



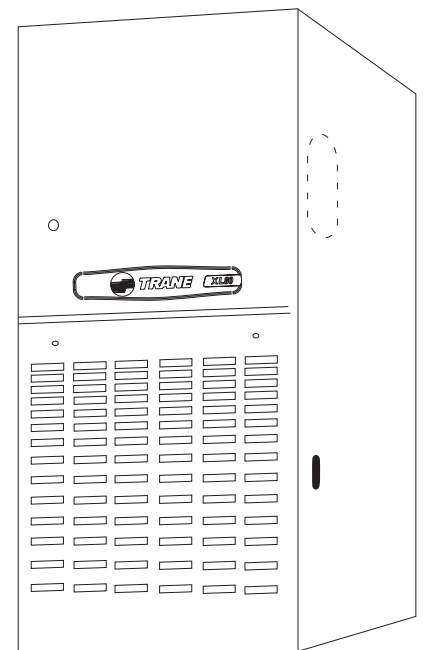
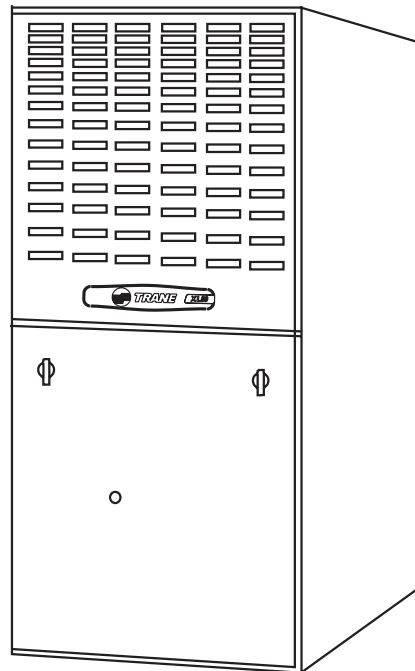
TRANE®

Upflow/ Downflow Horizontal Right or Left Gas-Fired Furnace

XL 80

TUD2A040A9242A	TUD2A060A9362A
TUD2B060A9362A	TUD2B080A9362A
TUD2B080A9482A	TUD2B100A9362A
TUD2C100A9482A	TUD2C100A9602A
TUD2D100A9602A	TUD2C120A9542A
TUD2D120A9602A	TUD2D140A9602A
TDD2A040A9242A	TDD2A060A9362A
TDD2B060A9362A	TDD2B080A9362A
TDD2B100A9482A	TDD2C100A9482A
TDD2C100A9602A	TDD2D120A9602A
TDD2D140A9602A	

Two-Stage Fan Assisted Combustion System



PUB. NO. 22-1639-13



General Features

Natural Gas Models

Central heating furnace designs are certified by the American Gas Association 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.

Burners

Multi-port In-shot burners will give years of quiet and efficient service. All models can be converted to **L.P. gas**.

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.

Air Delivery

The multispeed, direct drive blower motor, with sufficient airflow range 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.

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.

Features And General Operation

The XL 80 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.

Contents

General Features	2
Features and Benefits	4
Standard Equipment	4
Optional Equipment	5
General Data	6
TUD2A040A9242A	6
TUD2A060A9362A	6
TUD2B080A9362A	6
TUD2B060A9362A	6
TUD2B080A9482A	7
TUD2B100A9362A	7
TUD2C100A9482A	7
TUD2C100A9602A	7
TUD2C120A9542A	8
TUD2D120A9602A	8
TUD2D140A9602A	8
TUD2D100A9602A	8
TDD2A040A9242A	9
TDD2A060A9362A	9
TDD2B060A9362A	9
TDD2B080A9362A	10
TDD2B100A9482A	10
TDD2C100A9482A	10
TDD2C100A9602A	11
TDD2D120A9602A	11
TDD2D140A9602A	11
Performance Data	12
Electrical Data	15
Field Wiring	19
Twinning	21
Field Wiring	21
Dimensions	23



Features and Benefits

Standard Equipment XL 80 Upflow/ Downflow Horizontal Right or Left

- Convertible to horizontal with left or right airflow
- Power supply 115/1/60
- 2-stage gas valve
- 2-speed venter
- 2 heating blower speeds
- Silicon Nitride Hot surface igniter with adaptive heat up
- Integrated solid state control with self-diagnostics
- Single wire twinning
- Inner blower door panel
- Right and left hand side knockout for venting
- Attractive color accents
- Hinged blower door
- Prefect Fit door latches
- Insulated blower door
- Gasketed blower door
- Internal filter rack
- Standard filter sizes
- Heavy gauge aluminized steel heat exchanger
- Blower door safety switch
- Multi-port In-shot burners
- Complete front service access
- Alternate bottom/left/right return air
- Slide out blower assembly
- Direct drive, 4-speed motors
- Adjustable fan-off times
- Common vent capability
- Heavy gauge reinforced wrap-around steel cabinet
- Optional L.P. conversion kit
- Left/right gas connection
- Accessory hook-up capability
- Selectable cooling fan off eliminates need for BAY24X045 time delay relay
- 24 volt fuse
- Manual reset flame roll-out switches



Features and Benefits

Optional Equipment

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

Comfort Control, Mechanical 2-Stage Heating/1-Stage Cooling	BAYSTAT241 []
Comfort Control, Heating/Cooling Single Stage (Mounts Horizontally)	AY28X092 []
Comfort Control, Heating/Cooling Single Stage (Mounts Vertically).....	BAYSTAT305 []
Comfort Control, Electronic Programmable 2-Stage Heating/1-Stage Cooling	BAYSTAT302C []
Comfort Control, Electronic Programmable 1-Stage Heating/1-Stage Cooling	BAYSTAT300C []
Comfort Control, Electronic Non-Programmable 1-Stage Heating/1-Stage Cooling	TAYSTAT370 []
Comfort Control, Electronic Programmable (5/2) 1-Stage Heating/1-Stage Cooling.....	TAYSTAT340 []
Comfort Control, Heating Only	BAYSTAT388 []
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)	BAYCLE14A1422A []
Coil Enclosure (17-1/2" Wide Cabinets)	BAYCLE17A1722A []
Coil Enclosure (21" Wide Cabinets)	BAYCLE21A2130A []
Coil Enclosure (24-1/2" Wide Cabinets)	BAYCLE24A2430A []
High Altitude Switch.....	BAYHALT239 []
High Altitude Switch.....	BAYHALT249 []
Downflow Subbase	BAYBASE205 []
Filter Access Door Kit.....	BAYFLTR206 []
Masonry Chimney Vent Kit (Upflow models only).....	BAYVENT800B []
Filter Rack Kit	BAYRACK960A []
Cleanable Filter (14.5"/17.5" wide Upflow models).....	BAYFLTR317 []
Cleanable Filter (21" wide Upflow models).....	BAYFLTR321 []
Cleanable Filter (24.5" wide Upflow models).....	BAYFLTR324 []



General Data

TUD2 Product Specifications ^①

MODEL	TUD2A040A9242A	TUD2A060A9362A	TUD2B060A9362A	TUD2B080A9362A
RATINGS^②				
1st Stage Input BTUH	26,000	39,000	39,000	52,000
1st Stage Capacity BTUH (ICS) ^③	20,800	31,200	31,200	41,600
2nd Stage Input BTUH	40,000	60,000	60,000	80,000
2nd Stage Capacity BTUH (ICS) ^③	32,000	47,000	47,000	63,000
AFUE (ICS)	80.0	80.0	80.0	80.1
Temp. Rise (Min.-Max.) °F.	30 - 60	30 - 60	30 - 60	30 - 60
BLOWER DRIVE				
	DIRECT	DIRECT	DIRECT	DIRECT
Dia.-Width (In.)	10 x 6	10 x 6**	10 x 6**	10 x 7
No. Used	1	1	1	1
Speeds (No.)	4	4	4	4
CFM vs. in. w.g.	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE
Motor HP	1/5	1/3	1/3	1/3
R.P.M.	1080	1075	1075	1075
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 - 2	DIRECT - 2	DIRECT - 2	DIRECT - 2
Motor HP PSC [Shaded Pole] - RPM	1/100 - 2544/1374	11/100 / [1/145] - 2543/1727	1/100 / [1/145] - 2543/1727	1/100 / [1/145] - 2543/1727
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60	115/1/60
FLA PSC [Shaded pole]	0.76/0.37	0.70/0.40 / [0.23/0.20]	0.70/0.40 / [0.23/0.20]	0.70/0.40 / [0.23/0.20]
FILTER — Furnished?				
	NO	NO	NO	NO
Type Recommended	HIGH VELOCITY	HIGH VELOCITY	HIGH VELOCITY	HIGH VELOCITY
Filter (No.-Size-Thk.)	1 - 17 X 25 - 1 IN.	1 - 17 X 25 - 1 IN.	1 - 17 X 25 - 1 IN.	1 - 17 X 25 - 1 IN.
VENT — Size (In.)				
	4 ROUND	4 ROUND	4 ROUND	4 ROUND
HEAT EXCHANGER				
Type -Fired	ALUMINIZED STEEL	ALUMINIZED STEEL	ALUMINIZED STEEL	ALUMINIZED STEEL
-Unfired				
Gauge (Fired)	20	20	20	20
ORIFICES — Main				
Nat. Gas Qty. — Drill Size	2 - 45	3 - 45	3 - 45	4 - 45
L.P. Gas Qty. — Drill Size	2 - 56	3 - 56	3 - 56	4 - 56
GAS VALVE				
	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE
DIRECT IGNITION DEVICE				
Type	HOT SURFACE IGNITION	HOT SURFACE IGNITION	HOT SURFACE IGNITION	HOT SURFACE IGNITION
BURNERS — Type				
	MULTIPOINT INSHOT	MULTIPOINT INSHOT	MULTIPOINT INSHOT	MULTIPOINT INSHOT
Number	2	3	3	4
POWER CONN. — V/Ph/Hz^④				
	115/1/60	115/1/60	115/1/60	115/1/60
Ampacity (In Amps)	4.5	8.2	9.0	8.2
Max. Overcurrent Protection (Amps)	15	15	15	15
PIPE CONN. SIZE (IN.)				
	1/2	1/2	1/2	1/2
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 16-1/2 X 30-1/2	41-3/4 X 16-1/2 X 30-1/2	41-3/4 X 19-1/2 X 30-1/2	41-3/4 X 19-1/2 X 30-1/2
Uncrated	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
WEIGHT				
Shipping (Lbs.)/Net (Lbs.)	119/110	127/118	137/127	142/132

**-Built with a 10 X 7 blower housing, identical airflow to 10 X 6 housing in this model.

① Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3.

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.



General Data

TUD2 Product Specifications ^①

MODEL	TUD2B080A9482A	TUD2B100A9362A	TUD2C100A9482A	TUD2C100A9602A
RATINGS^②				
1st Stage Input BTUH	52,000	65,000	65,000	65,000
1st Stage Capacity BTUH (ICS) ^③	41,600	52,000	52,000	52,000
2nd Stage Input BTUH	80,000	100,000	100,000	100,000
2nd Stage Capacity BTUH (ICS) ^③	63,000	79,000	79,000	80,000
AFUE (ICS)	80.0	80.6	81.0	80.0
Temp. Rise (Min.-Max.) °F.	30 - 60	40 - 70	35 - 65	30 - 60
BLOWER DRIVE				
	DIRECT	DIRECT	DIRECT	DIRECT
Dia.-Width (In.)	10 x 8	10 x 7	10 x 8	11 x 10
No. Used	1	1	1	1
Speeds (No.)	4	4	4	4
CFM vs. in. w.g.	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE
Motor HP	1/3	1/3	1/2	1/2
R.P.M.	1075	1075	1075	1075
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 - 2	DIRECT - 2	DIRECT - 2	DIRECT - 2
Motor HP PSC [Shaded Pole] - RPM	1/100 / [1/145] - 2543/1727	1/75 / [1/145] - 2708/1868	1/75 / [1/145] - 2708/1868	1/75 / [1/145] - 2708/1868
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60	115/1/60
FLA PSC [Shaded pole]	0.70/0.40 / [0.23/0.20]	0.87/0.49 / [0.22/0.20]	0.87/0.49 / [0.22/0.20]	0.87/0.49 / [0.22/0.20]
FILTER — Furnished?				
	NO	NO	NO	NO
Type Recommended	HIGH VELOCITY	HIGH VELOCITY	HIGH VELOCITY	HIGH VELOCITY
Filter (No.-Size-Thk.)	1 - 17 X 25 - 1 IN.	1 - 17 X 25 - 1 IN.	1 - 20 X 25 - 1 IN.	1 - 20 X 25 - 1 IN.
VENT — Size (In.)				
	4 ROUND	4 ROUND	4 ROUND	4 ROUND
HEAT EXCHANGER				
Type -Fired	ALUMINIZED STEEL	ALUMINIZED STEEL	ALUMINIZED STEEL	ALUMINIZED STEEL
-Unfired				
Gauge (Fired)	20	20	20	20
ORIFICES — Main				
Nat. Gas Qty. — Drill Size	4 - 45	5 - 45	5 - 45	5 - 45
L.P. Gas Qty. — Drill Size	4 - 56	5 - 56	5 - 56	5 - 56
GAS VALVE				
	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE
DIRECT IGNITION DEVICE				
Type	HOT SURFACE IGNITION	HOT SURFACE IGNITION	HOT SURFACE IGNITION	HOT SURFACE IGNITOR
BURNERS — Type				
	MULTIPOINT INSHOT	MULTIPOINT INSHOT	MULTIPOINT INSHOT	MULTIPOINT INSHOT
Number	4	5	5	5
POWER CONN. — V/Ph/Hz^④				
	115/1/60	115/1/60	115/1/60	115/1/60
Ampacity (In Amps)	8.9	8.4	11.0	12.8
Max. Overcurrent Protection (Amps)	15	15	15	20
PIPE CONN. SIZE (IN.)				
	1/2	1/2	1/2	1/2
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 23 X 30-1/2
Uncrated	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
WEIGHT				
Shipping (Lbs.)/Net (Lbs.)	142/132	151/141	162/151	162/151

① Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3.

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.



General Data

TUD2 Product Specifications ^①

MODEL	TUD2D100A9602A	TUD2C120A9542A	TUD2D120A9602A	TUD2D140A9602A
RATINGS^②				
1st Stage Input BTUH	65,000	78,000	78,000	91,000
1st Stage Capacity BTUH (ICS) ^③	52,000	62,400	62,400	72,800
2nd Stage Input BTUH	100,000	120,000	120,000	140,000
2nd Stage Capacity BTUH (ICS) ^③	80,000	95,000	95,000	111,000
AFUE (ICS)	81.1	80.0	80.0	80.0
Temp. Rise (Min.-Max.) °F.	30 - 60	35 - 65	30 - 60	40 - 70
BLOWER DRIVE				
	DIRECT	DIRECT	DIRECT	DIRECT
Dia.-Width (In.)	10 x 10	11 x 10	11 x 10	11 x 10
No. Used	1	1	1	1
Speeds (No.)	4	4	4	4
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	1/2	3/4
R.P.M.	1075	1075	1075	1075
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 - 2	DIRECT - 2	DIRECT - 2	DIRECT - 2
Motor HP PSC [Shaded Pole] - RPM	1/75 / [1/145] - 2708/1868	1/60 / [1/85] - 3090/2225	1/60 / [1/85] - 3090/2225	1/60 - 3100/2350
Volts/Ph/Hz	115/1/60	115/60/1	115/60/1	115/60/1
FLA PSC [Shaded pole]	0.87/0.49 / [0.22/0.20]	1.14/0.51 / [0.25/0.21]	1.14/0.51 / [0.25/0.21]	1.16/0.54
FILTER — Furnished?				
	NO	NO	NO	NO
Type Recommended	HIGH VELOCITY	HIGH VELOCITY	HIGH VELOCITY	HIGH VELOCITY
Filter (No.-Size-Thk.)	1 - 24 X 25 - 1 IN.	1 - 20 X 25 - 1 IN.	1 - 24 X 25 - 1 IN.	1 - 24 X 25 - 1 IN.
VENT — Size (In.)				
	4 ROUND	4 ROUND	4 ROUND	4 ROUND
HEAT EXCHANGER				
Type -Fired	ALUMINIZED STEEL	ALUMINIZED STEEL	ALUMINIZED STEEL	ALUMINIZED STEEL
-Unfired				
Gauge (Fired)	20	20	20	20
ORIFICES — Main				
Nat. Gas Qty. — Drill Size	5 - 45	6 - 45	6 - 45	7 - 45
L.P. Gas Qty. — Drill Size	5 - 56	6 - 56	6 - 56	7 - 56
GAS VALVE				
	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE
DIRECT IGNITION DEVICE				
Type	HOT SURFACE IGNITION	HOT SURFACE IGNITION	HOT SURFACE IGNITION	HOT SURFACE IGNITION
BURNERS — Type				
	MULTIPOINT INSHOT	MULTIPOINT INSHOT	MULTIPOINT INSHOT	MULTIPOINT INSHOT
Number	5	6	6	7
POWER CONN. — V/Ph/Hz^④				
	115/1/60	115/1/60	115/1/60	115/1/60
Ampacity (In Amps)	12.8	13.2	13.2	13.6
Max. Overcurrent Protection (Amps)	20	20	20	20
PIPE CONN. SIZE (IN.)				
	1/2	1/2	1/2	1/2
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 26-1/2 X 30-1/2	41-3/4 X 23 X 30-1/2	41-3/4 X 26-1/2 X 30-1/2	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.)	175/163	176/165	186/174	193/181

① Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3.

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.



General Data

TDD2 Product Specifications ^①

MODEL	TDD2A040A9242A	TDD2A060A9362A	TDD2B060A9362A
RATINGS^②			
1st Stage Input BTUH	26,000	39,000	39,000
1st Stage Capacity BTUH (ICS) ^③	20,800	31,200	31,200
2nd Stage Input BTUH	40,000	60,000	60,000
2nd Stage Capacity BTUH (ICS) ^③	32,000	47,000	47,000
AFUE (ICS)	80.0	80.0	80.0
Temp. Rise (Min.-Max.) °F.	30 - 60	30 - 60	30 - 60
BLOWER DRIVE			
	DIRECT	DIRECT	DIRECT
Dia.-Width (In.)	10 x 6	10 x 7	10 x 7
No. Used	1	1	1
Speeds (No.)	4	4	4
CFM vs. in. w.g.	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE
Motor HP	1/5	1/3	1/3
R.P.M.	1075	1075	1075
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60
COMBUSTION FAN — TYPE			
	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
Drive - No. Speeds	DIRECT - 2	DIRECT - 2	DIRECT - 2
Motor HP PSC [Shaded Pole] - RPM	1/100 - 2544/1374	1/100 / [1/145] - 2543/1727	1/100 / [1/145] - 2543/1727
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60
FLA PSC [Shaded pole]	0.76/0.37	0.70/0.40 / [0.23/0.20]	0.70/0.40 / [0.23/0.20]
FILTER — Furnished?			
	NO	NO	NO
Type Recommended	HIGH VELOCITY	HIGH VELOCITY	HIGH VELOCITY
Filter (No.-Size-Thk.)	2 - 14 X 20 - 1 IN.	2 - 14 X 20 - 1 IN	2 - 14 X 20 - 1 IN
VENT — Size (In.)			
	4 ROUND	4 ROUND	4 ROUND
HEAT EXCHANGER			
Type -Fired	ALUMINIZED STEEL	ALUMINIZED STEEL	ALUMINIZED STEEL
-Unfired			
Gauge (Fired)	20	20	20
ORIFICES — Main			
Nat. Gas. Qty. — Drill Size	2 - 45	3 - 45	3 - 45
L.P. Gas Qty. — Drill Size	2 - 56	3 - 56	3 - 56
GAS VALVE			
	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE
DIRECT IGNITION DEVICE			
Type	HOT SURFACE IGNITION	HOT SURFACE IGNITION	HOT SURFACE IGNITION
BURNERS — Type			
	MULTIPOINT INSHOT	MULTIPOINT INSHOT	MULTIPOINT INSHOT
Number	2	3	3
POWER CONN. — V/Ph/Hz^④			
	115/1/60	115/1/60	115/1/60
Ampacity (In Amps)	4.5	8.2	8.2
Max. Overcurrent Protection (Amps)	15	15	15
PIPE CONN. SIZE (IN.)			
	1/2	1/2	1/2
DUCT CONN.			
	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
Crated (In.)	41 X 16-1/2 X 30-1/2	41 X 16-1/2 X 30-1/2	41 X 19-1/2 X 30-1/2
Uncrated	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
WEIGHT			
Shipping (Lbs.)/Net (Lbs.)	119 / 109	129 / 119	129 / 119

① Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3.

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.



General Data

TDD2 Product Specifications ^①

MODEL	TDD2B080A9362A	TDD2B100A9482A	TDD2C100A9482A
RATINGS^②			
1st Stage Input BTUH	52,000	65,000	65,000
1st Stage Capacity BTUH (ICS) ^③	41,600	52,000	52,000
2nd Stage Input BTUH	80,000	100,000	100,000
2nd Stage Capacity BTUH (ICS) ^③	64,000	79,000	79,000
AFUE (ICS)	80.0	80.0	80.0
Temp. Rise (Min.-Max.) °F.	35 - 65	40 - 70	35 - 65
BLOWER DRIVE			
Dia.-Width (In.)	DIRECT 10 x 7	DIRECT 10 x 8	DIRECT 10 x 8
No. Used	1	1	1
Speeds (No.)	4	4	4
CFM vs. in. w.g.	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE
Motor HP	1/3	1/3	1/2
R.P.M.	1075	1075	1075
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60
COMBUSTION FAN — TYPE			
Drive - No. Speeds	CENTRIFUGAL DIRECT - 2	CENTRIFUGAL DIRECT - 2	CENTRIFUGAL DIRECT - 2
Motor HP PSC [Shaded Pole] - RPM	1/100 / [1/145] - 2543/1727	1/75 / [1/145] - 2708/1868	1/75 / [1/145] - 2708/1868
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60
FLA PSC [Shaded pole]	0.70/0.40 / [0.23/0.20]	0.87/0.49 / [0.22/0.20]	0.87/0.49 / [0.22/0.20]
FILTER — Furnished?			
Type Recommended	NO	NO	NO
Filter (No.-Size-Thk.)	HIGH VELOCITY 2 - 14 X 20 - 1 IN	HIGH VELOCITY 2 - 16 X 20 - 1 IN	HIGH VELOCITY 2 - 16 X 20 - 1 IN
VENT — Size (In.)			
	4 ROUND	4 ROUND	4 ROUND
HEAT EXCHANGER			
Type -Fired	ALUMINIZED STEEL	ALUMINIZED STEEL	ALUMINIZED STEEL
-Unfired			
Gauge (Fired)	20	20	20
ORIFICES — Main			
Nat. Gas Qty. — Drill Size	4 - 45	5 - 45	5 - 45
L.P. Gas Qty. — Drill Size	4 - 56	5 - 56	5 - 56
GAS VALVE			
	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE
DIRECT IGNITION DEVICE			
Type	HOT SURFACE IGNITION	HOT SURFACE IGNITION	HOT SURFACE IGNITION
BURNERS — Type			
Number	MULTIPOINT INSHOT 4	MULTIPOINT INSHOT 4	MULTIPOINT INSHOT 5
POWER CONN. — V/Ph/Hz^④			
Ampecity (In Amps)	115/1/60 8.2	115/1/60 9.2	115/1/60 11.0
Max. Overcurrent Protection (Amps)	15	15	15
PIPE CONN. SIZE (IN.)			
	1/2	1/2	1/2
DUCT CONN.			
	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
DIMENSIONS			
Crated (In.)	H X W X D 41-3/4 X 19-1/2 X 30-1/2	H X W X D 41-3/4 X 19-1/2 X 30-1/2	H X W X D 41-3/4 X 23 X 30-1/2
Uncrated	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
WEIGHT			
Shipping (Lbs.)/Net (Lbs.)	146 / 135	156 / 145	165 / 154

① Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3.

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.



General Data

TDD2 Product Specifications ^①

MODEL	TDD2C100A9602A	TDD2D120A9602A	TDD2D140A9602A
RATINGS^②			
1st Stage Input BTUH	65,000	78,000	91,000
1st Stage Capacity BTUH (ICS) ^③	52,000	62,400	72,800
2nd Stage Input BTUH	100,000	120,000	140,000
2nd Stage Capacity BTUH (ICS) ^③	79,000	95,000	112,000
AFUE (ICS)	80.0	80.0	80.0
Temp. Rise (Min.-Max.) °F.	30 - 60	35 - 65	45 - 75
BLOWER DRIVE			
Drive - Width (In.)	DIRECT 11 x 10	DIRECT 11 x 10	DIRECT 11 x 10
No. Used	1	1	1
Speeds (No.)	4	4	4
CFM vs. in. w.g.	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE	SEE FAN PERF. TABLE
Motor HP	1/2	1/2	3/4
R.P.M.	1075	1075	1075
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60
COMBUSTION FAN — TYPE			
Drive - No. Speeds	CENTRIFUGAL DIRECT - 2	CENTRIFUGAL DIRECT - 2	CENTRIFUGAL DIRECT - 2
Motor HP PSC [Shaded Pole] - RPM	1/75 / [1/145] - 2708/1868	1/60 / [1/85] - 3090/2225	1/60 - 3100/2350
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60
FLA PSC [Shaded pole]	0.87/0.49 / [0.22/0.20]	1.14/0.51 / [0.25/0.21]	1.16/0.54
FILTER — Furnished?			
Type Recommended	NO	NO	NO
Filter (No.-Size-Thk.)	HIGH VELOCITY 2 - 16 X 20 - 1 IN	HIGH VELOCITY 2 - 16 X 20 - 1 IN	HIGH VELOCITY 2 - 16 X 20 - 1 IN
VENT — Size (In.)			
	4 ROUND	4 ROUND	4 ROUND
HEAT EXCHANGER			
Type - Fired	ALUMINIZED STEEL	ALUMINIZED STEEL	ALUMINIZED STEEL
-Unfired			
Gauge (Fired)	20	20	20
ORIFICES — Main			
Nat. Gas. Qty. — Drill Size	5 - 45	6 - 45	7 - 45
L.P. Gas Qty. — Drill Size	5 - 56	6 - 56	7 - 56
GAS VALVE			
	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE
DIRECT IGNITION DEVICE			
Type	HOT SURFACE IGNITOR	HOT SURFACE IGNITION	HOT SURFACE IGNITION
BURNERS — Type			
Number	MULTIPOINT INSHOT 5	MULTIPOINT INSHOT 6	MULTIPOINT INSHOT 7
POWER CONN. — V/Ph/Hz^④			
Ampacity (In Amps)	115/1/60 12.8	115/1/60 13.2	115/1/60 13.6
Max. Overcurrent Protection (Amps)	20	20	20
PIPE CONN. SIZE (IN.)			
	1/2	1/2	1/2
DUCT CONN.			
	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
DIMENSIONS			
Crated (In.)	H X W X D 41-3/4 X 23 X 30-1/2	H X W X D 41-3/4 X 26-1/2 X 30-1/2	H X W X D 41-3/4 X 26-1/2 X 30-1/2
Uncrated	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
WEIGHT			
Shipping (Lbs.)/Net (Lbs.)	167 / 155	189/176	197 / 184

① Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3.

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

TUD2

FURNACE AIRFLOW (CFM) VS. EXTERNAL STATIC PRESSURE (IN. W.C.)										
MODEL		0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
*UD2A040A9242A	4-HIGH - Black	1018	1004	982	950	910	860	802	763	660
	3-MED.-HIGH - Blue	847	832	809	779	742	697	644	585	517
	2-MED.-LOW - Yellow	716	701	678	648	610	585	512	452	384
	1-LOW - Red	617	599	575	544	507	463	413	357	294
*UD2A060A9362A	4-HIGH - Black	1426	1389	1345	1298	1236	1171	1099	1020	934
	3-MED.-HIGH - Blue	1243	1225	1197	1160	1113	1057	991	916	831
	2-MED.-LOW - Yellow	1042	1039	1027	1005	973	931	879	817	745
	1-LOW - Red	900	903	895	877	848	809	760	700	629
*UD2B060A9362A	4-HIGH - Black	1588	1554	1517	1468	1412	1351	1278	1200	1102
	3-MED.-HIGH - Blue	1329	1318	1299	1268	1228	1186	1135	1072	988
	2-MED.-LOW - Yellow	1090	1090	1093	1076	1052	1028	978	917	836
	1-LOW - Red	894	901	904	894	881	860	828	777	638
*UD2B080A9362A	4-HIGH - Black	1393	1384	1364	1335	1296	1247	1189	1120	1042
	3-MED.-HIGH - Blue	1210	1209	1198	1177	1147	1107	1058	999	930
	2-MED.-LOW - Yellow	1046	1052	1047	1033	1008	973	928	873	808
	1-LOW - Red	900	903	895	888	869	842	808	766	717
*UD2B080A9482A	4-HIGH - Black	1839	1821	1796	1756	1710	1641	1573	1480	1392
	3-MED.-HIGH - Blue	1323	1325	1329	1319	1308	1275	1246	1201	1165
	2-MED.-LOW - Yellow	1092	1090	1091	1083	1076	1059	1040	1005	970
	1-LOW - Red	788	783	780	768	758	737	719	674	630
*UD2B100A9362A	4-HIGH - Black	1476	1464	1441	1408	1363	1307	1241	1163	1074
	3-MED.-HIGH - Blue	1249	1257	1252	1234	1203	1158	1101	1030	946
	2-MED.-LOW - Yellow	1020	1046	1058	1050	1028	990	936	866	780
	1-LOW - Red	873	887	890	883	864	834	794	742	680
*UD2C100A9482A	4-HIGH - Black	1880	1846	1799	1740	1669	1595	1489	1381	1260
	3-MED.-HIGH - Blue	1662	1635	1598	1551	1493	1424	1345	1256	1157
	2-MED.-LOW - Yellow	1428	1421	1402	1370	1326	1269	1199	1117	1022
	1-LOW - Red	1208	1215	1210	1193	1164	1124	1073	1009	935
*UD2C100A9602A	4-HIGH - Black	2181	2143	2104	2053	2001	1929	1856	1766	1676
	3-MED.-HIGH - Blue	1908	1888	1868	1834	1800	1745	1690	1631	1572
	2-MED.-LOW - Yellow	1621	1609	1597	1582	1567	1533	1498	1438	1377
	1-LOW - Red	1443	1419	1395	1381	1367	1335	1302	1256	1209
*UD2D120A9542A	4-HIGH - Black	2162	2130	2097	2067	2037	1976	1914	1833	1752
	3-MED.-HIGH - Blue	1889	1881	1873	1839	1805	1776	1746	1670	1593
	2-MED.-LOW - Yellow	1654	1643	1631	1619	1606	1572	1538	1483	1428
	1-LOW - Red	1427	1421	1414	1400	1386	1357	1327	1285	1243
*UD2C100A9602A	4-HIGH - Black	2250	2185	2120	2046	1972	1868	1762	1640	1517
	3-MED.-HIGH - Blue	2085	2039	1992	1918	1843	1760	1677	1567	1456
	2-MED.-LOW - Yellow	1860	1842	1824	1773	1722	1651	1579	1465	1350
	1-LOW - Red	1638	1630	1621	1591	1561	1497	1433	1321	1208
*UD2D120A9602A	4-HIGH - Black	2135	2101	2066	2036	2005	1923	1840	1750	1659
	3-MED.-HIGH - Blue	1906	1881	1856	1817	1777	1724	1671	1602	1533
	2-MED.-LOW - Yellow	1646	1632	1617	1596	1575	1535	1494	1427	1360
	1-LOW - Red	1423	1415	1407	1391	1375	1338	1300	1246	1192
*UD2D140A9602A	4-HIGH - Black	2462	2407	2351	2284	2216	2143	2069	1989	1908
	3-MED.-HIGH - Blue	2128	2112	2096	2054	2011	1949	1887	1797	1706
	2-MED.-LOW - Yellow	1755	1746	1736	1719	1702	1656	1609	1564	1518
	1-LOW - Red	1450	1446	1442	1427	1411	1383	1354	1298	1241

*- First letter may be "A" or "T"



Performance Data

TUD2

CFM VS. TEMPERATURE RISE

MODEL	CFM (CUBIC FEET PER MINUTE)																			
	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
*UD2A040A9242A	59	49	42	37	33	30														
*UD2A060A9362A				56	49	44	40	37	34	32										
*UD2B060A9362A				56	49	44	40	37	34	32										
*UD2B080A9362A						59	54	49	46	42										
*UD2B080A9482A						58	52	49	46	42	40	37	35	33						
*UD2B100A9362A							67	62	57	53	49									
*UD2C100A9482A							67	62	57	53	49	46	44	41	39	37				
*UD2C100A9602A								62	57	53	49	46	44	41	39	37	35	34	32	31
*UD2D100A9602A								62	57	53	49	46	44	41	39	37	35	34	32	31
*UD2D120A9542A										63	59	56	52	49	47	44	42	40		
*UD2D120A9602A											59	56	52	49	47	44	42	40		
*UD2D140A9602A											69	65	61	58	55	52	49	47	45	

*- May be "A" or "T"

TDD2

CFM VS. TEMPERATURE RISE

MODEL	CFM (CUBIC FEET PER MINUTE)																			
	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
*DD2A040A9242A	59	49	42	37	33	30														
*DD2A060A9362A				56	49	44	40	37	34	32										
*DD2B060A9362A				56	49	44	40	37	34	32										
*DD2B080A9362A						59	54	49	46	42										
*DD2B100A9482A								62	57	53	49	46	44	41						
*DD2C100A9482A								62	57	53	49	46	44	41	39	37				
*DD2C100A9602A								62	57	53	49	46	44	41	39	37	35	34	32	31
*DD2D120A9602A											59	56	52	49	47	44	42	40		
*DD2D140A9602A											69	65	61	58	55	52	49	47	45	



Performance Data

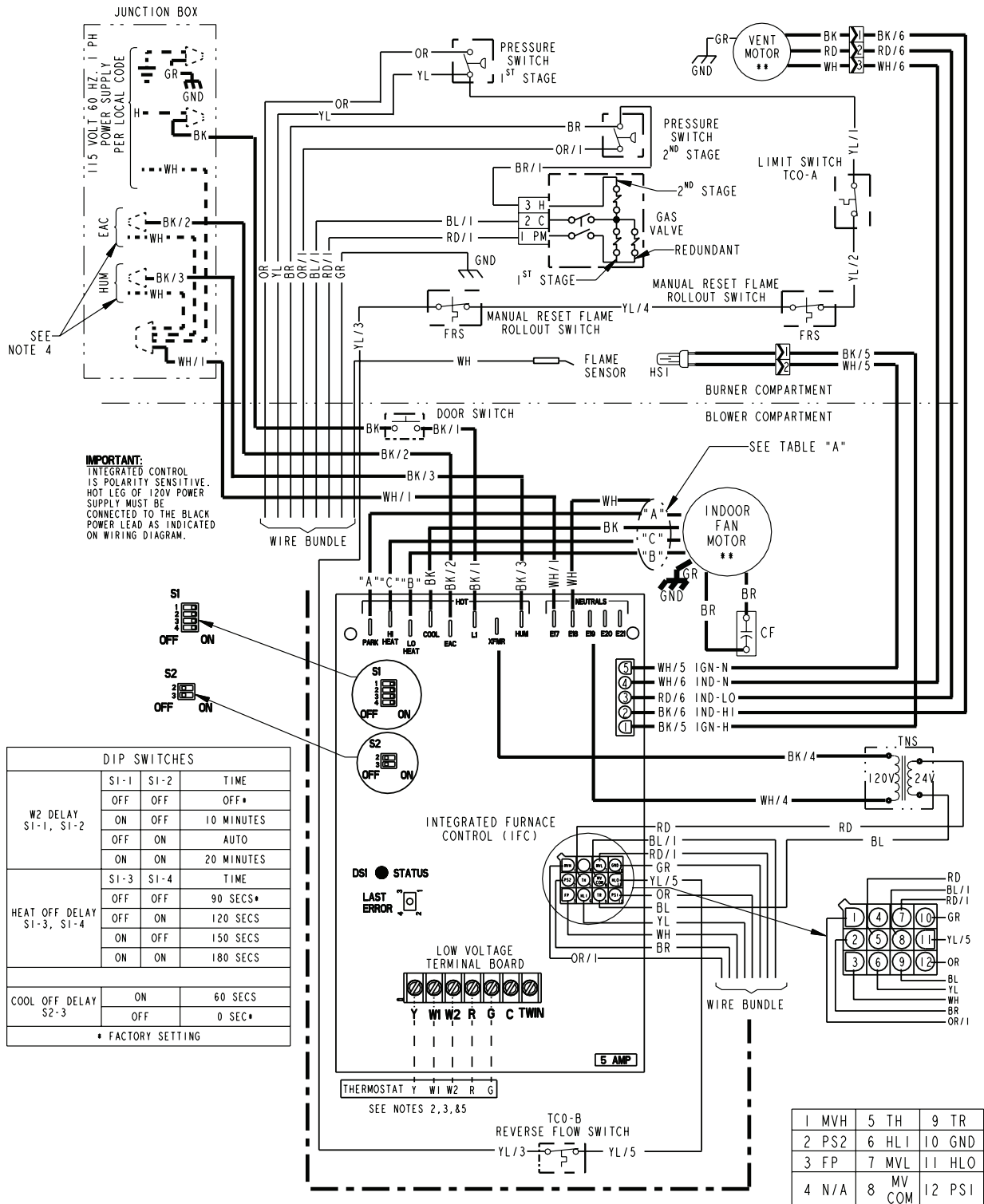
TDD2

FURNACE AIRFLOW (CFM) VS. EXTERNAL STATIC PRESSURE (IN. W.C.)										
MODEL	SPEED TAP	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
*DD2A040A9242A	4-HIGH - Black	1070	1033	1000	960	920	860	810	740	-
	3-MED.-HIGH - Blue	870	850	823	790	753	813	667	613	490
	2-MED.-LOW - Yellow	740	720	690	663	627	588	547	483	-
	1-LOW - Red	633	600	577	543	507	463	420	360	-
*DD2A060A9362A	4-HIGH - Black	1480	1429	1376	1318	1282	1188	1112	1029	959
	3-MED.-HIGH - Blue	1302	1276	1229	1188	1141	1088	1024	953	882
	2-MED.-LOW - Yellow	1115	1100	1070	1035	1000	965	918	859	790
	1-LOW - Red	956	947	918	888	859	824	788	741	682
*DD2B060A9362A	4-HIGH - Black	1644	1593	1525	1473	1408	1316	1269	1178	1056
	3-MED.-HIGH - Blue	1467	1431	1383	1332	1277	1209	1137	1064	970
	2-MED.-LOW - Yellow	1252	1216	1194	1169	1122	1079	1011	933	840
	1-LOW - Red	1025	1022	1003	986	955	910	862	793	672
*DD2B080A9362A	4-HIGH - Black	1523	1496	1463	1420	1369	1310	1243	1172	1100
	3-MED.-HIGH - Blue	1317	1307	1261	1260	1223	1175	1122	1060	1000
	2-MED.-LOW - Yellow	1123	1119	1106	1082	1056	1016	976	930	880
	1-LOW - Red	942	943	931	920	898	818	833	795	760
*DD2B100A9482A	4-HIGH - Black	1767	1731	1669	1615	1546	1469	1392	1300	1146
	3-MED.-HIGH - Blue	1382	1354	1323	1292	1254	1207	1177	1108	1038
	2-MED.-LOW - Yellow	1130	1138	1115	1085	1054	1015	977	938	877
	1-LOW - Red	840	831	815	792	762	731	700	654	625
*DD2C100A9482A	4-HIGH - Black	1965	1915	1865	1805	1740	1670	1587	1500	1370
	3-MED.-HIGH - Blue	1645	1627	1605	1575	1535	1482	1421	1330	1220
	2-MED.-LOW - Yellow	1407	1398	1387	1375	1347	1318	1275	1190	1095
	1-LOW - Red	1202	1208	1205	1195	1166	1140	1105	1045	970
*DD2C100A9602A	4-HIGH - Black	2165	2113	2060	1995	1929	1842	1755	1674	1593
	3-MED.-HIGH - Blue	1962	1927	1891	1839	1786	1724	1662	1581	1500
	2-MED.-LOW - Yellow	1705	1688	1671	1671	1600	1547	1492	1435	1377
	1-LOW - Red	1492	1467	1442	1442	1385	1346	1307	1243	1179
*DD2D120A9602A	4-HIGH - Black	2241	2202	2163	2106	2049	1979	1908	1804	1700
	3-MED.-HIGH - Blue	1981	1962	1942	1904	1866	1805	1743	1680	1617
	2-MED.-LOW - Yellow	1721	1705	1688	1671	1653	1611	1569	1515	1461
	1-LOW - Red	1476	1466	1456	1440	1423	1392	1361	1302	1243
*DD2D140A9602A	4-HIGH - Black	2377	2321	2265	2199	2133	2050	1967	1877	1786
	3-MED.-HIGH - Blue	2115	2081	2046	1992	1938	1872	1805	1727	1649
	2-MED.-LOW - Yellow	1806	1793	1779	1738	1696	1655	1614	1556	1497
	1-LOW - Red	1527	1507	1486	1473	1459	1422	1384	1329	1273

* - First letter may be "A" or "T"

Electrical Data

TUD2 Wiring Diagram For Gas Furnaces



(continued on next page)

From Dwg. D344429P01

Electrical Data

TUD2 Schematic Diagram For Gas Furnaces

TABLE "A"
SPEED TAPS FOR I.D. FAN MOTOR

MODEL	PARK "A"	LO HEAT "B"	HI HEAT "C"	MODEL	PARK "A"	LO HEAT "B"	HI HEAT "C"
*UD2A040A9242^^	BL	RD	YL	*UD040R924^^	BL	RD	YL
*UD2A060A9362^^	BL	RD	YL	*UD060R936^^	BL	RD	YL
*UD2B060A9362^^	BL	RD	YL	*UD060R937^^	BL	RD	YL
*UD2B080A9362^^	YL	RD	BL	*UD080R936^^	YL	RD	BL
*UD2B080A9482^^	YL	RD	BL	*UD080R948^^	YL	RD	BL
*UD2B100A9362^^	YL	RD	BL	*UD100R936^^	YL	RD	BL
*UD2C100A9482^^	YL	RD	BL	*UD100R948^^	YL	RD	BL
*UD2C100A9602^^	YL	RD	BL	*UD100R960^^	YL	RD	BL
*UD2D100A9602^^	BL	RD	YL	*UD100R961^^	BL	RD	YL
*UD2C120A9542^^	YL	RD	BL	*UD120R954^^	YL	RD	BL
*UD2D120A9602^^	YL	RD	BL	*UD120R960^^	YL	RD	BL
*UD2D140A9602^^	YL	RD	BL	*UD140R960^^	YL	RD	BL

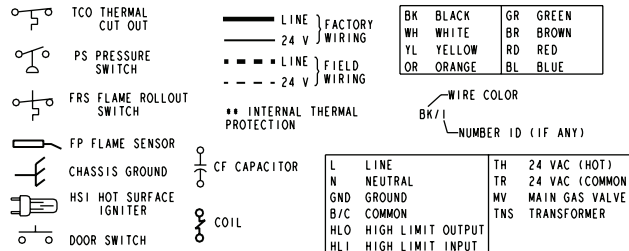
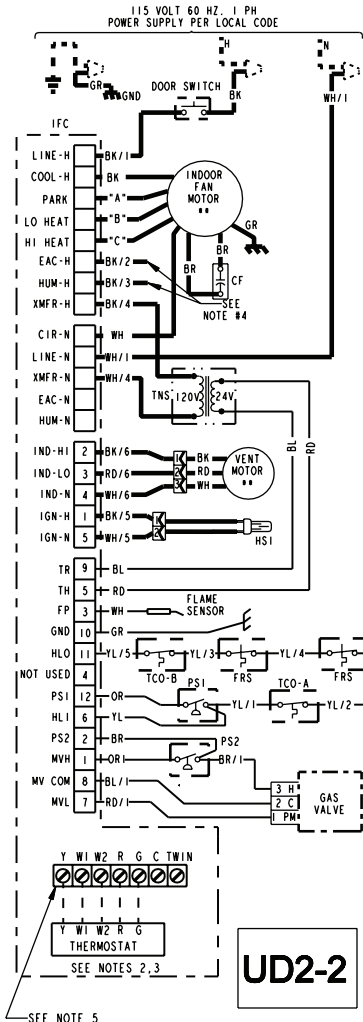
* PREFIX MAY BE "A" OR "T"
^^ SUFFIX MAY BE A THROUGH Z
RD = LOW
YL = MED. LOW
BL = MED. HIGH
BK = HIGH

WARNING

HAZARDOUS VOLTAGE:
DISCONNECT ALL ELECTRICAL POWER INCLUDING REMOTE DISCONNECTS BEFORE SERVICING.
FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.

CAUTION

USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.



NOTES:

- IF ANY OF THE ORIGINAL WIRING AS SUPPLIED WITH THIS FURNACE MUST BE REPLACED, IT MUST BE WITH WIRE HAVING A TEMPERATURE RATING OF AT LEAST 105 C.
- THERMOSTAT HEAT ANTICIPATOR SETTING: FIRST STAGE .38 AMPS, SECOND STAGE .13 AMPS. IF SETTING IS NOT FIXED ON THERMOSTAT, FOR SINGLE STAGE HEATING THERMOSTAT SET AT .51 AMPS.
- FOR PROPER OPERATION OF COOLING SPEED, "Y" TERMINAL MUST BE CONNECTED TO THE ROOM THERMOSTAT.
- THESE LEADS PROVIDE 120V POWER CONNECTIONS FOR ELECTRONIC AIR CLEANER (EAC) AND HUMIDIFIER (HUM), MAX. LOAD: 1.0 AMPS EACH.
- WHEN TWINNING TWO FURNACES, BOTH UNITS MUST BE CONNECTED TO THE SAME 115 VAC PHASE CONNECT THE TWO UNITS 'TWIN' TERMINALS WITH 14 TO 22AWG. WIRE.

INTEGRATED FURNACE CONTROL

REPLACE WITH PART CNT06424 OR EQUIVALENT
ELECTRICAL RAT/AG
INPUT: 25 VAC, 60 HZ.
XMFR SEC. CURRENT: 800 MA. + MV
MV 1ST STAGE OUTPUT: 1.5 A @ 24 VAC
MV 2ND STAGE OUTPUT: 0.5 A @ 24 VAC
IGN. OUTPUT: 2A @ 132VAC
IND OUTPUT: 2.2 FLA, 3.5 LRA @ 120 VAC
CIRC. BLOWER OUTPUT:
14.5 FLA, 25.0 LRA @ 120 VAC

TIMINGS
PREPURGE: 0 SEC; INTERPURGE:60 SEC.
POST PURGE: 5 SECONDS
IGNITOR WARMUP: 20 SECONDS
IAP: 2 SECONDS; TFI: 5 SECONDS
RETRIES: 2; RECYCLES: 10
HEAT ON DELAY: 45 SECONDS
COOL ON DELAY: 5 SECONDS
AUTO RESTART: 60 MINUTES
AUTO RESET PURGE PERIOD: 15 SECONDS

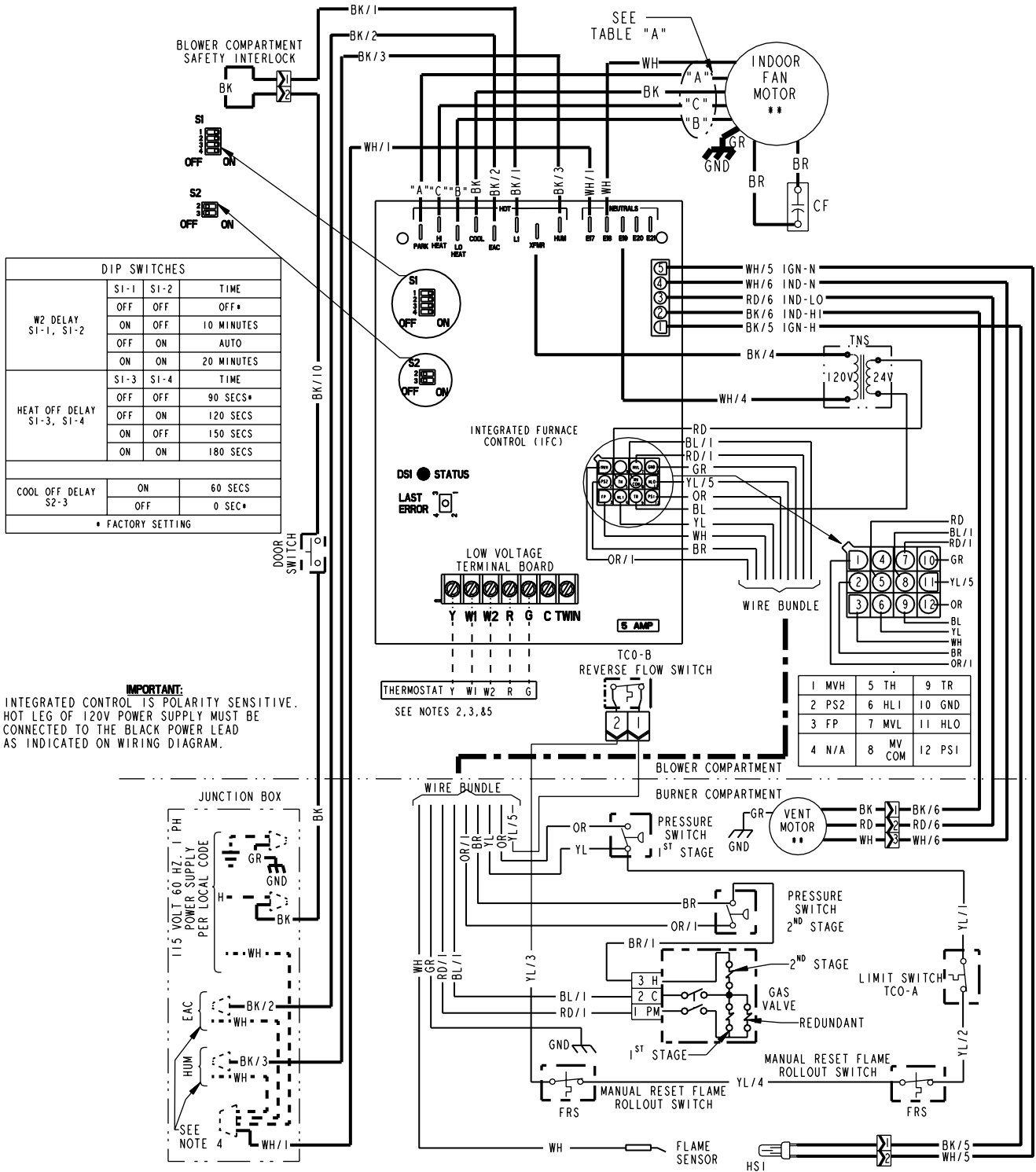
DIAGNOSTIC CODES

RED LED FLASH:
1 FLASH : FLAME SENSED WHEN NO FLAME SHOULD BE PRESENT
2 FLASHES: PRESSURE SWITCH STUCK CLOSED /INDUCER ERROR
3 FLASHES: 1ST-STAGE PRESSURE SWITCH STUCK OPEN/ INDUCER ERROR
4 FLASHES: OPEN LIMIT SWITCH
5 FLASHES: OPEN ROLLOUT/OPEN FUSE DETECT
6 FLASHES: PRESSURE SWITCH CYCLE LOCKOUT
7 FLASHES: EXTERNAL LOCKOUT (RETRIES)
8 FLASHES: EXTERNAL LOCKOUT (RECYCLES)
9 FLASHES: GROUNDING OR REVERSED POLARITY
10 FLASHES: GAS FLOW WITH NO CALL FOR HEAT
11 FLASHES: LIMIT SWITCH OPEN-BLOWER FAILURE
12 FLASHES:IGNITOR FAILURE
SOLID : INTERNAL GV ERROR; MICRO, AND FREQUENCY CHECK
RAPID: TWINNING ERROR, INCORRECT 24V PHASING
3 DOUBLE: 2ND STAGE PRESSURE SWITCH OPEN OR INDUCER ERROR
AMBER LED FLASH:
1 FLASH : 1ST STAGE CALL FOR HEAT
2 FLASHES: 2ND STAGE CALL FOR HEAT
3 FLASHES: W2 CALL PRESENT WITH NO W1
4 FLASHES: Y PRESENT WITH NO G CALL
RAPID : LOW FLAME SENSE CURRENT
GREEN LED FLASH:
1 FLASH: STANDBY MODE OF CALL FOR COOLING

From Dwg. D344930P01

Electrical Data

TDD2 Wiring Diagram For Gas Furnaces



DIP SWITCHES			
W2 DELAY S1-1, S1-2	S1-1	S1-2	TIME
	OFF	OFF	OFF*
	ON	OFF	10 MINUTES
	OFF	ON	AUTO
HEAT OFF DELAY S1-3, S1-4	S1-3	S1-4	TIME
	OFF	OFF	90 SECS*
	OFF	ON	120 SECS
	ON	OFF	150 SECS
COOL OFF DELAY S2-3	ON		60 SECS
	OFF		0 SEC*

* FACTORY SETTING

IMPORTANT:
INTEGRATED CONTROL IS POLARITY SENSITIVE. HOT LEG OF 120V POWER SUPPLY MUST BE CONNECTED TO THE BLACK POWER LEAD AS INDICATED ON WIRING DIAGRAM.

(continued on next page)

From Dwg. D344430P02



Electrical Data

TDD2 Schematic Diagram For Gas Furnaces

TABLE "A"			
SPEED TAPS FOR I.D. FAN MOTOR			
MODEL	PARK "A"	LO HEAT "B"	HI HEAT "C"
*DD2A040A9242^^	BL	RD	YL
*DD2A060A9362^^	BL	RD	YL
*DD2B060A9362^^	BL	RD	YL
*DD2B080A9362^^	YL	RD	BL
*DD2B100A9482^^	YL	RD	BL
*DD2C100A9482^^	YL	RD	BL
*DD2C100A9602^^	BL	RD	YL
*DD2D120A9602^^	YL	RD	BL
*DD2D140A9602^^	YL	RD	BL

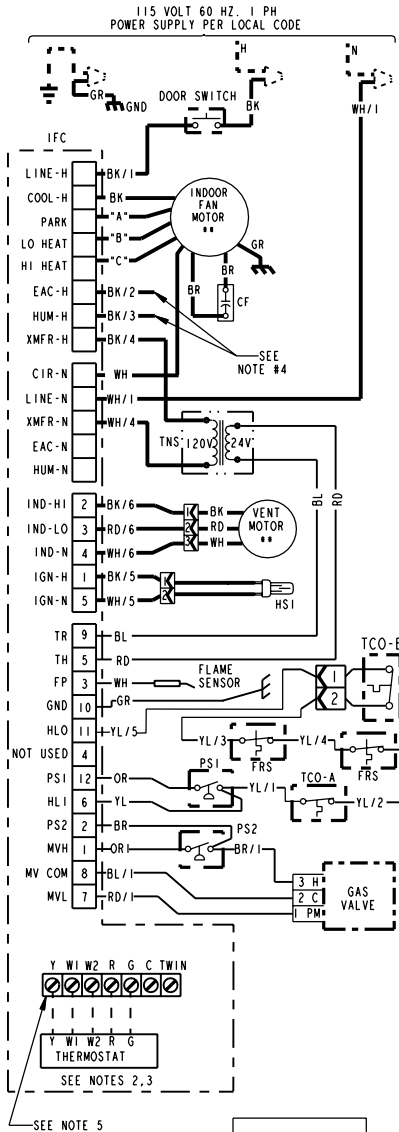
^^ PREFIX MAY BE "A" OR "T"
 ^^ SUFFIX MAY BE A THROUGH Z
 RD = LOW BL=MED. HIGH
 YL = MED. LOW BK=HIGH

WARNING

HAZARDOUS VOLTAGE:
DISCONNECT ALL ELECTRICAL POWER INCLUDING REMOTE DISCONNECTS BEFORE SERVICING.
FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.

CAUTION

USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.



WIRE COLOR

BK BLACK	GR GREEN
WH WHITE	BR BROWN
YL YELLOW	RD RED
OR ORANGE	BL BLUE

WIRE COLOR

BK/1 NUMBER ID (IF ANY)

LEGEND

- TCO THERMAL CUT OUT
- PS PRESSURE SWITCH
- FRS FLAME ROLLOUT SWITCH
- FP FLAME SENSOR
- CHASSIS GROUND
- HSI HOT SURFACE IGNITER
- DOOR SWITCH
- LINE 24 V WIRING
- LINE FIELD WIRING
- INTERNAL THERMAL PROTECTION
- CF CAPACITOR
- COIL

TERMINAL BLOCK

L LINE	TH 24 VAC (HOT)
N NEUTRAL	TR 24 VAC (COMMON)
GND/GROUND	MV MAIN GAS VALVE
B/C COMMON	TNS TRANSFORMER
HLO/HIGH LIMIT OUTPUT	
HLI/HIGH LIMIT INPUT	

- NOTES:**
- IF ANY OF THE ORIGINAL WIRING AS SUPPLIED WITH THIS FURNACE MUST BE REPLACED, IT MUST BE WITH WIRE HAVING A TEMPERATURE RATING OF AT LEAST 105 C.
 - THERMOSTAT HEAT ANTICIPATOR SETTING: FIRST STAGE 38 AMPS, SECOND STAGE 13 AMPS. IF SETTING IS NOT FIXED ON THERMOSTAT, FOR SINGLE STAGE HEATING THERMOSTAT SET AT 51 AMPS.
 - FOR PROPER OPERATION OF COOLING SPEED, "Y" TERMINAL MUST BE CONNECTED TO THE ROOM THERMOSTAT.
 - THESE LEADS PROVIDE 120V POWER CONNECTIONS FOR ELECTRONIC AIR CLEANER (EAC) AND HUMIDIFIER (HUM). MAX. LOAD: 1.0 AMPS EACH.
 - WHEN TWINNING TWO FURNACES, BOTH UNITS MUST BE CONNECTED TO THE SAME 115 VAC PHASE CONNECT THE TWO UNITS 'TWIN' TERMINALS WITH 14 TO 22AWG. WIRE.

INTEGRATED FURNACE CONTROL

REPLACE WITH PART CNT06424 OR EQUIVALENT

ELECTRICAL RATING

INPUT: 25 VAC, 60 HZ.
 XFMR SEC. CURRENT: 800 MA, 4 MV
 MV 1ST STAGE OUTPUT: 1.5 A @ 24 VAC
 MV 2ND STAGE OUTPUT: 0.5 A @ 24 VAC
 IGN. OUTPUT: 2A @ 132VAC
 IND OUTPUT: 2.2 FLA, 3.5 LRA @ 120 VAC
 CIR. BLOWER OUTPUT:
 14.5 FLA, 25.0 LRA @ 120 VAC

TIMINGS

PREPURGE: 0 SEC; INTERPURGE: 60 SEC.
 POST PURGE: 5 SECONDS
 IGNITOR WARMUP: 20 SECONDS
 IAP: 2 SECONDS; IFI: 5 SECONDS
 RETRIES: 2; RECYCLES: 10
 HEAT ON DELAY: 45 SECONDS
 COOL ON DELAY: 5 SECONDS
 AUTO RESTART: 60 MINUTES
 AUTO RESET PURGE PERIOD: 15 SECONDS

DIAGNOSTIC CODES

- RED LED FLASH:**
- 1 FLASH : FLAME SENSE WHEN NO FLAME SHOULD BE PRESENT
 - 2 FLASHES: PRESSURE SWITCH STUCK CLOSED / INDUCER ERROR
 - 3 FLASHES: 1ST-STAGE PRESSURE SWITCH STUCK OPEN/ INDUCER ERROR
 - 4 FLASHES: OPEN LIMIT SWITCH
 - 5 FLASHES: OPEN ROLLOUT/OPEN FUSE DETECT
 - 6 FLASHES: PRESSURE SWITCH CYCLE LOCKOUT
 - 7 FLASHES: EXTERNAL LOCKOUT (RETRIES)
 - 8 FLASHES: EXTERNAL LOCKOUT (RECYCLES)
 - 9 FLASHES: GROUNDING OR REVERSED POLARITY
 - 10 FLASHES: GAS FLOW WITH NO CALL FOR HEAT
 - 11 FLASHES: LIMIT SWITCH OPEN-BLOWER FAILURE
 - 12 FLASHES: IGNITOR FAILURE
- SOLID :** INTERNAL GV ERROR, MICRO, AND FREQUENCY CHECK
- RAPID: TWINNING ERROR, INCORRECT 24V PHASING**
- 3 DOUBLE: 2ND STAGE PRESSURE SWITCH OPEN OR INDUCER ERROR**
- AMBER LED FLASH:**
- 1 FLASH : 1ST STAGE CALL FOR HEAT
 - 2 FLASHES: 2ND STAGE CALL FOR HEAT
 - 3 FLASHES: W2 CALL PRESENT WITH NO W1
 - 4 FLASHES: Y PRESENT WITH NO G CALL
 - RAPID : LOW FLAME SENSE CURRENT
- GREEN LED FLASH:**
- 1 FLASH: STANDBY MODE OF CALL FOR COOLING

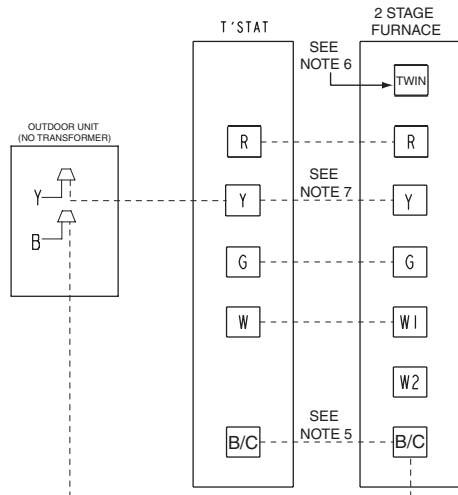
D344430P02
REV00

DD2-2

From Dwg. D344430P02

Field Wiring

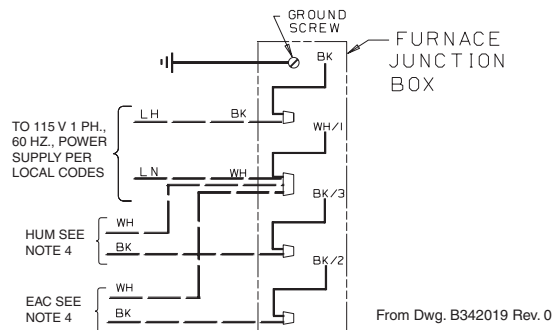
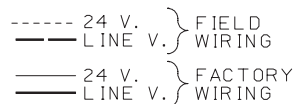
**FIELD WIRING DIAGRAM FOR 2 STAGE FURNACE
2 STAGE HEATING, 1 STAGE COOLING
USING A 1 STAGE HEATING, 1 STAGE COOLING THERMOSTAT
(OUTDOOR SECTION WITHOUT TRANSFORMER)**



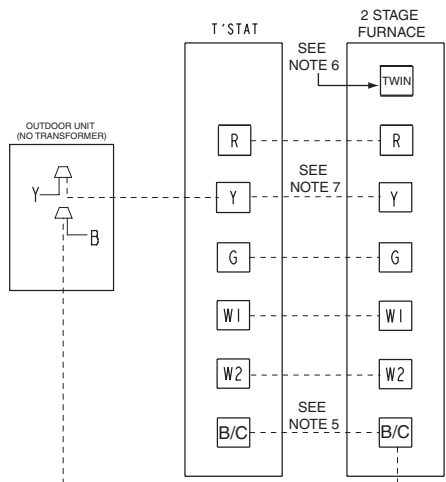
NOTES:

1. BE SURE POWER AGREES WITH EQUIPMENT NAMPLATE(S).
2. LOW VOLTAGE (24V. WIRING) TO BE NO. 18 A.W.G. MIN..
3. GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
4. THESE LEADS PROVIDE 115 V. POWER FOR CONNECTION OF ELECTRONIC AIR CLEANER AND HUMIDIFIER MAX. LOAD 1.0 AMPS EACH.
5. THIS CONNECTION IS ONLY USED FOR THERMOSTATS REQUIRING CONNECTION TO THE 24 V. POWER SUPPLY. (COMMON)
6. SEE TWINNING CONNECTION DIAGRAMS FOR PROPER CONNECTIONS WHEN USING THIS FEATURE.
7. THE "Y" TERMINAL FROM THE THERMOSTAT MUST BE WIRED TO THE "Y" TERMINAL OF THE FURNACE CONTROL FOR PROPER BLOWER OPERATION DURING COOLING.

INTER-COMPONENT WIRING



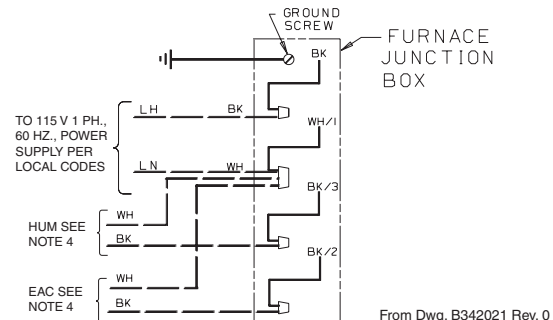
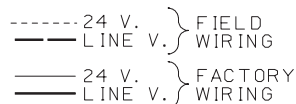
**FIELD WIRING DIAGRAM FOR 2 STAGE FURNACE
2 STAGE HEATING, 1 STAGE COOLING
USING A 2 STAGE HEATING, 1 STAGE COOLING THERMOSTAT
(OUTDOOR SECTION WITHOUT TRANSFORMER)**



NOTES:

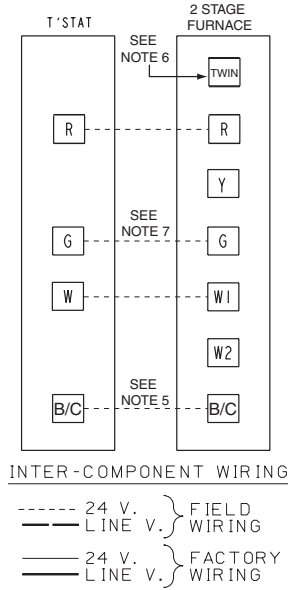
1. BE SURE POWER AGREES WITH EQUIPMENT NAMPLATE(S).
2. LOW VOLTAGE (24V. WIRING) TO BE NO. 18 A.W.G. MIN..
3. GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
4. THESE LEADS PROVIDE 115 V. POWER FOR CONNECTION OF ELECTRONIC AIR CLEANER AND HUMIDIFIER MAX. LOAD 1.0 AMPS EACH.
5. THIS CONNECTION IS ONLY USED FOR THERMOSTATS REQUIRING CONNECTION TO THE 24 V. POWER SUPPLY. (COMMON)
6. SEE TWINNING CONNECTION DIAGRAMS FOR PROPER CONNECTIONS WHEN USING THIS FEATURE.
7. THE "Y" TERMINAL FROM THE THERMOSTAT MUST BE WIRED TO THE "Y" TERMINAL OF THE FURNACE CONTROL FOR PROPER BLOWER OPERATION DURING COOLING.

INTER-COMPONENT WIRING



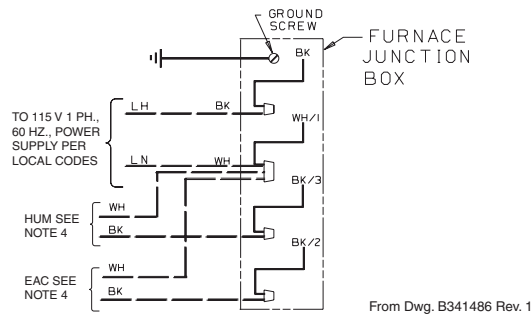
Field Wiring

FIELD WIRING DIAGRAM FOR 2 STAGE FURNACE 2 STAGE HEATING USING A 1 STAGE HEATING THERMOSTAT NO COOLING

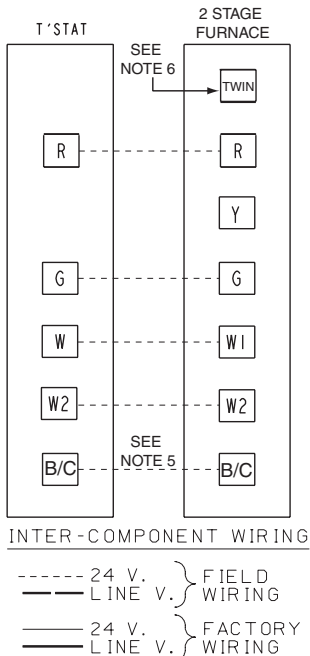


NOTES:

1. BE SURE POWER AGREES WITH EQUIPMENT NAMEPLATE(S).
2. LOW VOLTAGE (24V. WIRING) TO BE NO. 18 A.W.G. MIN.
3. GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
4. THESE LEADS PROVIDE 115 V. POWER FOR CONNECTION OF ELECTRONIC AIR CLEANER AND HUMIDIFIER MAX. LOAD 1.0 AMPS EACH.
5. THIS CONNECTION IS ONLY USED FOR THERMOSTATS REQUIRING CONNECTION TO THE 24 V. POWER SUPPLY. (COMMON)
6. SEE TWINNING CONNECTION DIAGRAMS FOR PROPER CONNECTIONS WHEN USING THIS FEATURE.
7. WHEN A HEATING THERMOSTAT (WITHOUT FAN SWITCH) IS USED, NO WIRING ON "G" TERMINAL OF IFC IS USED.

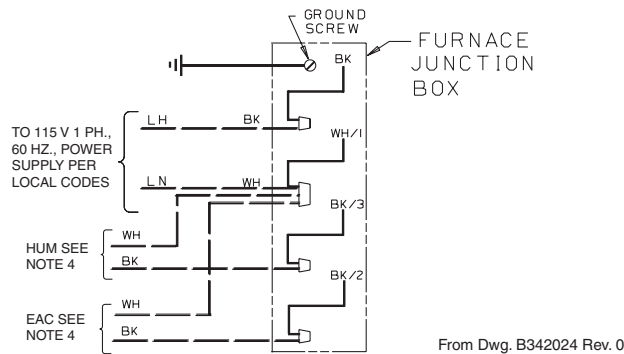


FIELD WIRING DIAGRAM FOR 2 STAGE FURNACE 2 STAGE HEATING USING A 2 STAGE HEATING THERMOSTAT NO COOLING



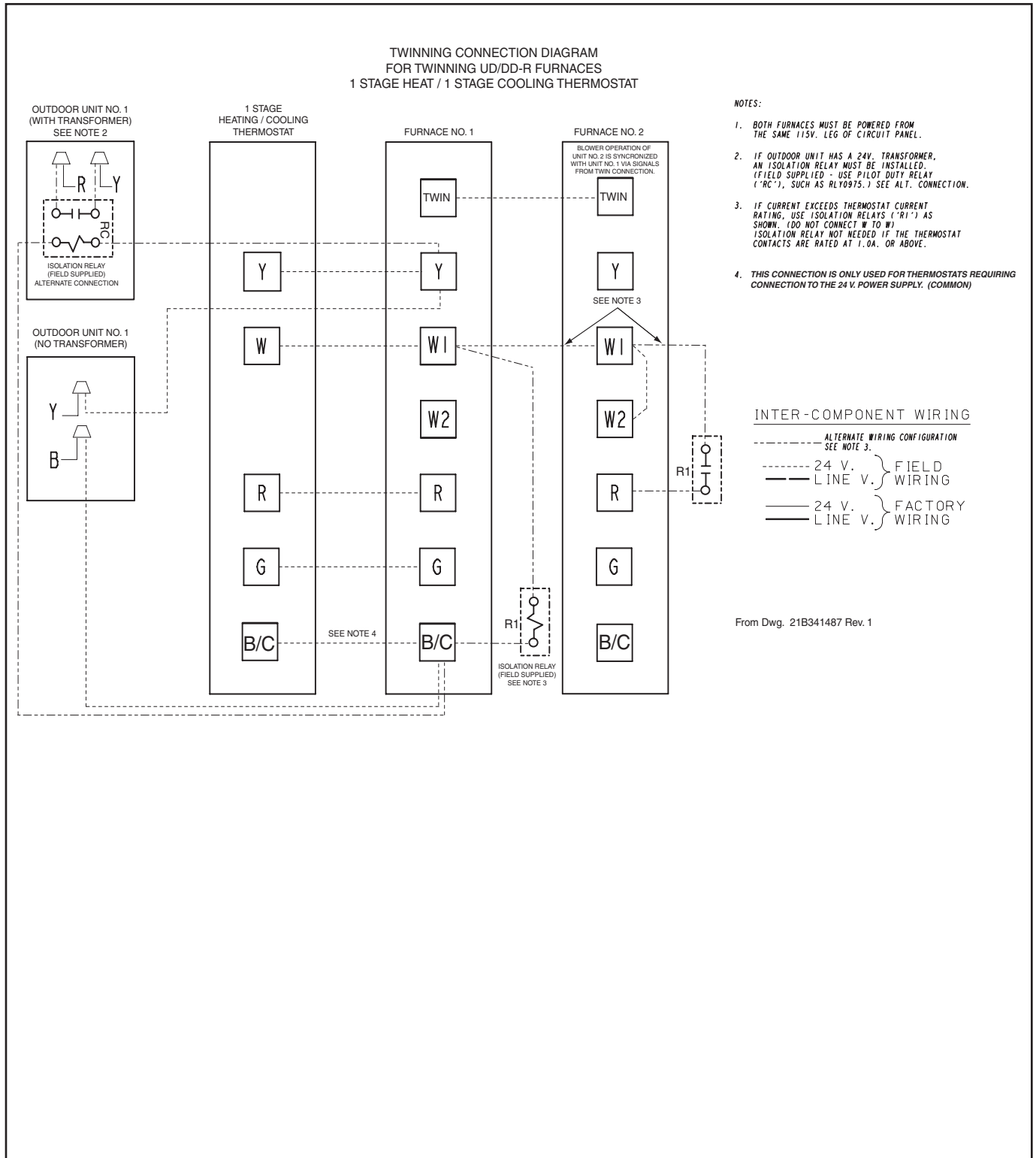
NOTES:

1. BE SURE POWER AGREES WITH EQUIPMENT NAMEPLATE(S).
2. LOW VOLTAGE (24V. WIRING) TO BE NO. 18 A.W.G. MIN.
3. GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
4. THESE LEADS PROVIDE 115 V. POWER FOR CONNECTION OF ELECTRONIC AIR CLEANER AND HUMIDIFIER MAX. LOAD 1.0 AMPS EACH.
5. THIS CONNECTION IS ONLY USED FOR THERMOSTATS REQUIRING CONNECTION TO THE 24 V. POWER SUPPLY. (COMMON)
6. SEE TWINNING CONNECTION DIAGRAMS FOR PROPER CONNECTIONS WHEN USING THIS FEATURE.



Twinning Field Wiring

TWINNING CONNECTION DIAGRAM
FOR TWINNING UD/DD-R FURNACES
1 STAGE HEAT / 1 STAGE COOLING THERMOSTAT



NOTES:

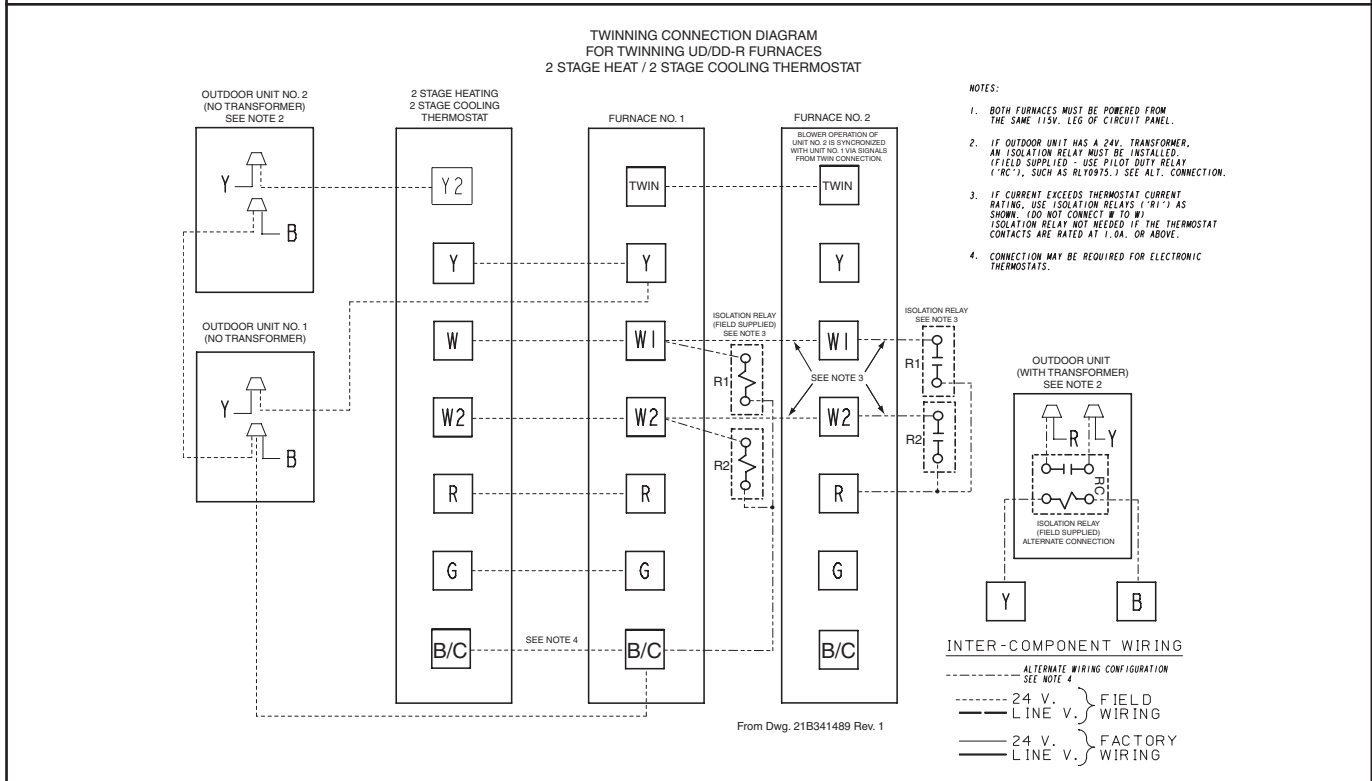
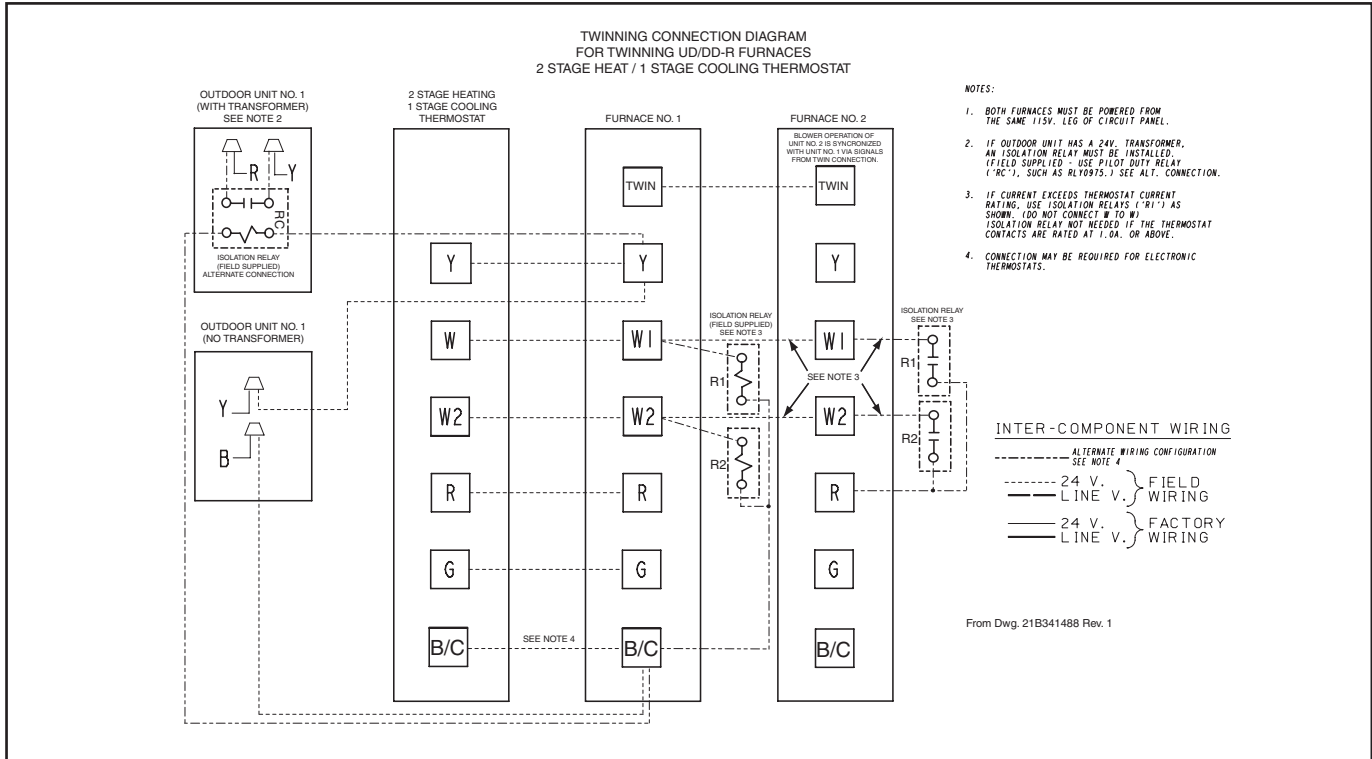
- BOTH FURNACES MUST BE POWERED FROM THE SAME 115V. LEG OF CIRCUIT PANEL.
- IF OUTDOOR UNIT HAS A 24V. TRANSFORMER, AN ISOLATION RELAY MUST BE INSTALLED. (FIELD SUPPLIED - USE PILOT DUTY RELAY ("RC"), SUCH AS RLY0975.) SEE ALT. CONNECTION.
- IF CURRENT EXCEEDS THERMOSTAT CURRENT RATING, USE ISOLATION RELAYS ("R1") AS SHOWN. (DO NOT CONNECT W TO W) ISOLATION RELAY NOT NEEDED IF THE THERMOSTAT CONTACTS ARE RATED AT 1.0A. OR ABOVE.
- THIS CONNECTION IS ONLY USED FOR THERMOSTATS REQUIRING CONNECTION TO THE 24 V. POWER SUPPLY. (COMMON)

INTER-COMPONENT WIRING

- ALTERNATE WIRING CONFIGURATION SEE NOTE 3.
- - - 24 V. LINE V. } FIELD WIRING
- — — 24 V. LINE V. } FACTORY WIRING

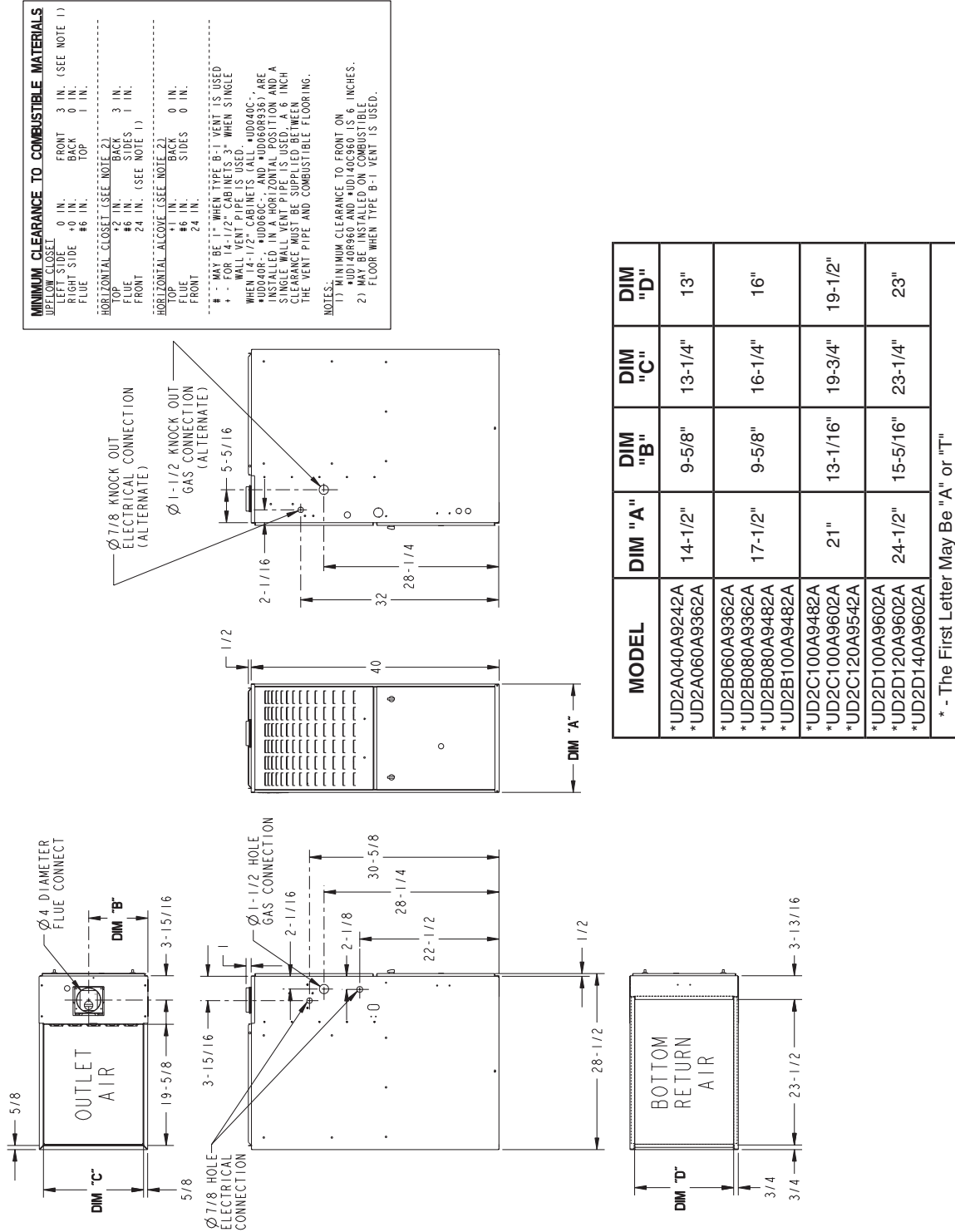
From Dwg. 21B341487 Rev. 1

Twinning Field Wiring



Dimensions

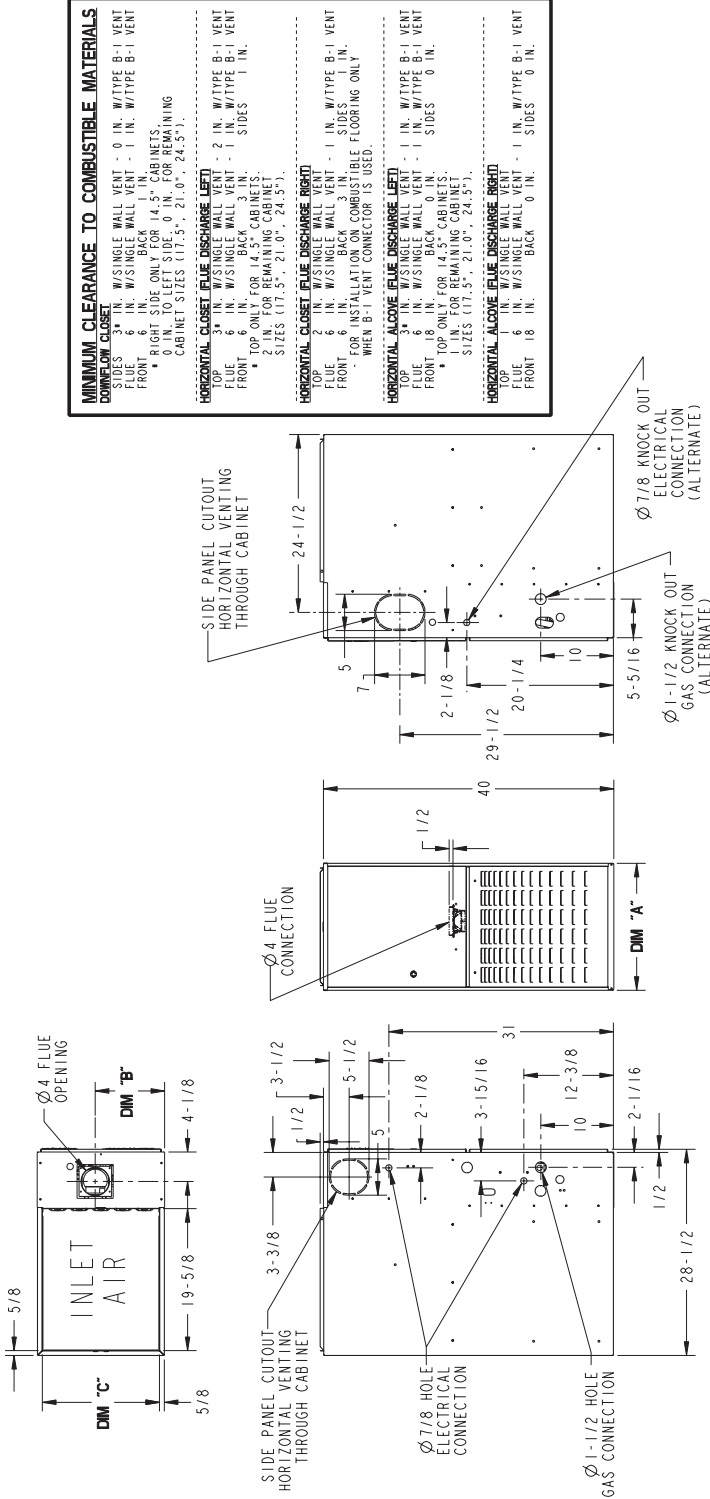
TUD2 OUTLINE DRAWING (ALL DIMENSIONS ARE IN INCHES)



From Dwg. 21 C341699 Sh. 1 Rev. 4

Dimensions

TDD2 OUTLINE DRAWING (ALL DIMENSIONS ARE IN INCHES)



MINIMUM CLEARANCE TO COMBUSTIBLE MATERIALS	
DOWNFLOW CABINET	
FLUE	3" IN. W/SINGLE WALL VENT - 0 IN. W/TYPE B-1 VENT
FRONT	6" IN. W/SINGLE WALL VENT - 1 IN. W/TYPE B-1 VENT
BACK	1 IN.
SIDES	1 IN.
TOP	2 IN. FOR REMAINING CABINET SIZES (17.5", 21.0", 24.5").
HORIZONTAL ALCOVE FLUE DISCHARGE LEFT	
FLUE	3" IN. W/SINGLE WALL VENT - 2 IN. W/TYPE B-1 VENT
FRONT	6" IN. W/SINGLE WALL VENT - 1 IN. W/TYPE B-1 VENT
BACK	1 IN.
SIDES	1 IN.
TOP	2 IN. FOR REMAINING CABINET SIZES (17.5", 21.0", 24.5").
HORIZONTAL ALCOVE FLUE DISCHARGE RIGHT	
FLUE	3" IN. W/SINGLE WALL VENT - 1 IN. W/TYPE B-1 VENT
FRONT	6" IN. W/SINGLE WALL VENT - 1 IN. W/TYPE B-1 VENT
BACK	1 IN.
SIDES	1 IN.
TOP	2 IN. FOR REMAINING CABINET SIZES (17.5", 21.0", 24.5").
HORIZONTAL ALCOVE FLUE DISCHARGE LEFT	
FLUE	3" IN. W/SINGLE WALL VENT - 1 IN. W/TYPE B-1 VENT
FRONT	6" IN. W/SINGLE WALL VENT - 1 IN. W/TYPE B-1 VENT
BACK	1 IN.
SIDES	0 IN.
TOP	2 IN. FOR REMAINING CABINET SIZES (17.5", 21.0", 24.5").
HORIZONTAL ALCOVE FLUE DISCHARGE RIGHT	
FLUE	3" IN. W/SINGLE WALL VENT - 1 IN. W/TYPE B-1 VENT
FRONT	6" IN. W/SINGLE WALL VENT - 1 IN. W/TYPE B-1 VENT
BACK	0 IN.
SIDES	0 IN.
TOP	2 IN. FOR REMAINING CABINET SIZES (17.5", 21.0", 24.5").

MODEL	DIM "A"	DIM "B"	DIM "C"	DIM "D"
*DD2A040A9242A	14-1/2"	9-5/8"	13-1/4"	13"
*DD2A060A9362A				
*DD2B060A9362A	17-1/2"	9-5/8"	16-1/4"	16"
*DD2B080A9362A				
*DD2B080A9482A	21"	13-1/16"	19-3/4"	19-1/2"
*DD2B100A9482A				
*DD2C100A9482A	24-1/2"	15-5/16"	23-1/4"	23"
*DD2D120A9602A				
*DD2D140A9602A				

* - The First Letter May Be "A" or "T"



Trane
6200 Troup Highway
Tyler, TX 75707
www.trane.com

03/12

The manufacturer has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice.