3	17.6	27.0	40.0	53.0	30.1	43.1
Minimum Circuit Ampacity (208V)	16.8	24.9	36.2	47.5	15.5	23.6	34.9	46.2	26.8	38.1
Max. Overcurrent Device (240V)	20	30	45	60	20	30	40	60	35	45
Max. Overcurrent Device (208V)	20	25	40	50	20	25	35	50	30	40
Minimum VAC	197	197	197	197	197	197	197	197	197	197
Maximum VAC	253	253	253	253	253	253	253	253	253	253
<b>BLOWER MOTOR</b>										
Full Load Amps (FLA)	2.6	2.6	2.6	2.6	1.58	1.58	1.58	1.58	4.1	4.1
Horsepower (HP)	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/2	1/2
<b>SHIP WEIGHT (LBS)</b>										
	84	84	84	84	93	109	109	109	109	109

**SPECIFICATIONS (CONT.)**

	AWUF 321016A*	AWUF 360516B	AWUF 360816B	AWUF 361016B	AWUF 370516B	AWUF 370816B	AWUF 371016B
<b>NOMINAL RATINGS</b>							
Cooling (BTU/h)	30,000	36,000	36,000	36,000	36,000	36,000	36,000
Electric Heat (kW)	10	5	8	10	5	8	10
<b>BLOWER</b>							
Diameter	10	9	9	9	10	10	10
Width	8	8	8	8	8	8	8
<b>COIL CONNECTIONS</b>							
Liquid	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"	3/4"	3/4"
Coil Drain Connection (FPT)	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
<b>ELECTRICAL DATA</b>							
Voltage	230/208	230/208	230/208	230/208	230/208	230/208	230/208
Minimum Circuit Ampacity (230V)	56.2	27.0	40.0	53.0	30.1	43.1	56.2
Minimum Circuit Ampacity (208V)	49.4	23.6	34.9	46.2	26.8	38.1	49.4
Max. Overcurrent Device (240V)	60	30	40	60	35	45	60
Max. Overcurrent Device (208V)	50	25	35	50	30	40	50
Minimum VAC	197	197	197	197	197	197	197
Maximum VAC	253	253	253	253	253	253	253
<b>BLOWER MOTOR</b>							
Full Load Amps (FLA)	4.1	1.58	1.58	1.58	4.1	4.1	4.1
Horsepower (HP)	1/2	1/3	1/3	1/3	1/2	1/2	1/2
<b>SHIP WEIGHT (LBS)</b>							
	109	96	96	96	96	96	96

**DIMENSIONS**

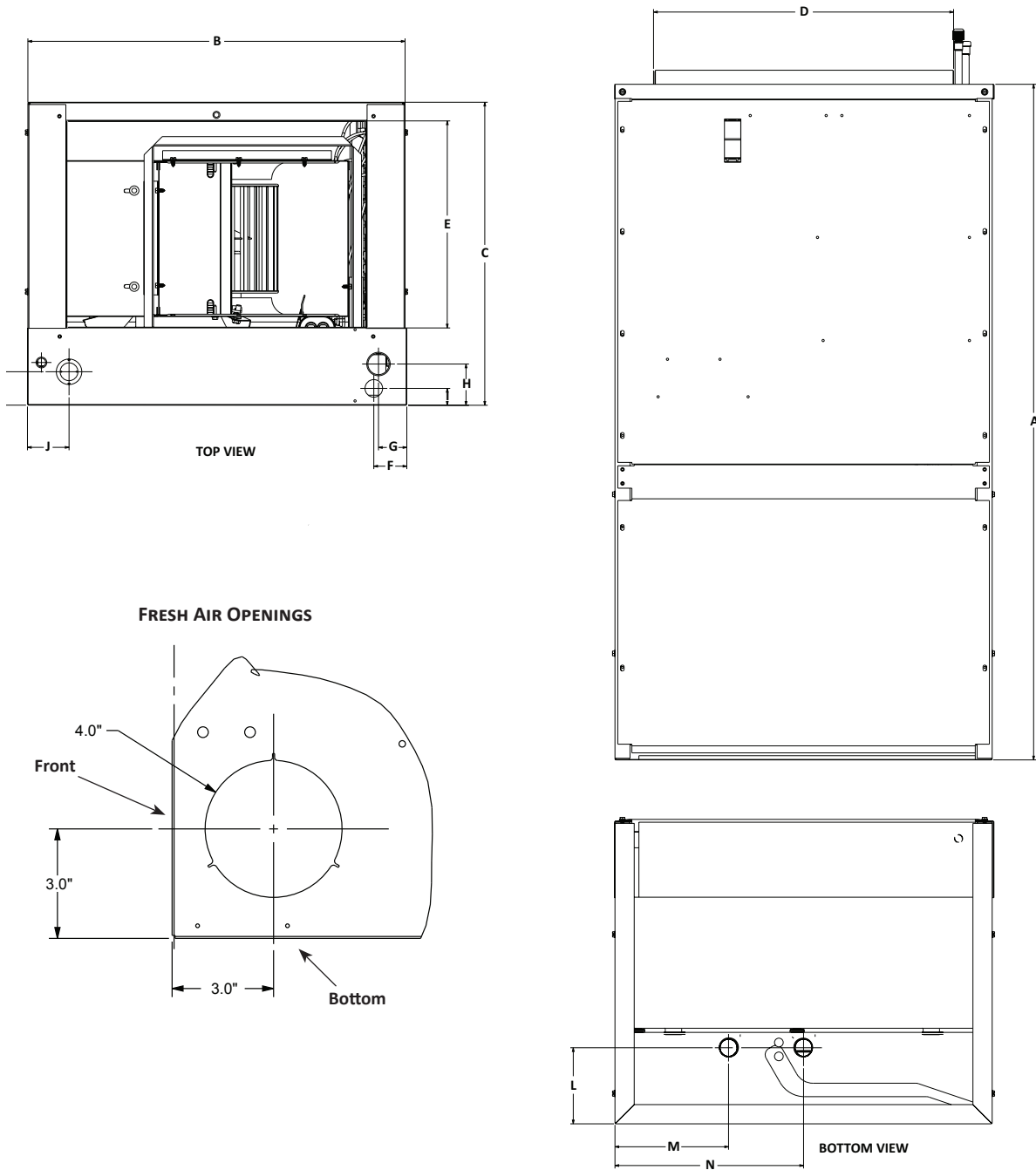
**Note** - Once installed, top of unit must be level or slightly tilted back to ensure proper condensate drainage.



SMALL CHASSIS (AWUF18-25)	
A	36"
B	20 <sup>3</sup> / <sub>16</sub> "
C	16 <sup>7</sup> / <sub>8</sub> "
D	16"
E	11"
Filter	14" x 18" x 1"

LARGE CHASSIS (AWUF30-37)	
A	36"
B	24"
C	21"
D	19 <sup>7</sup> / <sub>8</sub> "
E	15 <sup>7</sup> / <sub>8</sub> "
Filter (30, 36,31,32,37)	18" x 20" x 1"

**DIMENSIONS**



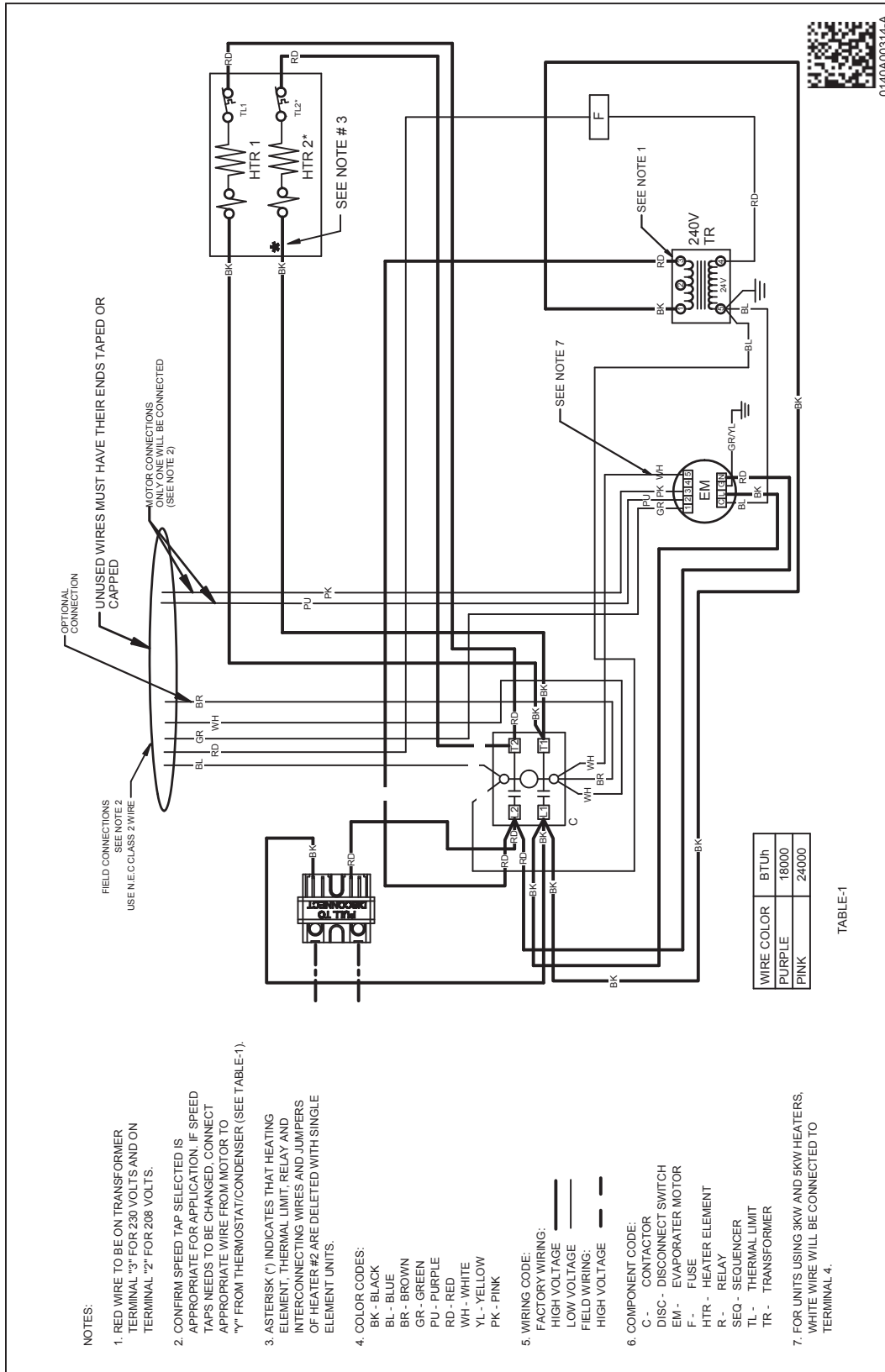
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
<b>AWUF 18-25</b>	36"	20 $\frac{1}{4}$ "	16 $\frac{7}{8}$ "	16"	11"	1 $\frac{3}{4}$ "	1 $\frac{1}{2}$ "	2 $\frac{1}{4}$ "	$\frac{7}{8}$ "	1 $\frac{1}{8}$ "	1 $\frac{3}{4}$ "	4"	6"	10"
<b>AWUF 30-37</b>	36"	24"	21"	19 $\frac{7}{8}$ "	16"	4 $\frac{1}{8}$ "	1 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "	2"	1 $\frac{1}{4}$ "	2 $\frac{3}{8}$ "	4"	8"	12"

MODEL	MOTOR SPEED	CFM DELIVERED AGAINST EXTERNAL STATIC PRESSURE				
		0.1"	0.2"	0.3"	0.4"	0.5"
AWUF18XX16B*	High	755	715	670	615	545
	Low	740	700	655	595	535
AWUF19XX16A*	T5	899	870	853	824	800
	T4	635	604	580	546	520
	T3	799	775	747	727	702
	T2	635	604	580	546	520
	T1	635	604	580	546	520
AWUF24XX16B*	High	900	870	835	795	760
	Low	865	835	800	765	725
AWUF25XX16A*	T5	899	870	853	824	800
	T4	635	604	580	546	520
	T3	799	775	747	727	702
	T2	635	604	580	546	520
	T1	635	604	580	546	520
AWUF30XX16B*	High	1255	1120	1100	1020	950
	Low	1115	1010	990	900	820
AWUF310516XX	T5	875	865	830	805	765
	T4	1005	975	945	920	890
	T3	840	795	785	745	700
	T2	645	615	550	500	445
	T1	645	615	550	500	445
AWUF310816XX AWUF321016XX	T5	1090	1065	1040	1015	985
	T4	1005	975	945	920	890
	T3	840	795	785	745	700
	T2	645	615	550	500	445
	T1	645	615	550	500	445
AWUF36XX16B*	High	1215	1145	1070	985	890
	Low	1120	1065	1000	915	820
AWUF37XX16B*	T5	1385	1205	1130	1045	950
	T4	1235	1180	1115	1040	955
	T3	1165	1120	1075	1025	945
	T2	1050	1010	970	930	860
	T1	1050	1010	970	930	860

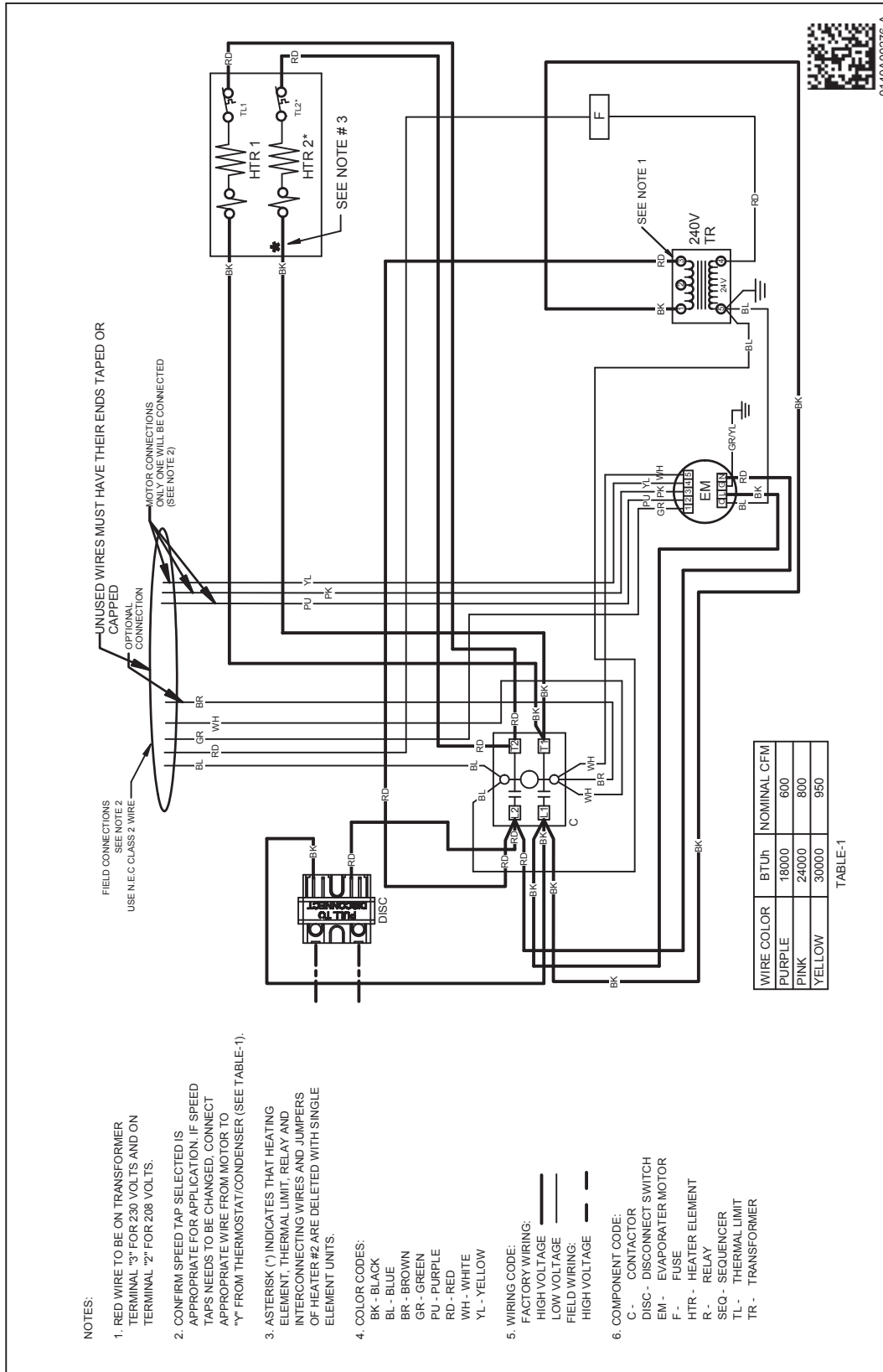




# AWUF19/25 WIRING DIAGRAM



# AWUF31/32 WIRING DIAGRAM



**NOTES:**

1. RED WIRE TO BE ON TRANSFORMER TERMINAL "3" FOR 230 VOLTS AND ON TERMINAL "2" FOR 208 VOLTS.
2. CONFIRM SPEED TAP SELECTED IS APPROPRIATE FOR APPLICATION. IF SPEED TAPS NEEDS TO BE CHANGED, CONNECT APPROPRIATE WIRE FROM MOTOR TO "Y" FROM THERMOSTAT/CONDENSER (SEE TABLE-1).

3. ASTERISK (\*) INDICATES THAT HEATING ELEMENT, THERMAL LIMIT, RELAY AND INTERCONNECTING WIRES AND JUMPERS OF HEATER #2 ARE DELETED WITH SINGLE ELEMENT UNITS.

**4. COLOR CODES:**

- BK - BLACK
- BL - BLUE
- BR - BROWN
- GR - GREEN
- PU - PURPLE
- RD - RED
- WH - WHITE
- YL - YELLOW

**5. WIRING CODE:**

- FACTORY WIRING: ———
- HIGH VOLTAGE: ———
- LOW VOLTAGE: ———
- FIELD WIRING: ———
- HIGH VOLTAGE: - - -

**6. COMPONENT CODE:**

- C - CONTACTOR
- DISC - DISCONNECT SWITCH
- EM - EVAPORATOR MOTOR
- F - FUSE
- HTR - HEATER ELEMENT
- R - RELAY
- SEQ - SEQUENCER
- TL - THERMAL LIMIT
- TR - TRANSFORMER

FIELD CONNECTIONS SEE NOTE 2  
USE N.E.C CLASS 2 WIRE  
UNUSED WIRES MUST HAVE THEIR ENDS TAPED OR CAPPED  
OPTIONAL CONNECTION  
MOTOR CONNECTIONS ONLY ONE WILL BE CONNECTED (SEE NOTE 2)

SEE NOTE # 3

SEE NOTE 1



0140A00276-A

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

**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.

