



TRANE®

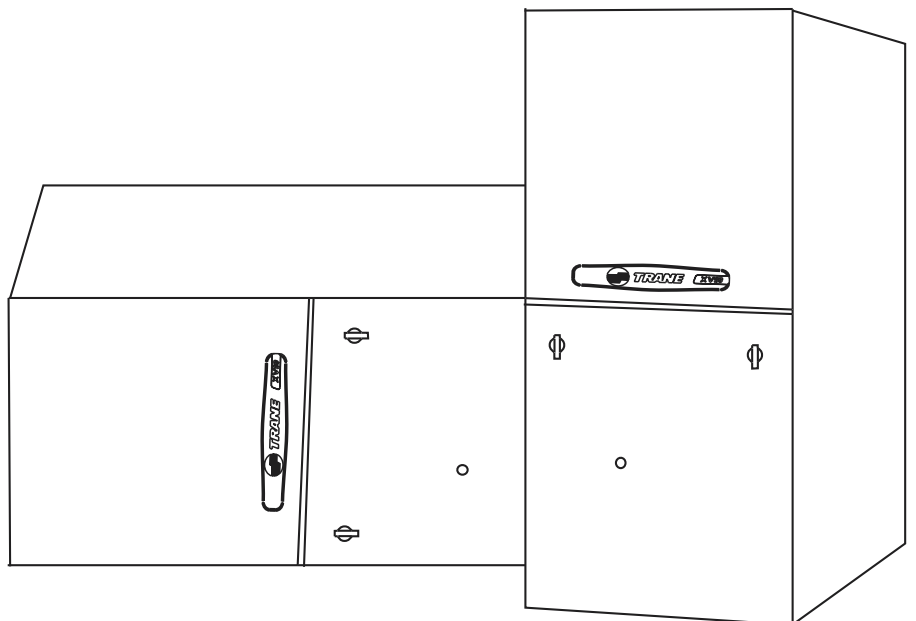
Upflow/Horizontal Two-stage Condensing Gas-Fired Furnace

XV 90

TUY060,080,100,120R9V

Variable Speed Blower

Variable Speed Inducer



PUB. NO. 22-1682-05-0802 (EN)



General Features

NATURAL GAS MODELS

Central heating furnace designs are certified by the International Approval Services (IAS) for both natural and L.P. gas. Limit setting and rating data were established and approved under standard rating conditions using American National Standards Institute standards.

SAFE OPERATION

The Integrated System Control has solid state devices, which continuously monitor for presence of flame, when the system is in the heating mode of operation. Dual solenoid combination gas valve and regulator provide extra safety.

QUICK HEATING

Durable, cycle tested, heavy gauge **aluminized steel heat exchanger** quickly transfers heat to provide warm conditioned air to the structure. **Low energy power vent blower**, to increase efficiency and provide a positive discharge of gas fumes to the outside.

BURNERS

Multi-port In-shot burners will give years of quiet and efficient service. All models can be converted to **L.P. gas** without changing burners.

INTEGRATED SYSTEM CONTROL

Exclusively designed operational program provides total control of furnace limit sensors, blowers, gas valve, flame control and includes self diagnostics for ease of service. Also contains connection points for E.A.C./humidifier.

CONDENSATE DRAIN

Built-in trap which can drain from either side when the furnace is installed upflow.

AIR DELIVERY

The variable speed, direct drive blower motor, has sufficient airflow for most heating and cooling requirements, will switch from heating to cooling speeds on demand from room thermostat. The blower door safety switch will prevent or terminate furnace operation when the blower door is removed.

SECONDARY HEAT EXCHANGER

The XV 90 has a special type 29-4C™ stainless steel secondary heat exchanger to reclaim heat from flue gases which would normally be lost outside.

STYLING

Heavy gauge steel and “wrap-around” cabinet construction is used in the cabinet with baked-on enamel finish for strength and beauty. The heat exchanger section of the cabinet is completely lined with foil faced fiberglass insulation. This results in quiet and efficient operation due to the excellent acoustical and insulating qualities of fiberglass. Built-in bottom pan and alternate bottom, left or right side return air connection in vertical position.

FEATURES AND GENERAL OPERATION

The XV 90 High Efficiency Gas Furnaces employ a Hot Surface Ignition system, which eliminates the waste of a constant burning pilot. The integrated system control lights the main burners upon a demand for heat from the room thermostat. Complete front service access.

- a. Low energy power venter.
- b. Vent proving differential switch.

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Features and Benefits

XV 90 STANDARD EQUIPMENT

- Variable speed indoor blower
- Silicon Nitride Igniter with adaptive heat up
- Variable speed induced draft blower
- Direct/Non-Direct vent option
- Fused 24 volt control circuit
- Manual reset burner safety switches
- Power supply 115/1/60
- Convertible to horizontal on left side
- 2-stage gas valve
- PVC venting-1 or 2 pipe option
- Accessory hook-up capability
- Integrated solid state control with self-diagnostics
- Attractive color accents
- Heavy gauge aluminized steel heat exchanger
- Multi-port In-shot burners
- Hinged blower door
- Perfect fit door latches
- Insulated blower door
- Gasketed blower door
- Internal filter rack
- Standard filter sizes
- Two tone color
- Complete front service access
- Left/right gas connection
- Adjustable fan off times
- Cleanable high velocity filters
- Optional L.P conversion kit
- Selectable cooling fan off delay eliminates need for BAY24X045 time delay kit
- **Lifetime limited primary heat exchanger or secondary heat exchanger warranty to original owner (Residential use)**
- **5 Year limited parts warranty**



Features and Benefits

OPTIONAL EQUIPMENT

Thermostat, Mechanical 2-Stage Heating/1-Stage Cooling	TAYSTAT241 []
Thermostat, Heating/Cooling Single Stage (Mounts Horizontally)	AY28X092 []
Thermostat, Heating/Cooling Single Stage (Mounts Vertically)	BAYSTAT305 []
Thermostat, Electronic Programmable 2-Stage Heating/2-Stage Cooling	TAYSTAT302C []
Thermostat, Electronic Programmable 1-Stage Heating/1-Stage Cooling	TAYSTAT300C []
Propane Conversion Kit	BAYLPKT210A []
Electronic Air Filter, "Perfect Fit" Super Efficiency (14-1/2" Wide Gas Furnace)	TFE145A9FR0 []
Electronic Air Filter, "Perfect Fit" Super Efficiency (17-1/2" Wide Gas Furnace)	TFE175A9FR0 []
Electronic Air Filter, "Perfect Fit" Super Efficiency (21" Wide Gas Furnace)	TFE210A9FR0 []
Electronic Air Filter, "Perfect Fit" Super Efficiency (24-1/2" Wide Gas Furnace)	TFE245A9FR0 []
Electronic Air Filter, "Perfect Fit" High Efficiency (14-1/2" Wide Gas Furnace)	TFM145A9FR0 []
Electronic Air Filter, "Perfect Fit" High Efficiency (17-1/2" Wide Gas Furnace)	TFM175A9FR0 []
Electronic Air Filter, "Perfect Fit" High Efficiency (21" Wide Gas Furnace)	TFM210A9FR0 []
Electronic Air Filter, "Perfect Fit" High Efficiency (24-1/2" Wide Gas Furnace)	TFM245A9FR0 []
Electronic Air Filter, "Perfect Fit" Standard Efficiency (14-1/2" Wide Gas Furnace)	TFP145A9FR0 []
Electronic Air Filter, "Perfect Fit" Standard Efficiency (17-1/2" Wide Gas Furnace)	TFP175A9FR0 []
Electronic Air Filter, "Perfect Fit" Standard Efficiency (21" Wide Gas Furnace)	TFP210A9FR0 []
Electronic Air Filter, "Perfect Fit" Standard Efficiency (24-1/2" Wide Gas Furnace)	TFP245A9FR0 []
Coil Enclosure (14-1/2" Wide Cabinets)	BAYCLE1400C []
Coil Enclosure (17-1/2" Wide Cabinets)	BAYCLE1700C []
Coil Enclosure (21" Wide Cabinets)	BAYCLE2100C []
Coil Enclosure (24-1/2" Wide Cabinets)	BAYCLE2400C []
Side Filter Rack	BAYFLTR200 []
Filter Kit/Horizontal Conversion TUY060, 080-R	BAYFLTR203 []
Filter Kit/Horizontal Conversion TUY100-R	BAYFLTR204 []
Filter Kit/Horizontal Conversion TUY120-R	BAYFLTR205 []
Filter Accessory Kit Upflow 14.5" Furnaces	BAYFLTR317 []
Filter Accessory Kit Upflow 21" Furnaces	BAYFLTR321 []
Filter Accessory Kit Upflow 24.5" Furnaces	BAYFLTR324 []
High Altitude Switch TUY060R	BAYHALT245① []
High Altitude Switch TUY080, 100R	BAYHALT246① []
High Altitude Switch TUY120R	BAYHALT247① []
Concentric Vent Kit	BAYVENT100A []
Sidewall Vent Termination Kit	BAYVENT200B []
Manufactured/Mobile Home Kit	BAYMFGH100A []

① Optional kit allows 200 ft. max. vent length from 5,000-12,000 feet above sea level. See installer's guide.



General Data

TUY-R9V PRODUCT SPECIFICATIONS^①

MODEL	TUY060R9V3V	TUY080R9V3V	TUY100R9V4V	TUY120R9V5V
RATINGS^②				
1st Stage Input BTUH	39000	52000	65000	78000
1st Stage Capacity BTUH (ICS) ^③	37000	49000	62000	74000
2nd Stage Input BTUH	60000	80000	100000	120000
2nd Stage Capacity BTUH (ICS) ^③	56000	73000	93000	112000
AFUE (ICS)	93.0	92.5	93.0	92.5
Temp. Rise (Min.-Max.) °F.	35 - 65	35 - 65	35 - 65	40 - 70
BLOWER DRIVE				
	DIRECT	DIRECT	DIRECT	DIRECT
Dia.-Width (In.)	10 x 8	10 x 8	10 x 10	10 x 10
No. Used	1	1	1	1
Speeds (No.)	VARIABLE	VARIABLE	VARIABLE	VARIABLE
CFM vs. in. w.g.	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE
Motor HP	1/2	1/2	1	1
R.P.M.	VARIABLE	VARIABLE	VARIABLE	VARIABLE
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60	115/1/60
COMBUSTION FAN - TYPE				
	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
Drive - No. Speeds	DIRECT - VARIABLE	DIRECT - VARIABLE	DIRECT - VARIABLE	DIRECT - VARIABLE
Motor HP - RPM	1/15 - 5000	1/15 - 5000	1/15 - 5000	1/25 - 5000
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60	115/1/60
FL Amps	1.1	1.1	1.1	1.1
FILTER — Furnished?				
	YES	YES	YES	YES
Type Recommended	HIGH VELOCITY	HIGH VELOCITY	HIGH VELOCITY	HIGH VELOCITY
Filter (No.-Size-Thk.)	1 X 17 X 25 X 1	1 X 17 X 25 X 1	1 - 20 X 25 X 1	1 - 24 X 25 X 1
VENT — Size (In.)				
	2 ROUND	2 ROUND	3 ROUND	3 ROUND
HEAT EXCHANGER				
Type - Fired	ALUMINIZED STEEL TYPE 1	ALUMINIZED STEEL TYPE 1	ALUMINIZED STEEL TYPE 1	ALUMINIZED STEEL TYPE 1
-Unfired				
Gauge (Fired)	20	20	20	20
ORIFICES — Main				
Nat. Gas Qty. — Drill Size	3 - 45	4 - 45	5 - 45	6 - 45
L.P. Gas Qty. — Drill Size	3 - 56	4 - 56	5 - 56	6 - 56
GAS VALVE				
	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE
DIRECT IGNITION DEVICE				
Type	HOT SURFACE IGNITER	HOT SURFACE IGNITER	HOT SURFACE IGNITER	HOT SURFACE IGNITER
BURNERS — Type				
	IN-SHOT	IN-SHOT	IN-SHOT	IN-SHOT
Number	3	4	5	6
POWER CONN. — V/Ph/Hz^④				
	115/1/60	115/1/60	115/1/60	115/1/60
Ampacity (In Amps)	8.4	8.4	11.4	11.4
Max. Overcurrent Protection (Amps)	15	15	15	15
PIPE CONN. SIZE (IN.)				
	0.50	0.50	0.50	0.50
DUCT CONN.				
	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
DIMENSIONS				
	H X W X D	H X W X D	H X W X D	H X W X D
Crated (In.)	41-3/4 X 19-1/2 X 30-1/2	41-3/4 X 19-1/2 X 30-1/2	41-3/4 X 23 X 30-1/2	41-3/4 X 26-1/2 X 30-1/2
Uncrated	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
WEIGHT				
Shipping (Lbs.)/Net (Lbs.)	158/146	158/148	171/160	205/193

① Central Furnace heating designs are certified by AGA and CSA.

② For U.S. applications, above input ratings (BTUH) are up to 2,000 feet, derate 4% per 1,000 feet for elevations above 2,000 feet above sea level. For Canadian applications, above input ratings (BTUH) are up to 4,500 feet, derate 4% per 1,000 feet for elevations above 4,500 feet above sea level.

③ Based on U.S. government standard tests.

④ The above wiring specifications are in accordance with National Electrical Code; however, installations must comply with local codes.



Performance Data

*UY060R9V3V FURNACE COOLING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER											
OUTDOOR UNIT SIZE (TONS)	AIRFLOW SETTING	DIP SWITCH SETTING					EXTERNAL STATIC PRESSURE				
		SW 1	SW 2	SW 3	SW 4		0.1	0.3	0.5	0.7	0.9
1.5	LOW (350 CFM/TON)	ON	ON	OFF	ON	CFM WATTS	575 65	575 90	575 125	550 155	-
	NORMAL (400 CFM/TON)	ON	ON	OFF	OFF	CFM WATTS	640 70	640 110	640 140	630 175	-
	HIGH (450 CFM/TON)	ON	ON	ON	OFF	CFM WATTS	700 85	700 125	700 160	700 200	-
2.0	LOW (350 CFM/TON)	OFF	ON	OFF	ON	CFM WATTS	700 100	700 130	700 170	700 210	-
	NORMAL (400 CFM/TON)	OFF	ON	OFF	OFF	CFM WATTS	800 115	800 155	800 200	800 250	-
	HIGH (450 CFM/TON)	OFF	ON	ON	OFF	CFM WATTS	900 140	900 195	900 240	900 290	-
2.5	LOW (350 CFM/TON)	ON	OFF	OFF	ON	CFM WATTS	875 130	875 180	875 230	875 270	-
	NORMAL (400 CFM/TON)	ON	OFF	OFF	OFF	CFM WATTS	1000 175	1000 235	1000 285	1000 335	900 310
	HIGH (450 CFM/TON)	ON	OFF	ON	OFF	CFM WATTS	1125 235	1125 295	1125 345	1100 370	925 318
3	LOW (350 CFM/TON)	OFF	OFF	OFF	ON	CFM WATTS	1050 195	1050 260	1050 305	1050 350	920 315
	NORMAL (400 CFM/TON)	OFF	OFF	OFF	OFF	CFM WATTS	1200 275	1200 330	1200 385	1100 385	940 330
	HIGH (450 CFM/TON)	OFF	OFF	ON	OFF	CFM WATTS	1325 360	1325 425	1300 460	1175 425	1000 365

NOTES: * First letter may be "A" or "T"
 1. At continuous fan setting: Heating or Cooling airflows are approximately 50% of selected cooling value.
 2. LOW airflow (350 cfm/ton) is COMFORT & HUMID CLIMATE setting;
 NORMAL airflow (400 cfm/ton) is typical setting;
 HIGH airflow (450 cfm/ton) is DRY CLIMATE setting.

*UY060R9V3V FURNACE HEATING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER									
					1st Stage Capacity = 37,000 2nd Stage Capacity = 56,000				
	AIRFLOW SETTING	DIP SWITCH SETTING			EXTERNAL STATIC PRESSURE				
		SW 7	SW 8		0.1	0.3	0.5	0.7	0.9
HEATING 1ST STAGE	LOW	ON	ON	CFM TEMP. RISE WATTS	600 57 85	600 57 110	600 57 155	600 57 190	-
	MEDIUM LOW	OFF	ON	CFM TEMP. RISE WATTS	700 49 90	700 49 130	700 49 175	700 49 210	-
	NORMAL **	ON	OFF	CFM TEMP. RISE WATTS	775 44 105	775 44 155	775 44 195	775 44 240	-
	HIGH	OFF	OFF	CFM TEMP. RISE WATTS	870 39 135	870 39 185	870 39 235	870 39 290	-
HEATING 2ND STAGE	LOW	ON	ON	CFM TEMP. RISE WATTS	860 61 140	920 57 200	920 57 245	920 57 300	670 79 245
	MEDIUM LOW	OFF	ON	CFM TEMP. RISE WATTS	1000 53 190	1000 53 255	1000 53 305	1000 53 340	700 75 255
	NORMAL **	ON	OFF	CFM TEMP. RISE WATTS	1125 47 250	1125 47 315	1125 47 370	1025 51 355	775 68 285
	HIGH	OFF	OFF	CFM TEMP. RISE WATTS	1250 42 340	1250 42 405	1250 42 445	1100 48 390	1000 53 355

NOTES:
 * First letter may be "A" or "T"
 ** Factory setting



Performance Data

TUY080R9V3V FURNACE COOLING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER											
OUTDOOR UNIT SIZE (TONS)	AIRFLOW SETTING (See Notes)	DIP SWITCH SETTING					EXTERNAL STATIC PRESSURE				
		SW 1	SW 2	SW 3	SW 4		0.1	0.3	0.5	0.7	0.9
2.0	LOW (350 CFM/TON)	ON	ON	OFF	ON	CFM WATTS	750 84	750 122	750 154	720 185	710 221
	NORMAL (400 CFM/TON)	ON	ON	OFF	OFF	CFM WATTS	840 109	840 146	840 181	840 226	820 264
	HIGH (450 CFM/TON)	ON	ON	ON	OFF	CFM WATTS	940 136	940 177	940 215	940 274	940 318
2.5	LOW (350 CFM/TON)	OFF	ON	OFF	ON	CFM WATTS	850 113	850 150	870 200	890 250	890 295
	NORMAL (400 CFM/TON)	OFF	ON	OFF	OFF	CFM WATTS	960 150	990 200	1000 230	1020 305	1010 350
	HIGH (450 CFM/TON)	OFF	ON	ON	OFF	CFM WATTS	1080 195	1110 255	1120 315	1120 365	1080 390
3.0	LOW (350 CFM/TON)	ON	OFF	OFF	ON	CFM WATTS	1020 175	1020 225	1040 280	1050 330	1050 375
	NORMAL (400 CFM/TON)	ON	OFF	OFF	OFF	CFM WATTS	1170 240	1180 300	1200 365	1200 415	1130 420
	HIGH (450 CFM/TON)	ON	OFF	ON	OFF	CFM WATTS	1290 310	1320 410	1350 470	1340 520	1150 440
3.5	LOW (350 CFM/TON)	OFF	OFF	OFF	ON	CFM WATTS	1170 250	1190 315	1210 370	1210 435	1100 405
	NORMAL (400 CFM/TON)	OFF	OFF	OFF	OFF	CFM WATTS	1360 365	1390 445	1400 500	1360 535	1210 475
	HIGH (450 CFM/TON)	OFF	OFF	ON	OFF	CFM WATTS	1360 355	1390 450	1400 520	1350 535	1180 460

NOTES: Continuous Fan is with Thermostat Fan Switch on and Dip Switches 5 and 6 in the "ON" position.
 1. At continuous fan setting: Heating or Cooling airflows are approximately 50% of selected cooling value.
 2. LOW airflow (350 cfm/ton) is COMFORT & HUMID CLIMATE setting;
 NORMAL airflow (400 cfm/ton) is typical setting;
 HIGH airflow (450 cfm/ton) is DRY CLIMATE setting.

TUY080R9V3V FURNACE HEATING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER										
							1st Stage Capacity = 49,000			
							2nd Stage Capacity = 73,000			
	AIRFLOW SETTING	DIP SWITCH SETTING			EXTERNAL STATIC PRESSURE					
		SW 7	SW 8		0.1	0.3	0.5	0.7	0.9	
HEATING 1ST STAGE	LOW	ON	ON	CFM	800	800	800	800	800	
				TEMP. RISE WATTS	56	56	56	56	56	
	MEDIUM LOW	OFF	ON	CFM	860	880	890	920	910	
				TEMP. RISE WATTS	52	51	50	48	49	
NORMAL **	ON	OFF	CFM	960	990	1000	1020	1010		
			TEMP. RISE WATTS	46	45	44	44	44		
HIGH	OFF	OFF	CFM	1080	1110	1120	1120	1080		
			TEMP. RISE WATTS	41	40	40	40	41		
HEATING 2ND STAGE	LOW	ON	ON	CFM	1100	1100	1120	1120	1090	
				TEMP. RISE WATTS	62	62	61	61	63	
	MEDIUM LOW	OFF	ON	CFM	1210	1240	1260	1260	1130	
				TEMP. RISE WATTS	57	55	54	54	61	
NORMAL **	ON	OFF	CFM	1360	1390	1400	1360	1210		
			TEMP. RISE WATTS	50	49	49	50	57		
HIGH	OFF	OFF	CFM	1360	1390	1400	1350	1180		
			TEMP. RISE WATTS	50	49	49	51	58		

NOTES:
 ** Factory setting



Performance Data

TUY100R9V4V FURNACE COOLING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER											
OUTDOOR UNIT SIZE (TONS)	AIRFLOW SETTING (See Notes)	DIP SWITCH SETTING					EXTERNAL STATIC PRESSURE				
		SW 1	SW 2	SW 3	SW 4		0.1	0.3	0.5	0.7	0.9
3.0	LOW (350 CFM/TON)	ON	ON	OFF	ON	CFM WATTS	1040 165	1040 220	1040 270	1030 320	1030 375
	NORMAL (400 CFM/TON)	ON	ON	OFF	OFF	CFM WATTS	1210 235	1210 285	1230 360	1230 415	1230 475
	HIGH (450 CFM/TON)	ON	ON	ON	OFF	CFM WATTS	1340 390	1370 390	1400 465	1390 525	1370 580
3.5	LOW (350 CFM/TON)	OFF	ON	OFF	ON	CFM WATTS	1200 225	1220 280	1230 365	1250 425	1230 485
	NORMAL (400 CFM/TON)	OFF	ON	OFF	OFF	CFM WATTS	1390 335	1430 425	1430 495	1430 560	1400 590
	HIGH (450 CFM/TON)	OFF	ON	ON	OFF	CFM WATTS	1590 490	1590 575	1590 625	1580 685	1420 615
4.0	LOW (350 CFM/TON)	ON	OFF	OFF	ON	CFM WATTS	1370 325	1420 415	1430 490	1340 550	1410 595
	NORMAL (400 CFM/TON)	ON	OFF	OFF	OFF	CFM WATTS	1640 515	1640 585	1640 655	1590 680	1420 615
	HIGH (450 CFM/TON)	ON	OFF	ON	OFF	CFM WATTS	1840 700	1840 780	1770 795	1630 725	1470 655

NOTES: Continuous Fan is with Thermostat Fan Switch on and Dip Switches 5 and 6 in the "ON" position.
 1. At continuous fan setting: Heating or Cooling airflows are approximately 50% of selected cooling value.
 2. LOW airflow (350 cfm/ton) is COMFORT & HUMID CLIMATE setting;
 NORMAL airflow (400 cfm/ton) is typical setting;
 HIGH airflow (450 cfm/ton) is DRY CLIMATE setting.

TUY100R9V4V FURNACE HEATING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER										
							1st Stage Capacity = 62,000			
							2nd Stage Capacity = 93,000			
	AIRFLOW SETTING	DIP SWITCH SETTING			EXTERNAL STATIC PRESSURE					
		SW 7	SW 8		0.1	0.3	0.5	0.7	0.9	
HEATING 1ST STAGE	LOW	ON	ON	CFM	920	920	920	920	920	
				TEMP. RISE	60	60	60	60	60	
	WATTS	130	180	220	280	320				
	MEDIUM LOW	OFF	ON	CFM	1020	1020	1020	1010	1000	
TEMP. RISE				54	54	54	55	56		
WATTS	165	220	260	310	365					
NORMAL **	ON	OFF	CFM	1160	1160	1160	1160	1150		
			TEMP. RISE	48	48	48	48	48		
WATTS	220	260	325	390	430					
HIGH	OFF	OFF	CFM	1350	1380	1400	1400	1390		
			TEMP. RISE	41	40	40	40	40		
WATTS	320	400	470	540	585					
HEATING 2ND STAGE	LOW	ON	ON	CFM	1290	1290	1330	1340	1320	
				TEMP. RISE	67	67	65	64	65	
	WATTS	275	355	430	490	545				
	MEDIUM LOW	OFF	ON	CFM	1410	1460	1460	1460	1370	
TEMP. RISE				61	59	59	59	63		
WATTS	3561	455	520	590	590					
NORMAL **	ON	OFF	CFM	1640	1640	1640	1600	1410		
			TEMP. RISE	53	53	53	54	61		
WATTS	530	590	660	695	620					
HIGH	OFF	OFF	CFM	1970	1920	1780	1660	1520		
			TEMP. RISE	44	45	48	52	57		
WATTS	855	895	820	760	695					

NOTES:
 ** Factory setting



Performance Data

TUY120R9V5V FURNACE COOLING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER											
OUTDOOR UNIT SIZE (TONS)	AIRFLOW SETTING (See Notes)	DIP SWITCH SETTING					EXTERNAL STATIC PRESSURE				
		SW 1	SW 2	SW 3	SW 4		0.1	0.3	0.5	0.7	0.9
3.5	LOW (350 CFM/TON)	OFF	ON	OFF	ON	CFM WATTS	1210 220	1210 270	1220 325	1230 400	1230 445
	NORMAL (400 CFM/TON)	OFF	ON	OFF	OFF	CFM WATTS	1400 305	1440 390	1450 465	1450 510	1410 560
	HIGH (450 CFM/TON)	OFF	ON	ON	OFF	CFM WATTS	1590 425	1600 520	1610 600	1600 645	1380 575
4.0	LOW (350 CFM/TON)	ON	OFF	OFF	ON	CFM WATTS	1390 305	1400 375	1430 445	1440 515	1420 565
	NORMAL (400 CFM/TON)	ON	OFF	OFF	OFF	CFM WATTS	1620 420	1650 530	1670 595	1640 660	1480 600
	HIGH (450 CFM/TON)	ON	OFF	ON	OFF	CFM WATTS	1840 600	1830 690	1820 765	1670 700	1490 620
5	LOW (350 CFM/TON)	OFF	OFF	OFF	ON	CFM WATTS	1800 570	1780 630	1780 705	1700 695	1530 615
	NORMAL (400 CFM/TON)	OFF	OFF	OFF	OFF	CFM WATTS	2050 845	2010 875	1860 805	1710 735	1530 655
	HIGH (450 CFM/TON)	OFF	OFF	ON	OFF	CFM WATTS	2160 995	2040 935	1920 875	1780 805	1620 730

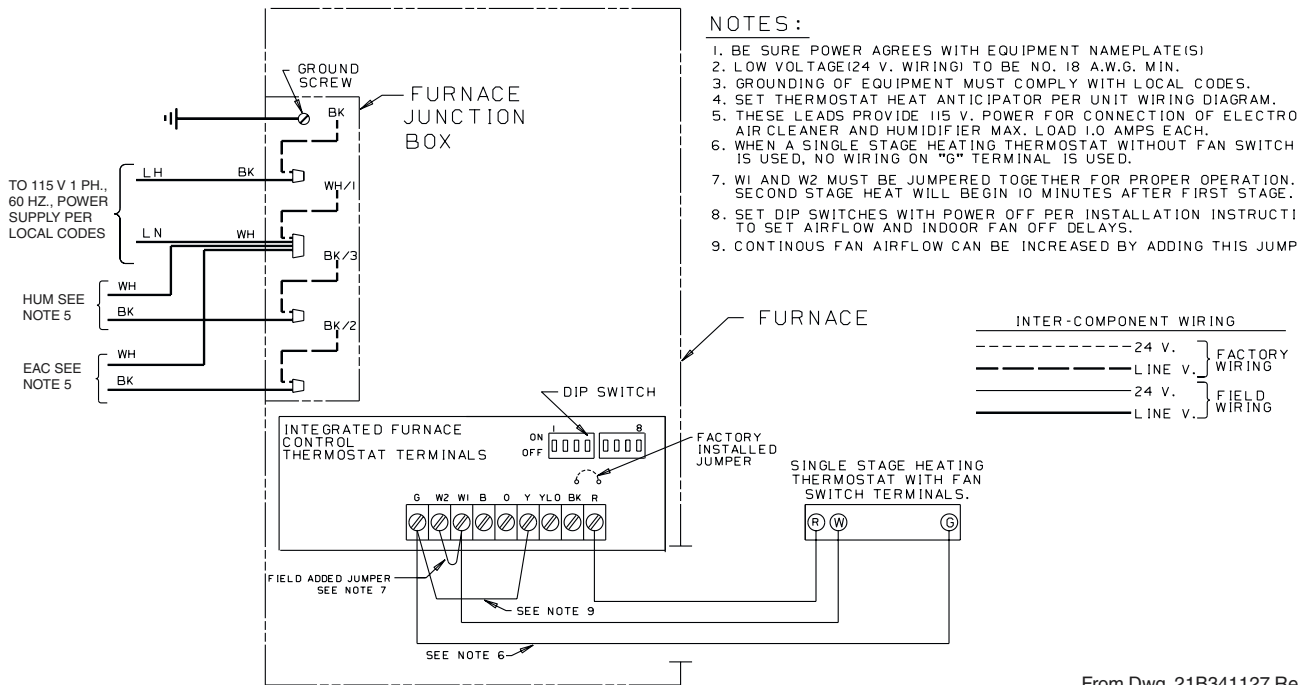
NOTES: Continuous Fan is with Thermostat Fan Switch on and Dip Switches 5 and 6 in the "ON" position.
 1. At continuous fan setting: Heating or Cooling airflows are approximately 50% of selected cooling value.
 2. LOW airflow (350 cfm/ton) is COMFORT & HUMID CLIMATE setting;
 NORMAL airflow (400 cfm/ton) is typical setting;
 HIGH airflow (450 cfm/ton) is DRY CLIMATE setting.

TUY120R9V5V FURNACE HEATING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER									
1st Stage Capacity = 74,000 2nd Stage Capacity = 112,000									
	AIRFLOW SETTING	DIP SWITCH SETTING			EXTERNAL STATIC PRESSURE				
		SW 7	SW 8		0.1	0.3	0.5	0.7	0.9
HEATING 1ST STAGE	LOW	ON	ON	CFM	1090	1120	1080	1070	1010
				TEMP. RISE WATTS	62 165	60 225	63 270	63 310	67 380
	MEDIUM LOW	OFF	ON	CFM	1210	1200	1200	1180	1160
				TEMP. RISE WATTS	56 220	56 280	56 330	57 395	58 455
NORMAL **	ON	OFF	CFM	1340	1360	1370	1380	1330	
			TEMP. RISE WATTS	50 295	50 350	49 425	49 495	51 535	
HIGH	OFF	OFF	CFM	1430	1570	1580	1570	1390	
			TEMP. RISE WATTS	47 390	43 490	43 565	43 625	49 565	
HEATING 2ND STAGE	LOW	ON	ON	CFM	1660	1690	1680	1640	1460
				TEMP. RISE WATTS	63 485	62 590	62 640	64 675	72 600
	MEDIUM LOW	OFF	ON	CFM	1870	1870	1810	1680	1490
				TEMP. RISE WATTS	56 675	56 745	58 770	62 715	70 625
NORMAL **	ON	OFF	CFM	2060	1990	1850	1710	1530	
			TEMP. RISE WATTS	51 880	53 890	57 810	61 750	68 665	
HIGH	OFF	OFF	CFM	2200	2090	1940	1790	1640	
			TEMP. RISE WATTS	48 1030	50 965	54 895	58 830	64 750	

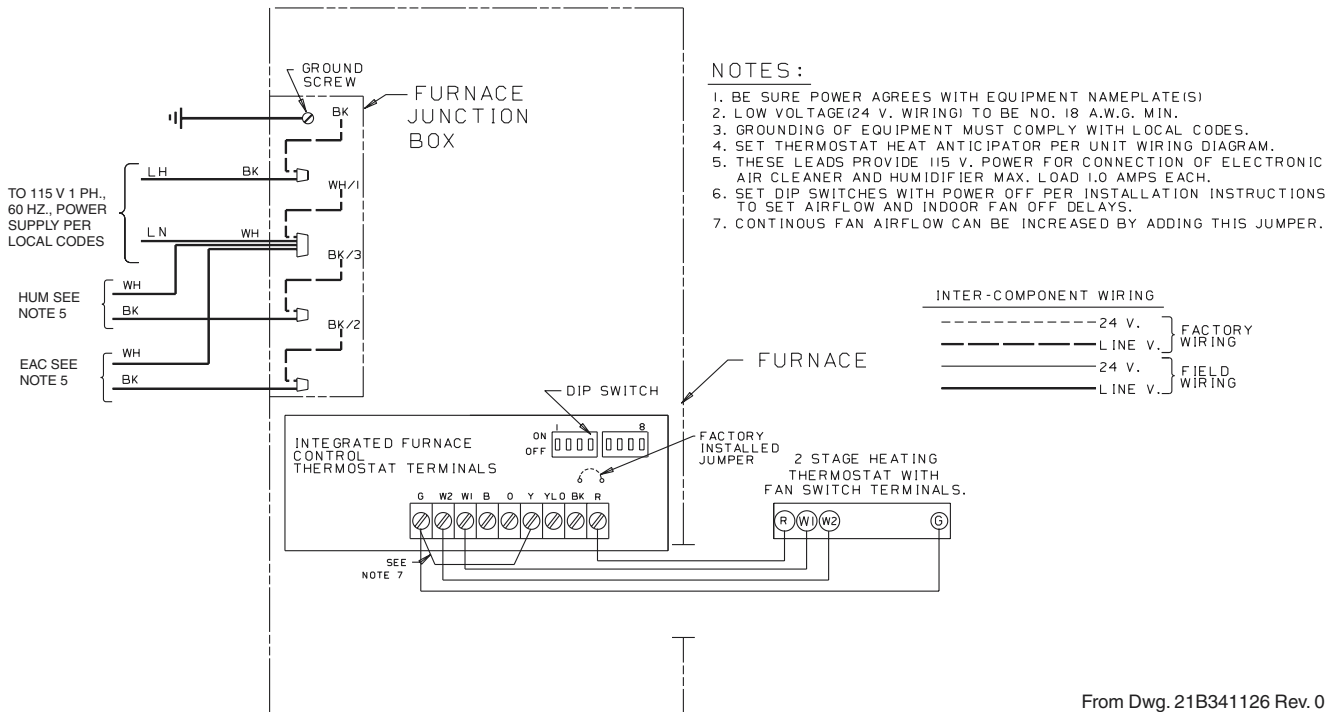
NOTES:
 ** Factory setting

Field Wiring

FIELD WIRING DIAGRAM FOR SINGLE STAGE HEATING

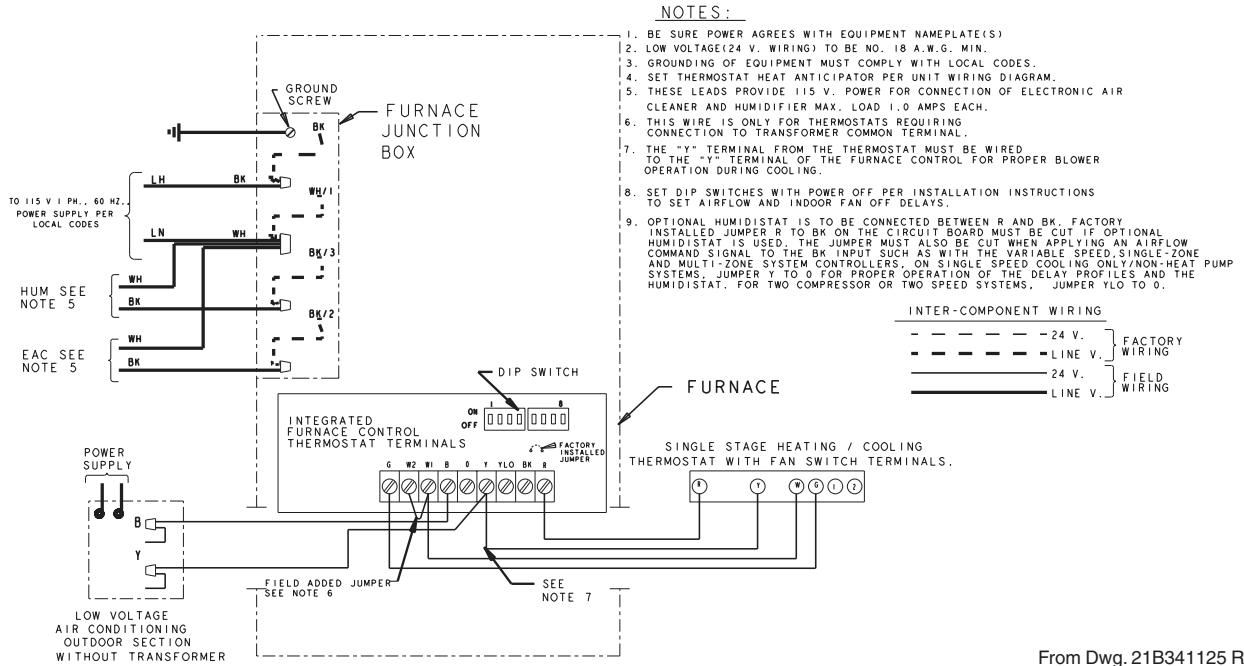


FIELD WIRING DIAGRAM FOR 2 STAGE HEATING THERMOSTAT

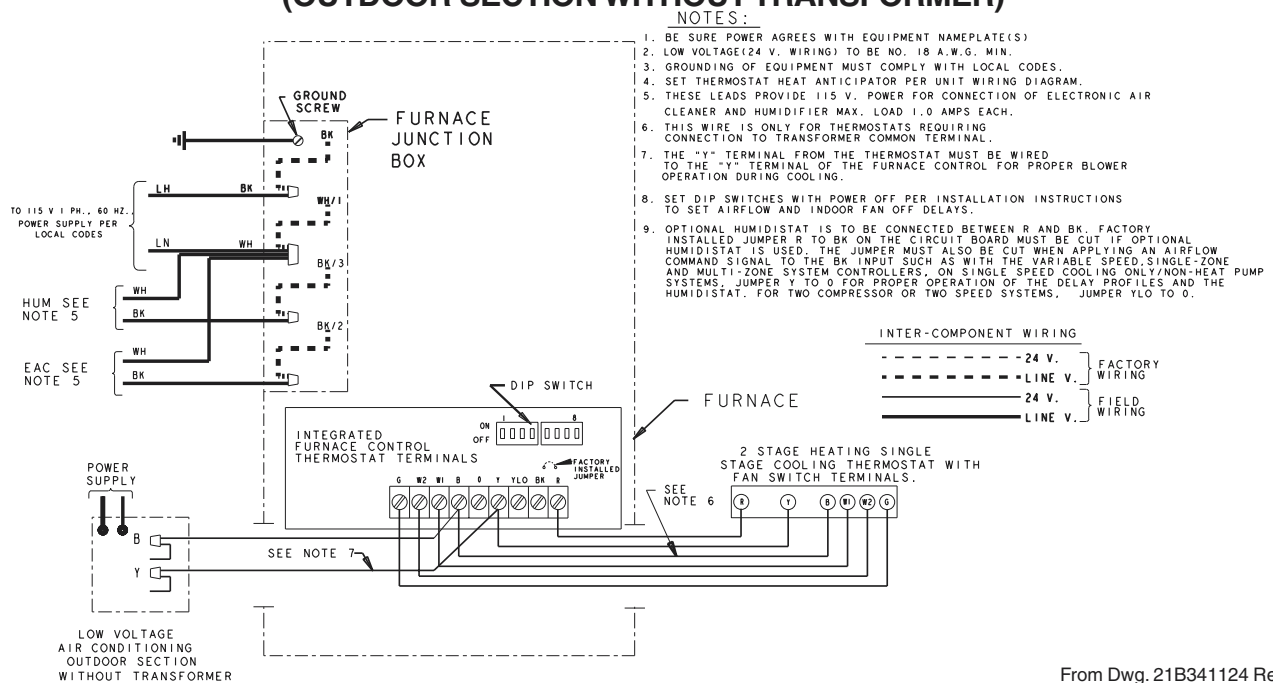


Field Wiring

FIELD WIRING DIAGRAM FOR SINGLE STAGE HEATING/COOLING (OUTDOOR SECTION WITHOUT TRANSFORMER)

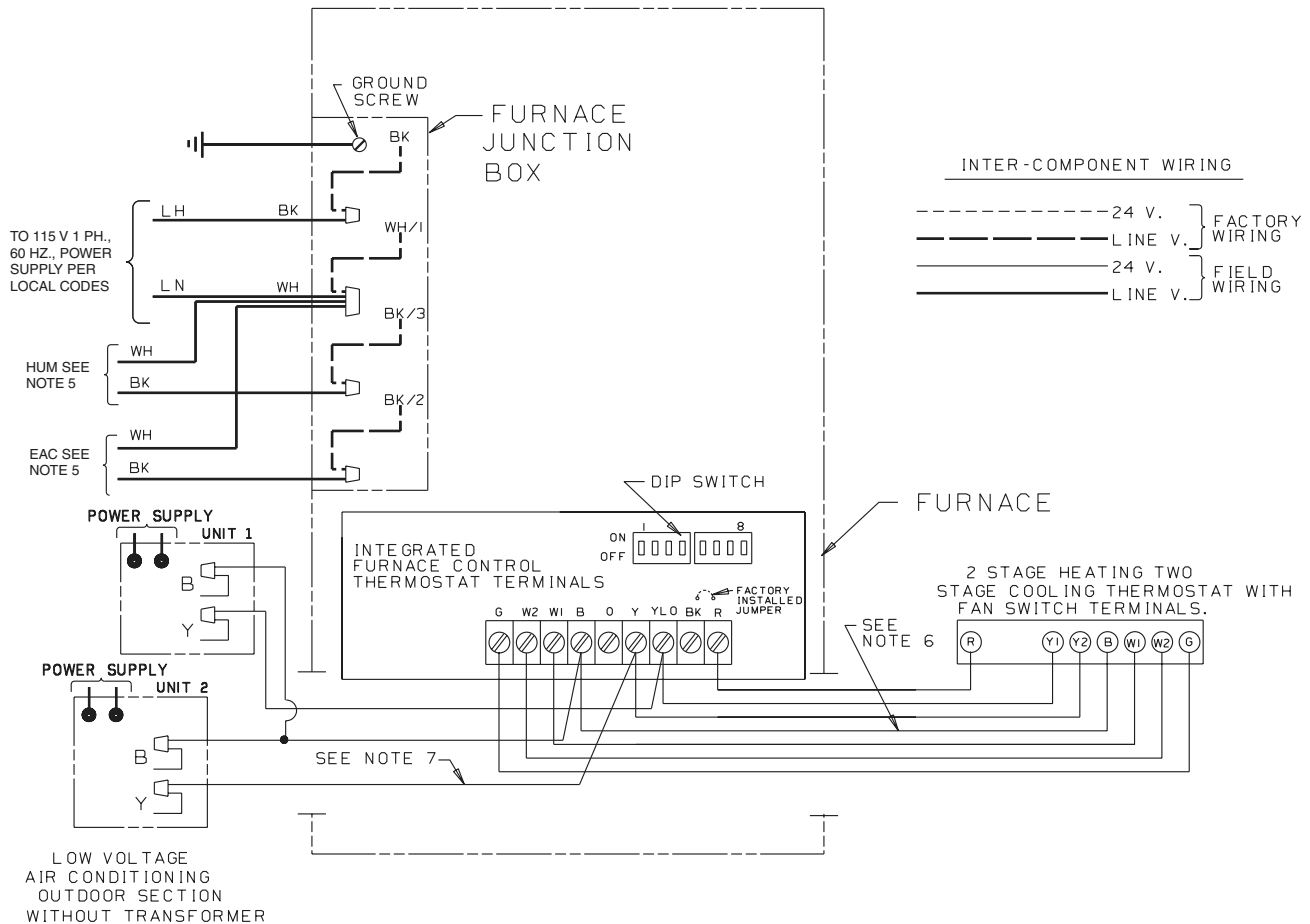


FIELD WIRING DIAGRAM FOR 2 STAGE HEATING SINGLE STAGE COOLING (OUTDOOR SECTION WITHOUT TRANSFORMER)



Field Wiring

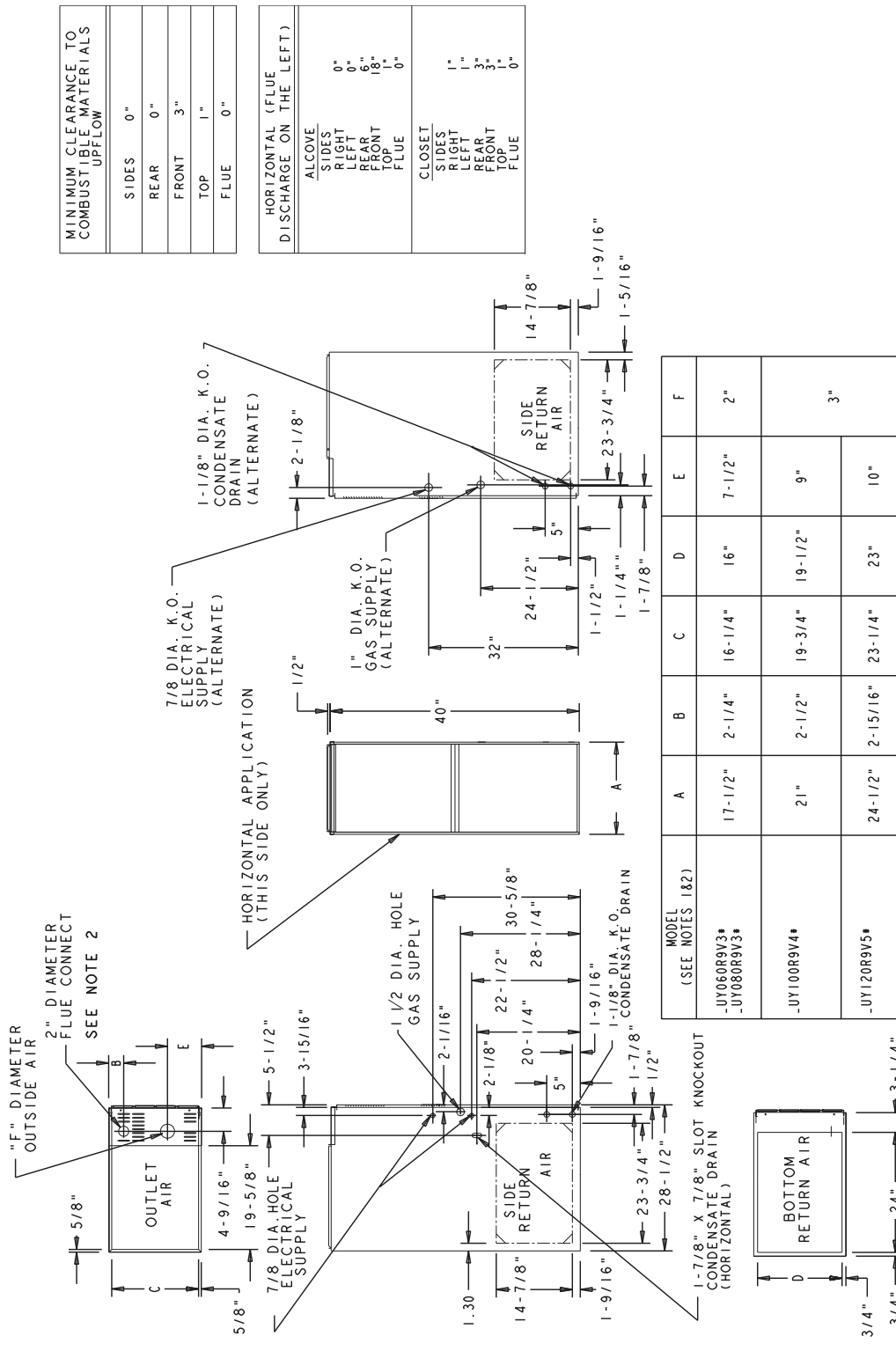
FIELD WIRING DIAGRAM FOR 2 STAGE HEATING TWO STAGE COOLING (OUTDOOR SECTION WITHOUT TRANSFORMER)



From Dwg. 21B341128 Rev. 0

Dimensions

TUY-R9V-V OUTLINE DRAWING (ALL DIMENSIONS ARE IN INCHES)



* SUFFIX LETTER MAY BE "V", 0 THRU 9
 NOTES:
 1. PREFIX LETTER MAYBE "A" OR "T" DEPENDING ON BRAND.
 2. DIAMETER OF VENT PIPE MAY BE LIMITED TO 2-1/2" OR 3".
 ON SOME MODELS AT DIFFERENT ALTITUDES REFER TO THE VENT LENGTH TABLE FOR PROPER APPLICATION.



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