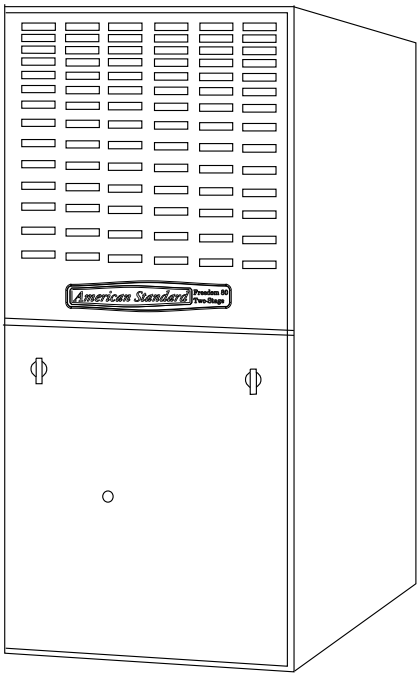
American Standard
HEATING & AIR CONDITIONING

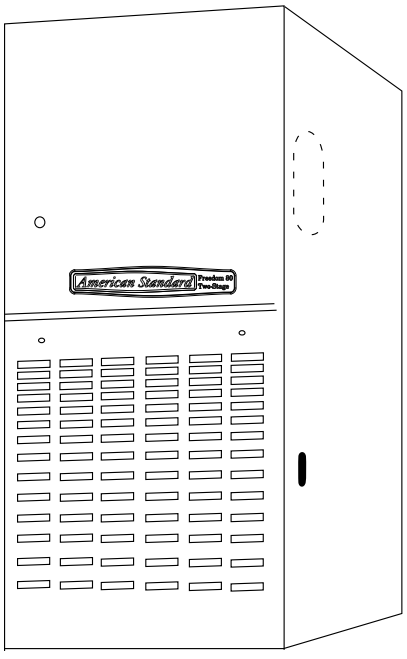
Upflow/ Downflow Horizontal Right or Left Gas-Fired Furnace

Freedom 80

AUD2A040A9242A, AUD2A060A9362A, AUD2B060A9362A, AUD2B080A9362A, AUD2B080A9482A, AUD2B100A9362A, AUD2C100A9482A, AUD2C100A9602A, AUD2D100A9602A, AUD2D120A9542A, AUD2D120A9602A, AUD2D140A9602A
ADD2A040A9242A, ADD2A060A9362A, ADD2B060A9362A, ADD2B080A9362A, ADD2B100A9482A, ADD2C100A9482A, ADD2C100A9602A, ADD2D120A9602A, ADD2D140A9602A

Two-Stage Fan Assisted Combustion System





PUB. NO. 12-1263-02

American Standard
HEATING & AIR CONDITIONING

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 FREEDOM 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.

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HEATING & AIR CONDITIONING

Contents

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Features and Benefits

FREEDOM 80 Upflow/ Downflow Horizontal Right or Left Standard Equipment

- 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

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HEATING & AIR CONDITIONING

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	[ ]
5" Media Air Filter, “Perfect Fit” High Efficiency (14-1/2" Wide Gas Furnace)	TFM145A9FR0	[ ]
5" Media Air Filter, “Perfect Fit” High Efficiency (17-1/2" Wide Gas Furnace)	TFM175A9FR0	[ ]
5" Media Air Filter, “Perfect Fit” High Efficiency (21" Wide Gas Furnace)	TFM210A9FR0	[ ]
5" Media Air Filter, “Perfect Fit” High Efficiency (24-1/2" Wide Gas Furnace)	TFM245A9FR0	[ ]
1" Media Air Filter, “Perfect Fit” Standard Efficiency (14-1/2" Wide Gas Furnace)	TFP145A9FR0	[ ]
1" Media Air Filter, “Perfect Fit” Standard Efficiency (17-1/2" Wide Gas Furnace)	TFP175A9FR0	[ ]
1" Media Air Filter, “Perfect Fit” Standard Efficiency (21" Wide Gas Furnace)	TFP210A9FR0	[ ]
1" Media 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	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	[ ]

American Standard
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General Data

AUD2 Product Specifications ①

MODEL	AUD2A040A9242A	AUD2A060A9362A	AUD2B060A9362A	AUD2B080A9362A
RATINGS②				
1st Stage Input BTUH	26000	39000	39000	52000
1st Stage Capacity BTUH (ICS)③	20800	31200	31200	41600
2nd Stage Input BTUH	40000	60000	60000	80000
2nd Stage Capacity BTUH (ICS)③	32000	47000	47000	63000
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 - RPM	1/100 - 2544/1374	1/100 - 2543/1727	1/100 - 2543/1727	1/100 - 2543/1727
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60	115/1/60
FL Amps	.76/.37	.70/.40	.70/.40	.70/.40
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 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	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	HOT SURFACE	HOT SURFACE	HOT SURFACE
BURNERS — Type	IN-SHOT	IN-SHOT	IN-SHOT	IN-SHOT
Number	2	3	3	4
POWER CONN. — V/Ph/Hz④	115/1/60	115/1/60	115/1/60	115/1/60
Ampacity (In Amps)	4.5	8.2	8.2	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	127/118	142/132

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

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.

American Standard
HEATING & AIR CONDITIONING

General Data

AUD2 Product Specifications ①

MODEL	AUD2B080A9482A	AUD2D100A9362A	AUD2C100A9482A	AUD2C100A9602A
RATINGS②				
1st Stage Input BTUH	52000	65000	65000	65000
1st Stage Capacity BTUH (ICS)③	41600	52000	52000	52000
2nd Stage Input BTUH	80000	100000	100000	100000
2nd Stage Capacity BTUH (ICS)③	63000	79000	79000	80000
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	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 - RPM	1/50 - 3000	1/50 - 3000	1/50 - 3000	1/50 - 3000
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60	115/1/60
FL Amps	1.0	0.93	0.93	0.93
FILTER — Furnished?	YES	YES	YES	YES
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 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	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	HOT SURFACE	HOT SURFACE	HOT SURFACE IGNITOR
BURNERS — Type	IN-SHOT	IN-SHOT	IN-SHOT	IN-SHOT
Number	4	5	5	5
POWER CONN. — V/Ph/Hz④	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	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 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

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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.

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American Standard
HEATING & AIR CONDITIONING

General Data

AUD2 Product Specifications ①

MODEL	AUD2C100A9612A	AUD2D120A9542A	AUD2D120A9602A	AUD2D140A9602A
RATINGS②				
1st Stage Input BTUH	65000	78000	78000	91000
1st Stage Capacity BTUH (ICS)③	52000	62400	62400	72800
2nd Stage Input BTUH	100000	120000	120000	140000
2nd Stage Capacity BTUH (ICS)③	79000	94000	95000	111000
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	3/4	3/4	3/4	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 - RPM	1/50 - 3000	1/50 - 3000	1/50 - 3000	1/50 - 3000
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60	115/1/60
FL Amps	0.93	.95	.95	.95
FILTER — Furnished?	YES	YES	YES	YES
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 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	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	HOT SURFACE	HOT SURFACE	HOT SURFACE
BURNERS — Type	IN-SHOT	IN-SHOT	IN-SHOT	IN-SHOT
Number	5	6	6	7
POWER CONN. — V/Ph/Hz④	115/1/60	115/1/60	115/1/60	115/1/60
Ampacity (In Amps)	12.8	12.8	12.8	13.0
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 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

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American Standard
HEATING & AIR CONDITIONING

General Data

ADD2 Product Specifications ①

MODEL	ADD2A040A9242A	ADD2A060A9362A	ADD2B060A9362A
RATINGS②			
1st Stage Input BTUH	26000	39000	39000
1st Stage Capacity BTUH (ICS)③	20800	31200	31200
2nd Stage Input BTUH	40000	60000	60000
2nd Stage Capacity BTUH (ICS)③	32000	47000	47000
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 - RPM	1/50 - 3000	1/50 - 3000	1/50 - 3000
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60
FL Amps	1.0	1.0	1.0
FILTER — Furnished?	YES	YES	YES
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 TYPE 1	ALUMINIZED STEEL TYPE 1	ALUMINIZED STEEL TYPE 1
-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	HOT SURFACE	HOT SURFACE
BURNERS — Type	IN-SHOT	IN-SHOT	IN-SHOT
Number	2	3	3
POWER CONN. — V/Ph/Hz④	115/1/60	115/1/60	115/1/60
Ampacity (In Amps)	5.2	8.75	8.75
Max. Overcurrent Protection (Amps)	10	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 15-1/2 X 29-1/2	41 X 15-1/2 X 29-1/2	41 X 18-1/2 X 29-1/2
Uncrated	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
WEIGHT			
Shipping (Lbs.)/Net (Lbs.)	119 / 109	129 / 119	129 / 119

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③ Based on U.S. government standard tests.

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American Standard
HEATING & AIR CONDITIONING

General Data

ADD2 Product Specifications ①

MODEL	ADD2B080A9362A	ADD2B100A9482A	ADD2C100A9482A
RATINGS②			
1st Stage Input BTUH	52000	65000	65000
1st Stage Capacity BTUH (ICS)③	41600	52000	52000
2nd Stage Input BTUH	80000	100000	100000
2nd Stage Capacity BTUH (ICS)③	64000	79000	79000
AFUE (ICS)	80.0	80.0	80.0
Temp. Rise (Min.-Max.) °F.	35 - 65	40 - 70	35 - 65
BLOWER DRIVE	DIRECT	DIRECT	DIRECT
Dia.-Width (In.)	10 x 7	10 x 8	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	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
Drive - No. Speeds	DIRECT - 2	DIRECT - 2	DIRECT - 2
Motor HP - RPM	1/50 - 3000	1/50 - 3000	1/50 - 3000
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60
FL Amps	1.0	0.93	0.93
FILTER — Furnished?	YES	YES	YES
Type Recommended	HIGH VELOCITY	HIGH VELOCITY	HIGH VELOCITY
Filter (No.-Size-Thk.)	2 - 14 X 20 - 1 IN	2 - 16 X 20 - 1 IN	2 - 16 X 20 - 1 IN
VENT — Size (In.)	4 ROUND	4 ROUND	4 ROUND
HEAT EXCHANGER			
Type -Fired	ALUMINIZED STEEL TYPE 1	ALUMINIZED STEEL TYPE 1	ALUMINIZED STEEL TYPE 1
-Unfired			
Gauge (Fired)	20	20	20
ORIFICES — Main			
Nat. Gas. Qty. — Drill Size	4 - 45	4 - 45	5 - 45
L.P. Gas Qty. — Drill Size	4 - 56	4 - 56	5 - 56
GAS VALVE	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE	REDUNDANT - TWO STAGE
DIRECT IGNITION DEVICE			
Type	HOT SURFACE	HOT SURFACE	HOT SURFACE
BURNERS — Type	IN-SHOT	IN-SHOT	IN-SHOT
Number	4	4	5
POWER CONN. — V/Ph/Hz④	115/1/60	115/1/60	115/1/60
Ampacity (In Amps)	8.4	9.1	14.2
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 18-1/2 X 29-1/2	41 X 18-1/2 X 29-1/2	41 X 22 X 29-1/2
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 by AGA and ETL.

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.

ADD2 Product Specifications ①

MODEL	ADD2C100A9602A	ADD2D120A9602A	ADD2D140A9602A
RATINGS②			
1st Stage Input BTUH	65000	78000	91000
1st Stage Capacity BTUH (ICS)③	52000	62400	72800
2nd Stage Input BTUH	100000	120000	140000
2nd Stage Capacity BTUH (ICS)③	80000	95000	112000
AFUE (ICS)	80.0	80.0	80.0
Temp. Rise (Min.-Max.) °F.	30 - 60	30 - 60	45 - 75
BLOWER DRIVE	DIRECT	DIRECT	DIRECT
Dia.-Width (In.)	11 x 10	11 x 10	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	3/4	3/4
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 - RPM	1/50 - 3000	1/50 - 3000	1/50 - 3000
Volts/Ph/Hz	115/1/60	115/1/60	115/1/60
FL Amps	0.93	.95	.95
FILTER — Furnished?	YES	YES	YES
Type Recommended	HIGH VELOCITY	HIGH VELOCITY	HIGH VELOCITY
Filter (No.-Size-Thk.)	2 - 16 X 20 - 1 IN	2 - 16 X 20 - 1 IN	2 - 16 X 20 - 1 IN
VENT — Size (In.)	4 ROUND	4 ROUND	4 ROUND
HEAT EXCHANGER			
Type -Fired	ALUMINIZED STEEL TYPE 1	ALUMINIZED STEEL TYPE 1	ALUMINIZED STEEL TYPE 1
-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	HOT SURFACE
BURNERS — Type	IN-SHOT	IN-SHOT	IN-SHOT
Number	5	6	7
POWER CONN. — V/Ph/Hz④	115/1/60	115/1/60	115/1/60
Ampacity (In Amps)	12.8	12.8	13.1
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.)	41-3/4 X 23 X 30-1/2	41-3/4 X 26-1/2 X 30-1/2	41 X 25-1/2 X 29-1/2
Uncrated	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING	SEE OUTLINE DRAWING
WEIGHT			
Shipping (Lbs.)/Net (Lbs.)	167 / 155	186/174	197 / 184

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

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.

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American Standard
HEATING & AIR CONDITIONING

Performance Data

AUD2

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**
*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"

American Standard
HEATING & AIR CONDITIONING

Performance Data

AUD2

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"																				

ADD2

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	

American Standard
HEATING & AIR CONDITIONING

Performance Data

ADD2

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

AUD2 Schematic Diagrams For Gas Furnaces

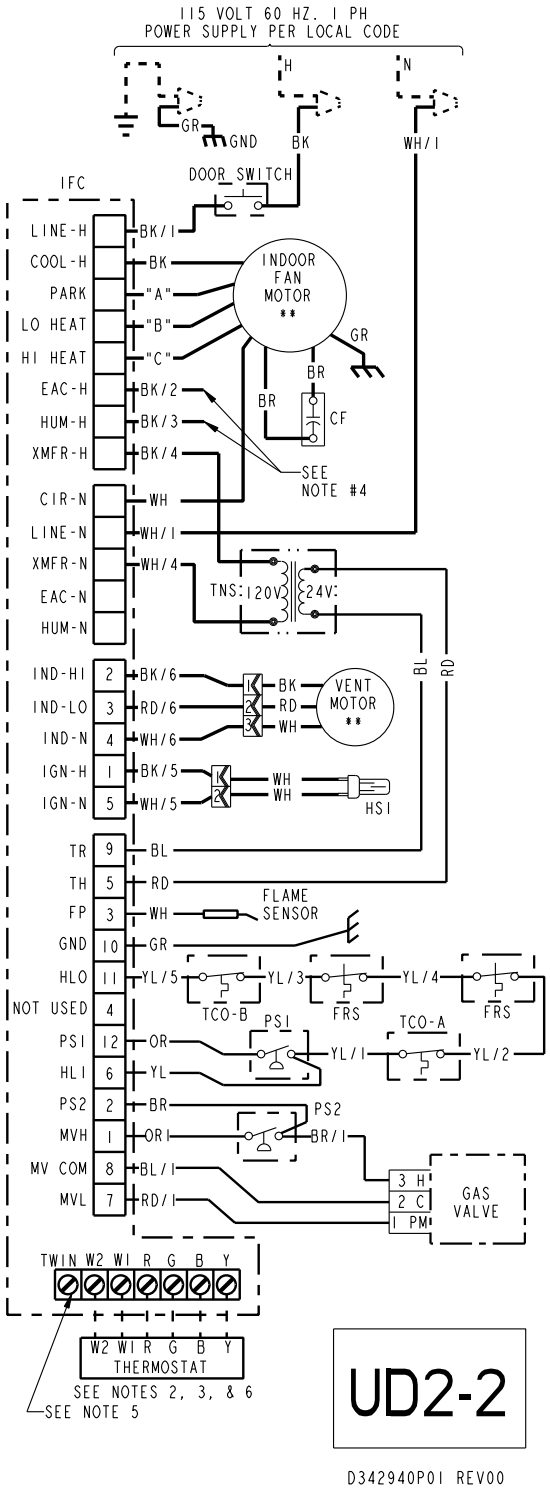


TABLE "A"			
SPEED TAPS FOR I.D. FAN MOTOR			
MODEL	PARK "A"	LO HEAT "B"	HI HEAT "C"
*UD2A040A9242^^	BL	RD	YL
*UD2A060A9362^^	BL	RD	YL
*UD2B060A9362^^	BL	RD	YL
*UD2B080A9362^^	YL	RD	BL
*UD2B080A9482^^	YL	RD	BL
*UD2B100A9362^^	YL	RD	BL
*UD2C100A9482^^	YL	RD	BL
*UD2C100A9602^^	YL	RD	BL
*UD2D100A9602^^	BL	RD	YL
*UD2C120A9542^^	YL	RD	BL
*UD2D120A9602^^	YL	RD	BL
*UD2D140A9602^^	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.

INTEGRATED FURNACE CONTROL

REPLACE WITH PART CNT03077 OR EQUIVALENT

ELECTRICAL RATING

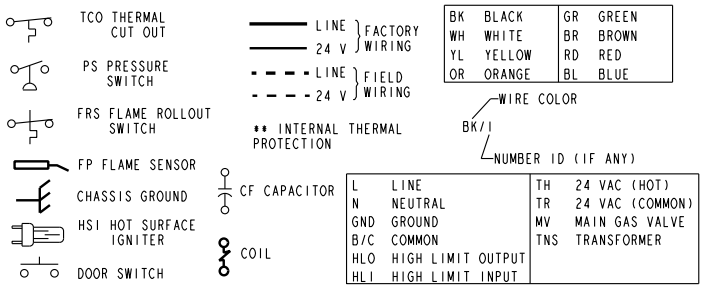
INPUT: 25 VAC, 60 HZ.
XFMR SEC. CURRENT: 450 MA.
MV 1ST STAGE OUTPUT: 1.5 A @ 24 VAC
MV 2ND STAGE OUTPUT: 0.5 A @ 24 VAC
IND OUTPUT: 2.2 FLA, 3.5 LRA @ 120 VAC
CIRC. BLOWER OUTPUT: 14.5 FLA, 25 LRA @ 120 VAC
HUMIDIFER & AIR CLEANER MAX. LOAD: 1.0 A @ 120 VAC
IGNITER OUTPUT: 6.0 A @ 120 VAC

TIMINGS

IGN WARMUP: 20 SEC.
RETRIES: 2 RECYCLES: 10
HEAT ON DELAY: 45 SEC.
COOL ON DELAY: 2 SEC.

DIAGNOSTIC CODES

FLASHING SLOW: NORMAL - NO CALL FOR HEAT
FLASHING FAST: NORMAL - CALL FOR HEAT
CONTINUOUS ON: REPLACE IFC
CONTINUOUS OFF: CHECK POWER
2 FLASHES: EXTERNAL LOCKOUT (RETRIES OR RECYCLES EXCEEDED)
3 FLASHES: PRESSURE SWITCH ERROR
4 FLASHES: OPEN LIMIT DEVICE
5 FLASHES: FLAME SENSED WHEN NO FLAME SHOULD BE PRESENT
6 FLASHES: 115 VAC POWER REVERSED POLARITY OR POOR GROUNDING
7 FLASHES: GAS VALVE CIRCUIT ERROR
8 FLASHES: LOW FLAME SENSE SIGNAL
9 FLASHES: CHECK IGNITER



NOTES:

1. 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.
2. 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.
3. FOR PROPER OPERATION OF COOLING SPEED, "Y" TERMINAL MUST BE CONNECTED TO THE ROOM THERMOSTAT.
4. THESE LEADS PROVIDE 120V POWER CONNECTIONS FOR ELECTRONIC AIR CLEANER (EAC) AND HUMIDIFIER (HUM). MAX. LOAD: 1.0 AMPS EACH.
5. 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.
6. JUMPER W1 AND W2 FOR SINGLE STAGE HEATING THERMOSTAT, SECOND STAGE WILL BE ENERGIZED 10 MINUTES AFTER A CALL FOR HEAT.

From Dwg. D342940P01

American Standard
HEATING & AIR CONDITIONING

Electrical Data

ADD2 Schematic Diagrams For Gas Furnaces

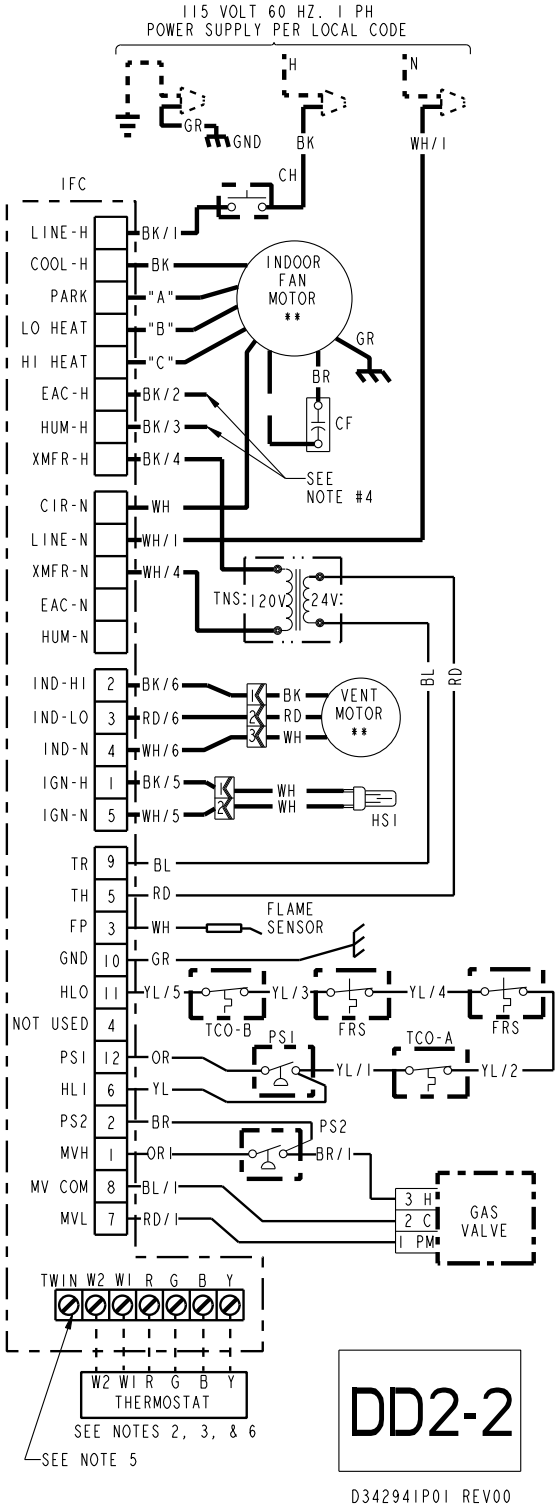


TABLE "A"			
SPEED TAPS FOR I.D. FAN MOTOR			
MODEL	PARK "A"	LO HEAT "B"	HI HEAT "C"
*DD2A040A9242^^	BL	RD	YL
*DD2A060A9362^^	BL	RD	YL
*DD2B060A9362^^	BL	RD	YL
*DD2B080A9362^^	YL	RD	BL
*DD2B100A9482^^	YL	RD	BL
*DD2C100A9482^^	YL	RD	BL
*DD2C100A9602^^	BL	RD	YL
*DD2D120A9602^^	YL	RD	BL
*DD2D140A9602^^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

DIAGNOSTIC CODES

FLASHING SLOW: NORMAL - NO CALL FOR HEAT
FLASHING FAST: NORMAL - CALL FOR HEAT
CONTINUOUS ON: REPLACE IFC
CONTINUOUS OFF: CHECK POWER
2 FLASHES: EXTERNAL LOCKOUT (RETRIES OR RECYCLES EXCEEDED)
3 FLASHES: PRESSURE SWITCH ERROR
4 FLASHES: OPEN LIMIT DEVICE
5 FLASHES: FLAME SENSED WHEN NO FLAME SHOULD BE PRESENT
6 FLASHES: 115 VAC POWER REVERSED POLARITY OR POOR GROUNDING
7 FLASHES: GAS VALVE CIRCUIT ERROR
8 FLASHES: LOW FLAME SENSE SIGNAL
9 FLASHES: CHECK IGNITER

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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.

INTEGRATED FURNACE CONTROL

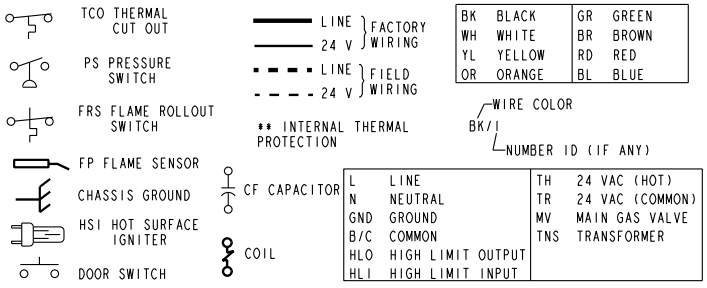
REPLACE WITH PART CNT03077 OR EQUIVALENT

ELECTRICAL RATING

INPUT: 25 VAC, 60 HZ.
XFMR SEC. CURRENT: 450 MA.
MV 1ST STAGE OUTPUT: 1.5 A @ 24 VAC
MV 2ND STAGE OUTPUT: 0.5 A @ 24 VAC
IND OUTPUT: 2.2 FLA, 3.5 LRA @ 120 VAC
CIRC. BLOWER OUTPUT: 14.5 FLA, 25 LRA @ 120 VAC
HUMIDIFER & AIR CLEANER MAX. LOAD: 1.0 A @ 120 VAC
IGNITER OUTPUT: 6.0 A @ 120 VAC

TIMINGS

IGN WARMUP: 20 SEC.
RETRIES: 2 RECYCLES: 10
HEAT ON DELAY: 45 SEC.
COOL ON DELAY: 2 SEC.



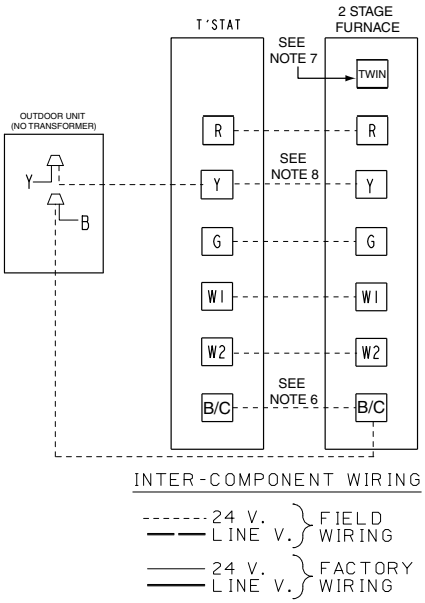
NOTES:

1. 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.
2. 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.
3. FOR PROPER OPERATION OF COOLING SPEED, "Y" TERMINAL MUST BE CONNECTED TO THE ROOM THERMOSTAT.
4. THESE LEADS PROVIDE 120V POWER CONNECTIONS FOR ELECTRONIC AIR CLEANER (EAC) AND HUMIDIFIER (HUM). MAX. LOAD: 1.0 AMPS EACH.
5. 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.
6. JUMPER W1 AND W2 FOR SINGLE STAGE HEATING THERMOSTAT, SECOND STAGE WILL BE ENERGIZED 10 MINUTES AFTER A CALL FOR HEAT.

From Dwg. D342941P01

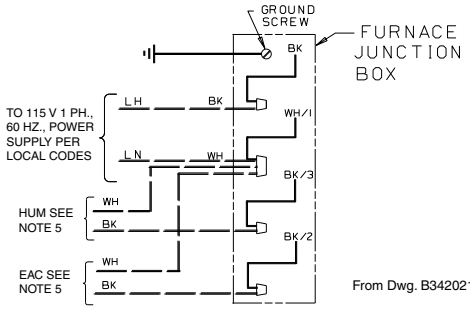
Field Wiring

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)



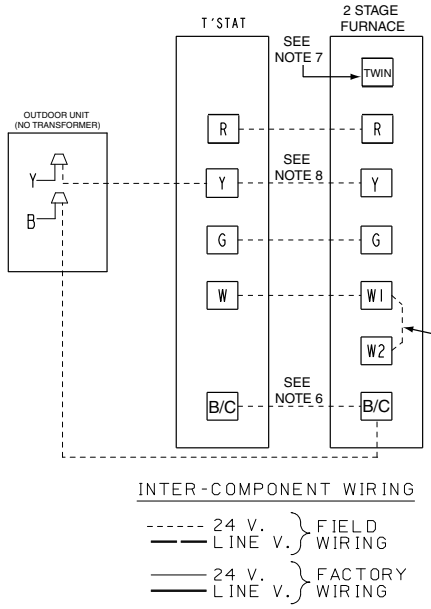
NOTES:

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. SET THERMOSTAT HEAT ANTICIPATOR PER UNIT WIRING DIAGRAM.
5. THESE LEADS PROVIDE 115 V. POWER FOR CONNECTION OF ELECTRONIC AIR CLEANER AND HUMIDIFIER MAX. LOAD 1.0 AMPS EACH.
6. THIS CONNECTION IS ONLY USED FOR THERMOSTATS REQUIRING CONNECTION TO THE 24 V. POWER SUPPLY. (COMMON)
7. SEE TWINNING CONNECTION DIAGRAMS FOR PROPER CONNECTIONS WHEN USING THIS FEATURE.
8. THE "Y" TERMININAL FROM THE THERMOSTAT MUST BE WIRED TO THE "Y" TERMINAL OF THE FURNACE CONTROL FOR PROPER BLOWER OPERATION DURING COOLING.



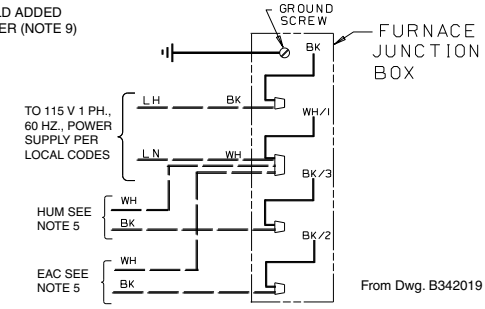
From Dwg. B342021 Rev. 0

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:

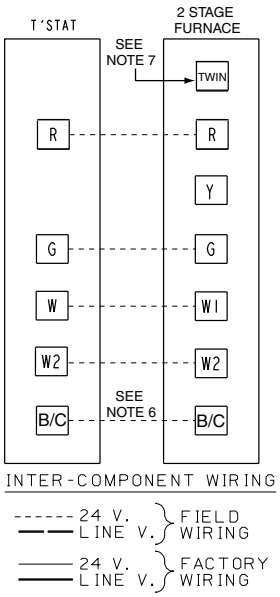
1. BE SURE POWER AGREES WITH EQUIPMENT NAMPLATE(S).
2. LOW VOLTAGE (24V. WIRING) TO BE NO. 18 A.W.G. MIN..
3. GROUNDING OF EQUIPMENT MUST COMPLY WITH LOCAL CODES.
4. SET THERMOSTAT HEAT ANTICIPATOR PER UNIT WIRING DIAGRAM.
5. THESE LEADS PROVIDE 115 V. POWER FOR CONNECTION OF ELECTRONIC AIR CLEANER AND HUMIDIFIER MAX. LOAD 1.0 AMPS EACH.
6. THIS CONNECTION IS ONLY USED FOR THERMOSTATS REQUIRING CONNECTION TO THE 24 V. POWER SUPPLY. (COMMON)
7. SEE TWINNING CONNECTION DIAGRAMS FOR PROPER CONNECTIONS WHEN USING THIS FEATURE.
8. THE "Y" TERMININAL FROM THE THERMOSTAT MUST BE WIRED TO THE "Y" TERMINAL OF THE FURNACE CONTROL FOR PROPER BLOWER OPERATION DURING COOLING.
9. W1 AND W2 MUST BE JUMPERED TOGETHER FOR PROPER OPERATION. SECOND STAGE HEATING WILL BEGIN 10 MINUTES AFTER FIRST STAGE.



From Dwg. B342019 Rev. 0

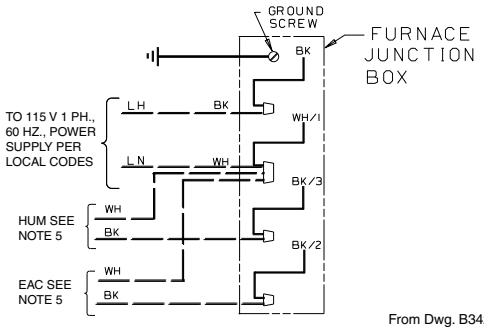
Field Wiring

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



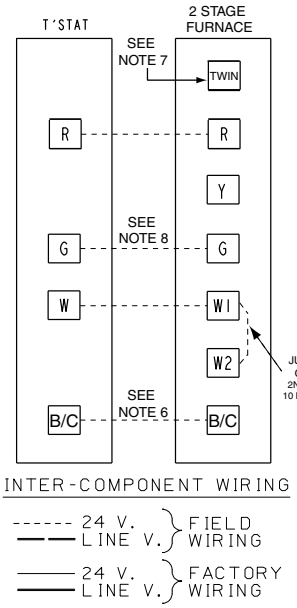
NOTES:

1. BE SURE POWER AGREES WITH EQUIPMENT 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. SET THERMOSTAT HEAT ANTICIPATOR PER UNIT WIRING DIAGRAM.
5. THESE LEADS PROVIDE 115 V. POWER FOR CONNECTION OF ELECTRONIC AIR CLEANER AND HUMIDIFIER MAX. LOAD 1.0 AMPS EACH.
6. THIS CONNECTION IS ONLY USED FOR THERMOSTATS REQUIRING CONNECTION TO THE 24 V. POWER SUPPLY. (COMMON)
7. SEE TWINNING CONNECTION DIAGRAMS FOR PROPER CONNECTIONS WHEN USING THIS FEATURE.



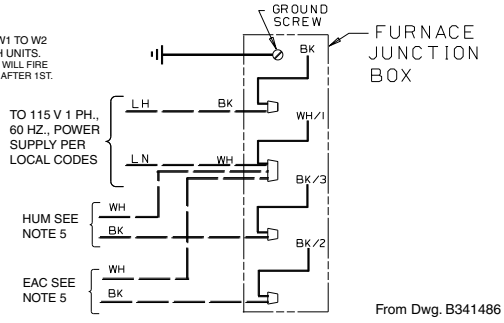
From Dwg. B342024 Rev. 0

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 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. SET THERMOSTAT HEAT ANTICIPATOR PER UNIT WIRING DIAGRAM.
5. THESE LEADS PROVIDE 115 V. POWER FOR CONNECTION OF ELECTRONIC AIR CLEANER AND HUMIDIFIER MAX. LOAD 1.0 AMPS EACH.
6. THIS CONNECTION IS ONLY USED FOR THERMOSTATS REQUIRING CONNECTION TO THE 24 V. POWER SUPPLY. (COMMON)
7. SEE TWINNING CONNECTION DIAGRAMS FOR PROPER CONNECTIONS WHEN USING THIS FEATURE.
8. WHEN A HEATING THERMOSTAT (WITHOUT FAN SWITCH) IS USED, NO WIRING ON "G" TERMINAL OF IFC IS USED.
9. W1 AND W2 MUST BE JUMPERED TOGETHER FOR PROPER OPERATION. SECOND STAGE HEATING WILL BEGIN 10 MINUTES AFTER FIRST STAGE

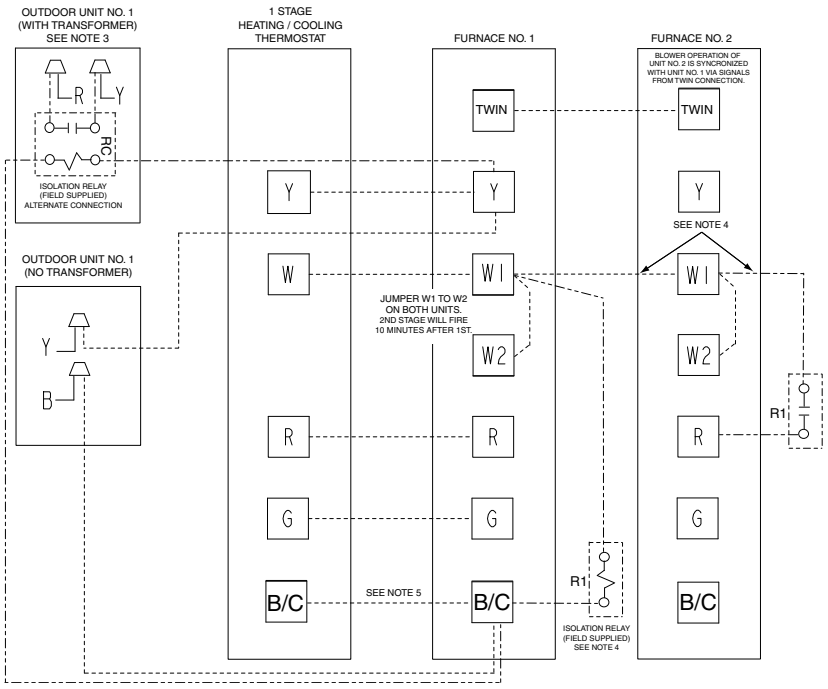


From Dwg. B341486 Rev. 1

American Standard
HEATING & AIR CONDITIONING

Twinning Field Wiring

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



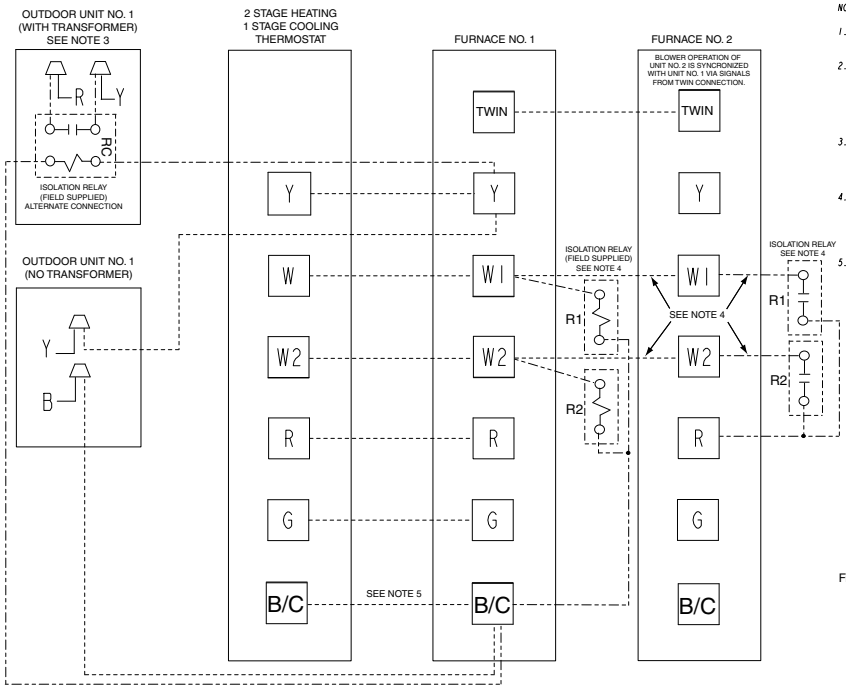
NOTES:

1. BOTH FURNACES MUST BE POWERED FROM THE SAME 115V. LEG OF CIRCUIT PANEL.
2. INSURE 24V. FURNACE TRANSFORMERS ARE IN PHASE. PRIOR TO COMPLETING CONNECTIONS, CHECK VOLTAGE BETWEEN 'R' TERMINALS OF EACH FURNACE. IF VOLTAGE IS GREATER THAN 10V., REVERSE THE BL AN RD SECONDARY LEADS ON ONE OF THE FURNACE TRANSFORMERS.
3. 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.
4. IF CURRENT EXCEEDS THERMOSTAT CURRENT RATING, USE ISOLATION RELAYS ('RI') AS SHOWN. (DO NOT CONNECT W TO W) ISOLATION RELAY NOT NEEDED IF THE THERMOSTAT CONTACTS ARE RATED AT 1.0A. OR ABOVE.
5. CONNECTION MAY BE REQUIRED FOR ELECTRONIC THERMOSTATS.

INTER-COMPONENT WIRING
- ALTERNATE WIRING CONFIGURATION SEE NOTE 4
- 24 V. / LINE V. } FIELD WIRING
- 24 V. / LINE V. } FACTORY WIRING

From Dwg. 21B341487 Rev. 1

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



NOTES:

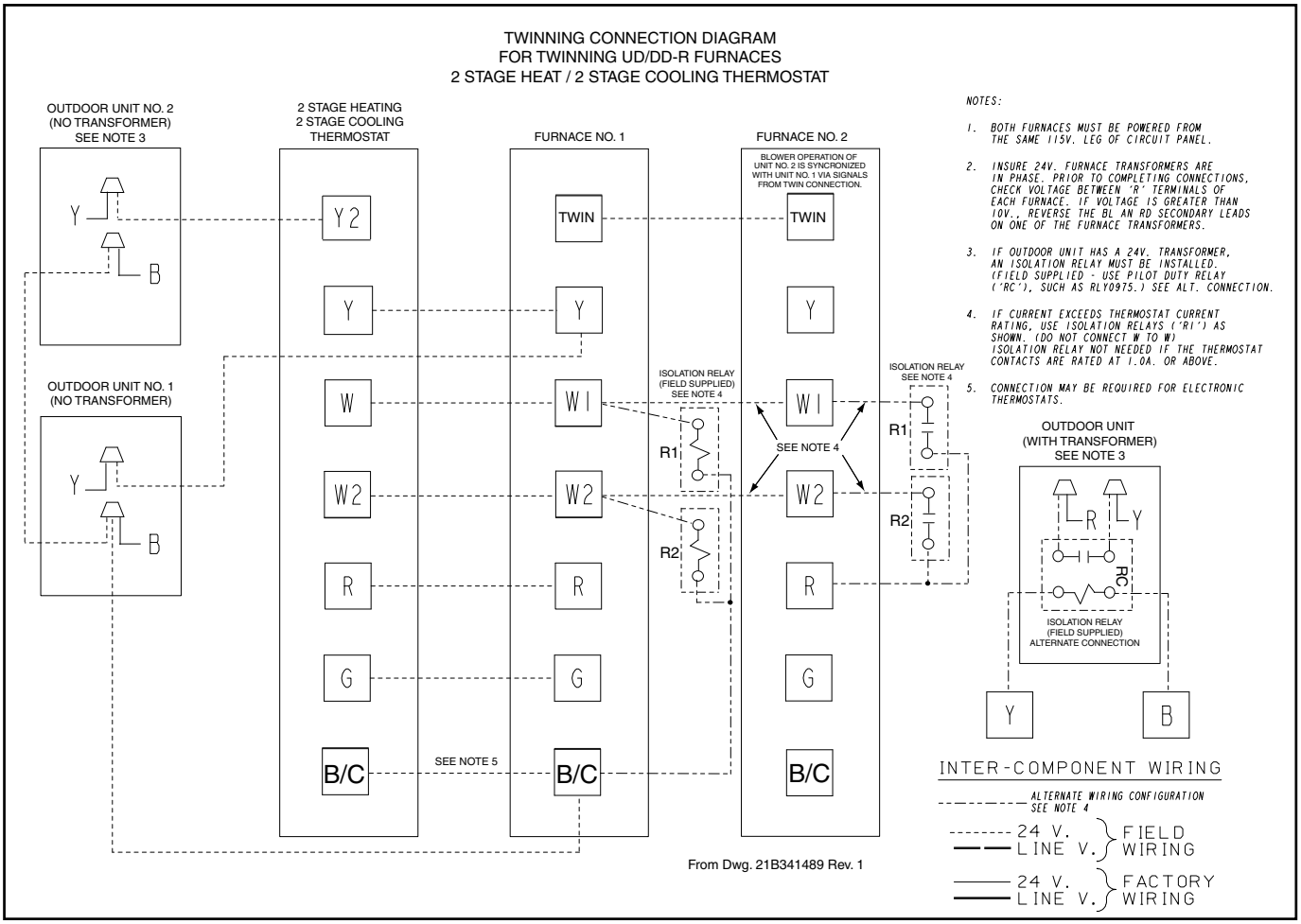
1. BOTH FURNACES MUST BE POWERED FROM THE SAME 115V. LEG OF CIRCUIT PANEL.
2. INSURE 24V. FURNACE TRANSFORMERS ARE IN PHASE. PRIOR TO COMPLETING CONNECTIONS, CHECK VOLTAGE BETWEEN 'R' TERMINALS OF EACH FURNACE. IF VOLTAGE IS GREATER THAN 10V., REVERSE THE BL AN RD SECONDARY LEADS ON ONE OF THE FURNACE TRANSFORMERS.
3. 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.
4. IF CURRENT EXCEEDS THERMOSTAT CURRENT RATING, USE ISOLATION RELAYS ('RI') AS SHOWN. (DO NOT CONNECT W TO W) ISOLATION RELAY NOT NEEDED IF THE THERMOSTAT CONTACTS ARE RATED AT 1.0A. OR ABOVE.
5. CONNECTION MAY BE REQUIRED FOR ELECTRONIC THERMOSTATS.

INTER-COMPONENT WIRING
- ALTERNATE WIRING CONFIGURATION SEE NOTE 4
- 24 V. / LINE V. } FIELD WIRING
- 24 V. / LINE V. } FACTORY WIRING

From Dwg. 21B341488 Rev. 1

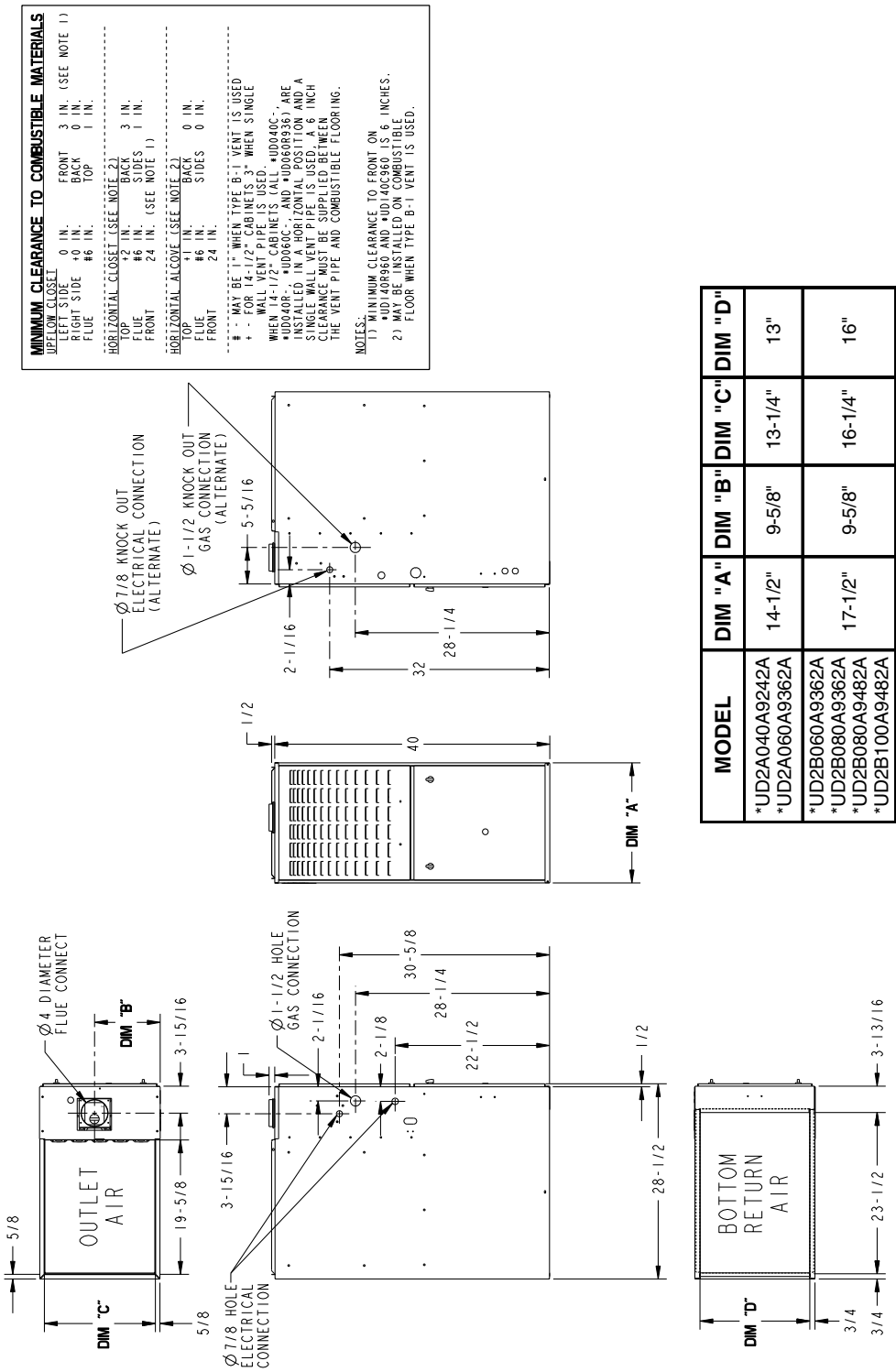
American Standard
HEATING & AIR CONDITIONING

Twinning Field Wiring



Dimensions

AUD2 OUTLINE DRAWING
(ALL DIMENSIONS ARE IN INCHES)



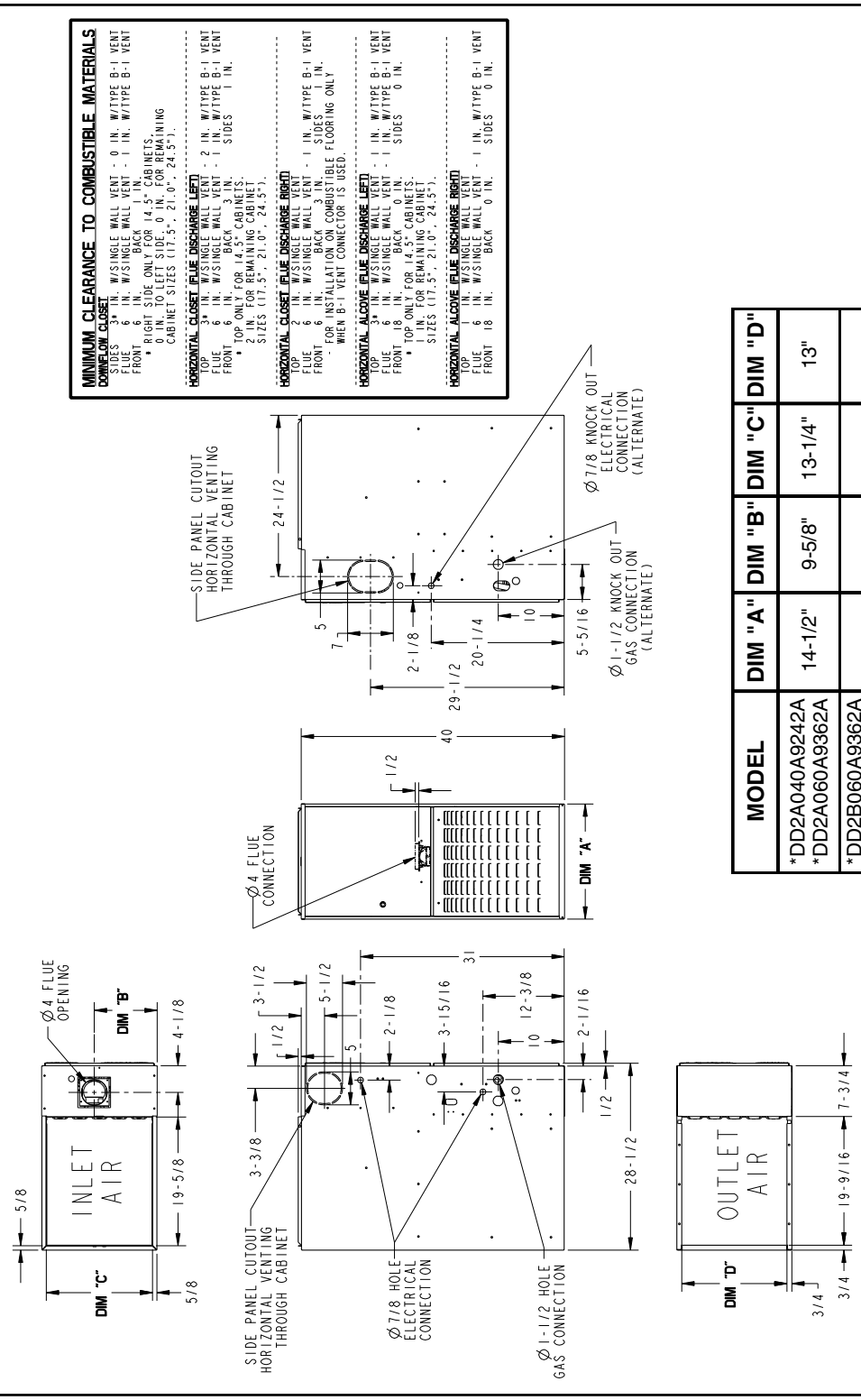
MODEL	DIM "A"	DIM "B"	DIM "C"	DIM "D"
*UD2A040A9242A *UD2A060A9362A	14-1/2"	9-5/8"	13-1/4"	13"
*UD2B060A9362A *UD2B080A9362A *UD2B080A9482A *UD2B100A9482A	17-1/2"	9-5/8"	16-1/4"	16"
*UD2C100A9482A *UD2C100A9602A *UD2C120A9542A	21"	13-1/16"	19-3/4"	19-1/2"
*UD2D100A9602A *UD2D120A9602A *UD2D140A9602A	24-1/2"	15-5/16"	23-1/4"	23"

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

From Dwg. 21C341699 Sh. 1 Rev. 4

Dimensions

ADD2 OUTLINE DRAWING
(ALL DIMENSIONS ARE IN INCHES)



MODEL	DIM "A"	DIM "B"	DIM "C"	DIM "D"
*DD2A040A9242A *DD2A060A9362A	14-1/2"	9-5/8"	13-1/4"	13"
*DD2B060A9362A *DD2B080A9362A *DD2B080A9482A *DD2B100A9482A	17-1/2"	9-5/8"	16-1/4"	16"
*DD2C100A9482A *DD2C100A9602A	21"	13-1/16"	19-3/4"	19-1/2"
*DD2D120A9602A *DD2D140A9602A	24-1/2"	15-5/16"	23-1/4"	23"

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

From Dwg. 21C341700 Sh. 1 Rev. 0

Notes

American Standard
HEATING & AIR CONDITIONING

American Standard
Heating & Air Conditioning
6200 Troup Highway
Tyler, TX 75707
www.americanstandardair.com

04/09