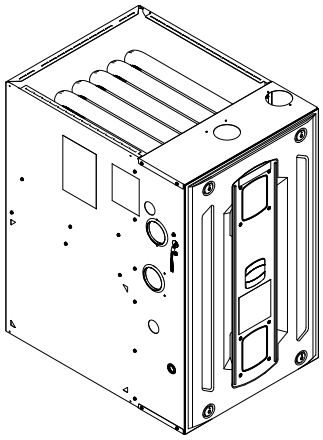
Product Data

Upflow/ Horizontal Left/Right, Downflow Two Stage Condensing Gas Fired Furnace

Upflow, Convertible to Horizontal Right or Horizontal Left
S9X2B040U2PSAA
S9X2B040U3PSAA
S9X2B060U3PSAA
S9X2B060U4PSAA
S9X2B080U3PSAA
S9X2B080U4PSAA
S9X2C080U4PSAA
S9X2C080U5PSAA
S9X2C100U4PSAA
S9X2C100U5PSAA
S9X2D120U5PSAA

Downflow Only
S9X2B040D2PSAA
S9X2B060D3PSAA
S9X2B080D4PSAA
S9X2C100D5PSAA
S9X2D120D5PSAA



Note: *Graphics in this document are for representation only. Actual model may differ in appearance.*

September 2016

22-1930-1A-EN

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 is a solid state device which continuously monitors for presence of flame when the system is in the heating mode of operation. Dual solenoid combination gas valve and regulator provide additional safety.

QUICK HEATING

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

BURNERS

Multiport Inshot burners will give years of quiet and efficient service. All models can be converted to **L.P. gas** with LP conversion kit.

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 dry contacts for EAC and HUM.

ENERGY EFFICIENT OPERATION

Furnace is certified by the manufacturer to leak 1% or less of nominal air conditioning CFM delivered when pressurized to .5" water column with all inlets, outlets, and drains sealed.

AIR DELIVERY

The variable speed blower motor has sufficient airflow for most heating and cooling requirements and will switch from heating to cooling speeds on demand from room thermostat.

SECONDARY HEAT EXCHANGER

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

STYLING

Heavy gauge steel and "wrap-around" cabinet construction is used in the cabinet with baked-on enamel finish for strength and beauty. Every orientation has at least two venting options. There are no knockouts on cabinet.

FEATURES AND GENERAL OPERATION

The S-Series furnace utilizes a Silicon Nitride 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 pressure switches.

Features and Benefits

95.0% AFUE ACROSS ALL MODELS

Meets utility rebates

Lowers utility bills

ELECTRICALLY EFFICIENT

Efficient airflow design reduces electrical energy use

34 INCH TALL

Lighter, easier to move and fit into tight spaces like short basements or tight closets

Works great with larger, high-efficiency coils

No knockouts

3–WAY MULTI-POISE / DEDICATED DOWNFLOW

11 SKU's — Upflow / Horizontal Left / Horizontal Right

5 SKU's — Downflow

Added application flexibility and reduction in specification errors

AIRFLOW

At least 400 CFM/ton at 0.5 in. H_20 external static pressure; setup airflow options down to 290 CFM/ton

REGULATORY

All models are air tight; 1% or less air leakage as per ASHRAE 193

Open vestibule design provides a full 34" high open vestibule

DIMENSIONS

Widths are industry standard: 17.5", 21", and 24.5"

Depth remains approximately 28"

Cabinet will be compatible with industry standard coils, as well as, other accessories

INTEGRATED FURNACE CONTROL

Setup / Status / Diagnostics / Digital Display

No dip switches

Last six errors stored

Dry contact EAC and HUM connections

All Molex connections; no spade terminals

Low voltage labeled above and below

Rain shield over IFC keeps condensate off the control

TUBULAR STAINLESS STEEL PRIMARY HEAT EXCHANGER
29–4C STAINLESS STEEL SECONDARY HEAT EXCHANGER

Stainless steel is a more durable, corrosive-resistant material than aluminumized steel

Integrated rail system for easy access if required

Reduces or eliminates need for baffles

VORTICA II BLOWER, DESIGNED EXCLUSIVELY FOR THE S-SERIES FURNACE

Improved airflow efficiency

Durable, easy to clean, two piece housing

Single piece belly band/ motor arm assembly

Blower deck has full-length rails for easy removal and replacement, regardless of poise

THREE–WAY MULTI-POISE (UPFLOW, HORIZONTAL LEFT AND RIGHT) PLUS DEDICATED DOWNFLOW

Easier to specify

Shipped ready to install (no kits required)

Every model has at least two venting options

When in horizontal, trap extends only about 2”

Barbed fitting on trap at hose connection and on cabinet transition for hose has barbed fitting and clamps at both ends for leak resistance.

Vent table improvements including longer vent lengths; 2” pipe can be used up to 100K

Accessories

Table 1. Accessories

Model Number	Description	Use with
BAYHANG	Horizontal Hanging Kit	All Upflow Furnaces
BAYVENT200B	Sidewall Vent Termination Kit	All Furnaces
BAYVENTCN200B	Sidewall Vent Termination Kit (Canada — CPVC)	All Furnaces
BAYAIR30AVENTA	Concentric Vent Kit	All Furnaces
BAYAIR30CNVENT	Concentric Vent Kit (Canada — CPVC)	All Furnaces
BAYREDUCE	Reducing Coupling (CPVC)	All Furnaces
BAYLIFTB	Dual Return Kit (B size extension)	B Cabinet Upflow Furnaces
BAYLIFTC	Dual Return Kit (C size extension)	C Cabinet Upflow Furnaces
BAYLIFTD	Dual Return Kit (D size extension)	D Cabinet Upflow Furnaces
BAYBASE205	Downflow Subbase	All Downflow Furnaces
BAYFLTR206	Filter Access Door Kit (Downflow only)	All Upflow Furnaces
BAYSLF1165AA [a]	1” SlimFit Box with MERV 4 Filter	All Upflow Furnaces
BAYFLTR203	Horizontal Filter Kit	B Cabinet Furnaces in Downflow/Horizontal
BAYFLTR204	Horizontal Filter Kit	C Cabinet Furnaces in Downflow/Horizontal
BAYFLTR205	Horizontal Filter Kit	D Cabinet Furnaces in Downflow/Horizontal
BAYLPSS400A	LP Conversion Kit with Stainless Steel Burners	All Furnaces
BAYMFGH200A	Manufactured/Mobile Housing Kit	All Furnaces

[a] Airflow greater than 1600 CFM requires dual returns

Product Specifications

MODEL	S9X2B040U2PSAA [a]	S9X2B040U3PSAA [a]	S9X2B060U3PSAA[a]	S9X2B060U4PSAA[a]
TYPE	Upflow/Horizontal	Upflow/Horizontal	Upflow/Horizontal	Upflow/Horizontal
RATINGS [b]				
1st Stage Input BTUH (ICS)	26,000	26,000	39,000	39,000
1st Stage Capacity BTUH	25,220	25,220	37,830	37,830
2nd Stage Input BTUH	40,000	40,000	60,000	60,000
2nd Stage Capacity BTUH (ICS) [c] [d]	38,800	38,800	58,200	58,200
1st Stage Temp. Rise (Min.-Max.)	30 - 60	25 - 55	25 - 55	25 - 55
2nd Stage Temp. Rise (Min.-Max.)	30 - 60	30 - 60	35 - 65	35 - 65
AFUE (%)	95.0	95.0	95.0	95.0
BLOWER DRIVE	DIRECT	DIRECT	DIRECT	DIRECT
Diameter — Width (In.)	11 X 8	11 X 8	11 X 8	11 X 8
No. Used	1	1	1	1
Speeds (No.)	5	5	5	5
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table
Motor HP	1/3	1/2	1/2	3/4
RPM	1075	1075	1075	1075
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	4.8	6.8	6.8	8.4
COMBUSTION FAN — Type	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Drive — No. Speeds	Direct - 2	Direct - 2	Direct - 2	Direct - 2
Motor HP — RPM	3300/2600	3300/2600	3300/2600	3300/2600
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	0.66	0.66	0.66	0.66
FILTER — Furnished?	No	No	No	No
Type recommended	High Velocity	High Velocity	High Velocity	High Velocity
Hi Vel. (No.-Size-Thk.)	1 — 16x25 — 1 in.	1 — 16x25 — 1 in.	1 — 16x25 — 1 in.	1 — 16x25 — 1 in.
VENT PIPE DIAMETER — Min (in.) [e] [f]	2 Round	2 Round	2 Round	2 Round
HEAT EXCHANGER				
Type — Fired	409 Stainless Steel	409 Stainless Steel	409 Stainless Steel	409 Stainless Steel
— Unfired	29–4C Stainless Steel	29–4C Stainless Steel	29–4C Stainless Steel	29–4C Stainless Steel
Gauge (Fired)	20	20	20	20
ORIFICES — Main				
Nat. Gas Qty. — Drill Size	2- 45	2- 45	3 - 45	3 - 45
LP Gas Qty. — Drill Size	2- 56	2- 56	3 - 56	3 - 56
GAS VALVE	Redundant - Two Stage	Redundant - Two Stage	Redundant - Two Stage	Redundant - Two Stage
PILOT SAFETY DEVICE				
Type	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter
BURNERS — Type	Multiport Inshot	Multiport Inshot	Multiport Inshot	Multiport Inshot
Number	2	2	3	3
POWER CONN. — V/Ph/Hz [g]	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
Ampacity (In Amps)	7.8	9.3	9.3	11.3

MODEL	S9X2B040U2PSAA (a)	S9X2B040U3PSAA (a)	S9X2B060U3PSAA(a)	S9X2B060U4PSAA(a)
Max. Overcurrent Protection (Amps)	15	15	15	15
PIPE CONN. SIZE (in.)	1/2	1/2	1/2	1/2
DIMENSIONS	H x W x D	H x W x D	H x W x D	H x W x D
Uncrated (In.)	34 x 17-1/2 x 28–3/4	34 x 17-1/2 x 28–3/4	34 x 17-1/2 x 28–3/4	34 x 17-1/2 x 28–3/4
Crated (In.)	35-1/2 x 19-1/2 x 30-7/8	35-1/2 x 19-1/2 x 30-7/8	35-1/2 x 19-1/2 x 30-7/8	35-1/2 x 19-1/2 x 30-7/8
WEIGHT				
Shipping (Lbs.)/Net (Lbs.)	122/114	122/114	127/119	130/122

(a) Meets Energy Star
(b) 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.
(c) Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3 — latest edition.
(d) Based on U.S. government standard tests.
(e) Refer to the Vent Length Table in the Installer's Guide.
(f) All S9X2 furnace models have a vent outlet diameter that equals 2 in.
(g) The above wiring specifications are in accordance with National Electrical Code; however, installations must comply with local codes.

MODEL	S9X2B080U3PSAA(a)	S9X2B080U4PSAA(a)	S9X2C080U4PSAA(a)	S9X2C080U5PSAA(a)
TYPE	Upflow / Horizontal	Upflow/Horizontal	Upflow/Horizontal	Upflow/Horizontal
RATINGS (b)				
1st Stage Input BTUH (ICS)	52,000	52,000	52,000	52,000
1st Stage Capacity BTUH	50,440	50,440	50,440	50,440
2nd Stage Input BTUH	80,000	80,000	80,000	80,000
2nd Stage Capacity BTUH (ICS) (c) (d)	77,600	77,600	77,600	77,600
1st Stage Temp. Rise (Min.-Max.)	30 - 60	30 - 60	30 - 60	30 - 60
2nd Stage Temp. Rise (Min.-Max.)	40 - 70	35 - 65	35 - 65	35 - 65
AFUE (%)	95.0	95.0	95.0	95.0
BLOWER DRIVE	DIRECT	DIRECT	DIRECT	DIRECT
Diameter — Width (In.)	11 X 8	11 X 8	11 X 10	11 X 10
No. Used	1	1	1	1
Speeds (No.)	5	5	5	5
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table
Motor HP	3/4	3/4	3/4	1
RPM	1075	1075	1075	1075
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	8.4	8.4	8.4	10.9
COMBUSTION FAN — Type	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Drive — No. Speeds	Direct - 2	Direct - 2	Direct - 2	Direct - 2
Motor HP — RPM	3300/2600	3300/2600	3300/2600	3300/2600
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	0.66	0.66	0.66	0.66
FILTER — Furnished?	No	No	No	No
Type recommended	High Velocity	High Velocity	High Velocity	High Velocity
Hi Vel. (No.-Size-Thk.)	1 — 16x25 — 1 in.	1 — 16x25 — 1 in.	1 — 20x25 — 1 in.	1 — 20x25 — 1 in.
VENT PIPE DIAMETER — Min (in.) (e) (f)	2 Round	2 Round	2 Round	2 Round
HEAT EXCHANGER				
Type — Fired	409 Stainless Steel	409 Stainless Steel	409 Stainless Steel	409 Stainless Steel
— Unfired	29–4C Stainless Steel	29–4C Stainless Steel	29–4C Stainless Steel	29–4C Stainless Steel

Product Specifications

MODEL	S9X2B080U3PSAA[a]	S9X2B080U4PSAA[a]	S9X2C080U4PSAA[a]	S9X2C080U5PSAA[a]
Gauge (Fired)	20	20	20	20
ORIFICES — Main				
Nat. Gas Qty. — Drill Size	4 - 45	4 - 45	4 - 45	4 - 45
LP Gas Qty. — Drill Size	4 - 56	4- 56	4- 56	4- 56
GAS VALVE	Redundant - Two Stage	Redundant - Two Stage	Redundant - Two Stage	Redundant - Two Stage
PILOT SAFETY DEVICE				
Type	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter
BURNERS — Type	Multiport Inshot	Multiport Inshot	Multiport Inshot	Multiport Inshot
Number	4	4	4	4
POWER CONN. — V/Ph/Hz [g]	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
Ampacity (In Amps)	11.3	11.3	11.3	14.4
Max. Overcurrent Protection (Amps)	15	15	15	15
PIPE CONN. SIZE (in.)	1/2	1/2	1/2	1/2
DIMENSIONS	H x W x D	H x W x D	H x W x D	H x W x D
Uncrated (In.)	34 x 17-1/2 x 28–3/4	34 x 17-1/2 x 28–3/4	34 x 21 x 28–3/4	34 x 21 x 28–3/4
Crated (In.)	35-1/2 x 19-1/2 x 30-7/8	35-1/2 x 19-1/2 x 30-7/8	35-1/2 x 23 x 30-7/8	35-1/2 x 23 x 30-7/8
WEIGHT				
Shipping (Lbs.)/Net (Lbs.)	132/124	135/127	149/139	149/139

[a] Meets Energy Star
[b] 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.
[c] Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3 — latest edition.
[d] Based on U.S. government standard tests.
[e] Refer to the Vent Length Table in the Installer's Guide.
[f] All S9X2 furnace models have a vent outlet diameter that equals 2 in.
[g] The above wiring specifications are in accordance with National Electrical Code; however, installations must comply with local codes.

MODEL	S9X2C100U4PSAA [a]	S9X2C100U5PSAA[a]	S9X2D120U5PSAA[a]	S9X2B040D2PSAA[a]
TYPE	Upflow/Horizontal	Upflow / Horizontal	Upflow/Horizontal	Downflow
RATINGS [b]				
1st Stage Input BTUH (ICS)	65,000	65,000	78,000	26,000
1st Stage Capacity BTUH	63,050	63,050	75,660	25,220
2nd Stage Input BTUH	100,000	100,000	120,000	40,000
2nd Stage Capacity BTUH (ICS) [c] [d]	97,000	97,000	116,400	38,800
1st Stage Temp. Rise (Min.-Max.)	25 - 55	25 - 55	35-65	25 - 55
2nd Stage Temp. Rise (Min.-Max.)	35 - 65	35 - 65	40-70	30 - 60
AFUE (%)	95.0	95.0	95.0	95.0
BLOWER DRIVE	DIRECT	DIRECT	DIRECT	DIRECT
Diameter — Width (In.)	11 X 10	11 X 10	11 X 10	11 X 8
No. Used	1	1	1	1
Speeds (No.)	5	5	5	5
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table
Motor HP	1	1	1	1/3
RPM	1075	1075	1075	1075
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	10.9	10.9	10.9	4.8
COMBUSTION FAN — Type	Centrifugal	Centrifugal	Centrifugal	Centrifugal

MODEL	S9X2C100U4PSAA [a]	S9X2C100U5PSAA[a]	S9X2D120U5PSAA[a]	S9X2B040D2PSAA[a]
Drive — No. Speeds	Direct - 2	Direct - 2	Direct - 2	Direct - 2
Motor HP — RPM	3300/2600	3300/2600	3300/2600	3300/2600
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	0.66	0.66	0.66	0.66
FILTER — Furnished?	No	No	No	No
Type recommended	High Velocity	High Velocity	High Velocity	High Velocity
Hi Vel. (No.-Size-Thk.)	1 — 20x25 — 1 in.	1 — 20x25 — 1 in.	1 — 24x25 — 1 in.	2 — 14x20 — 1 in.
VENT PIPE DIAMETER — Min (in.) [e] [f]	2 Round	2 Round	3 Round	2 Round
HEAT EXCHANGER				
Type — Fired	409 Stainless Steel	409 Stainless Steel	409 Stainless Steel	409 Stainless Steel
— Unfired	29–4C Stainless Steel	29–4C Stainless Steel	29–4C Stainless Steel	29–4C Stainless Steel
Gauge (Fired)	20	20	20	20
ORIFICES — Main				
Nat. Gas Qty. — Drill Size	5 - 45	5 - 45	6 - 45	2- 45
LP Gas Qty. — Drill Size	5- 56	5- 56	6- 56	2- 56
GAS VALVE	Redundant - Two Stage	Redundant - Two Stage	Redundant - Two Stage	Redundant - Two Stage
PILOT SAFETY DEVICE				
Type	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter
BURNERS — Type	Multiport Inshot	Multiport Inshot	Multiport Inshot	Multiport Inshot
Number	5	5	6	2
POWER CONN. — V/Ph/Hz [g]	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
Ampacity (In Amps)	14.4	14.4	14.4	7.8
Max. Overcurrent Protection (Amps)	15	15	15	15
PIPE CONN. SIZE (in.)	1/2	1/2	1/2	1/2
DIMENSIONS	H x W x D	H x W x D	H x W x D	H x W x D
Uncrated (In.)	34 x 21 x 28–3/4	34 x 21 x 28–3/4	34 x 24-1/2 x 28–3/4	34 x 17-1/2 x 28–3/4
Crated (In.)	35-1/2 x 23 x 30-7/8	35-1/2 x 23 x 30-7/8	35-1/2 x 26-1/2 x 30-7/8	35-1/2 x 19-1/2 x 30-7/8
WEIGHT				
Shipping (Lbs.)/Net (Lbs.)	154/144	155/145	167/156	122/114

[a] Meets Energy Star
[b] 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.
[c] Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3.
[d] Based on U.S. government standard tests.
[e] Refer to the Vent Length Table in the Installer's Guide.
[f] All S9X2 furnace models have a vent outlet diameter that equals 2 in.
[g] The above wiring specifications are in accordance with National Electrical Code; however, installations must comply with local codes.

MODEL	S9X2B060D3PSAA [a]	S9X2B080D4PSAA[a]	S9X2C100D5PSAA[a]	S9X2D120D5PSAA[a]
TYPE	Downflow	Downflow	Downflow	Downflow
RATINGS [b]				
1st Stage Input BTUH (ICS)	39,000	52,000	65,000	78,000
1st Stage Capacity BTUH	37,830	50,440	63,050	75,660
2nd Stage Input BTUH	60,000	80,000	100,000	120,000
2nd Stage Capacity BTUH (ICS) [c] [d]	58,200	77,600	97,000	116,400
1st Stage Temp. Rise (Min.-Max.)	25 - 55	30 - 60	30 - 60	30-60
2nd Stage Temp. Rise (Min.-Max.)	35 - 65	35 - 65	35 - 65	40-70
AFUE (%)	95.0	95.0	95.0	95.0

Product Specifications

MODEL	S9X2B060D3PSAA [a]	S9X2B080D4PSAA[a]	S9X2C100D5PSAA[a]	S9X2D120D5PSAA[a]
BLOWER DRIVE	DIRECT	DIRECT	DIRECT	DIRECT
Diameter — Width (In.)	11 X 8	11 X 8	11 X 10	11 X 10
No. Used	1	1	1	1
Speeds (No.)	5	5	5	5
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table	See Fan Performance Table
Motor HP	1/2	3/4	1	1
RPM	1075	1075	1075	1075
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	6.8	8.4	10.9	10.9
COMBUSTION FAN — Type	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Drive — No. Speeds	Direct - 2	Direct - 2	Direct - 2	Direct - 2
Motor HP — RPM	3300/2600	3300/2600	3300/2600	3300/2600
Volts/Ph/Hz	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
FLA	0.66	0.66	0.66	0.66
FILTER — Furnished?	No	No	No	No
Type recommended	High Velocity	High Velocity	High Velocity	High Velocity
Hi Vel. (No.-Size-Thk.)	2 — 14x20 — 1 in.	2 — 14x20 — 1 in.	2 — 16x20 — 1 in.	2 — 16x20 — 1 in.
VENT PIPE DIAMETER — Min (in.) [e] [f]	2 Round	2 Round	2 Round	3 Round
HEAT EXCHANGER				
Type — Fired	409 Stainless Steel	409 Stainless Steel	409 Stainless Steel	409 Stainless Steel
— Unfired	29–4C Stainless Steel	29–4C Stainless Steel	29–4C Stainless Steel	29–4C Stainless Steel
Gauge (Fired)	20	20	20	20
ORIFICES — Main				
Nat. Gas Qty. — Drill Size	3 - 45	4 - 45	5 - 45	6 - 45
LP Gas Qty. — Drill Size	3 - 56	4- 56	5- 56	6- 56
GAS VALVE	Redundant - Two Stage	Redundant - Two Stage	Redundant - Two Stage	Redundant - Two Stage
PILOT SAFETY DEVICE				
Type	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter	120 V SiNi Igniter
BURNERS — Type	Multiport Inshot	Multiport Inshot	Multiport Inshot	Multiport Inshot
Number	3	4	5	6
POWER CONN. — V/Ph/Hz [g]	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60
Ampacity (In Amps)	9.3	11.3	14.4	14.4
Max. Overcurrent Protection (Amps)	15	15	15	15
PIPE CONN. SIZE (in.)	1/2	1/2	1/2	1/2
DIMENSIONS	H x W x D	H x W x D	H x W x D	H x W x D
Uncrated (In.)	34 x 17-1/2 x 28–3/4	34 x 17-1/2 x 28–3/4	34 x 21 x 28–3/4	34 x 24-1/2 x 28–3/4
Crated (In.)	35-1/2 x 19-1/2 x 30-7/8	35-1/2 x 19-1/2 x 30-7/8	35-1/2 x 23 x 30-7/8	35-1/2 x 26-1/2 x 30-7/8
WEIGHT				
Shipping (Lbs.)/Net (Lbs.)	127/119	135/127	155/145	167/156

[a] Meets Energy Star
[b] 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.
[c] Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3.
[d] Based on U.S. government standard tests.
[e] Refer to the Vent Length Table in the Installer's Guide.
[f] All S9X2 furnace models have a vent outlet diameter that equals 2 in.
[g] The above wiring specifications are in accordance with National Electrical Code; however, installations must comply with local codes.

Heating and Cooling Airflow Tables

Table 2. Upflow Cooling Table

FURNACE AIRFLOW (CFM) VS. STATIC PRESSURE (ins.w.g)										
MODEL	SPEED TAP	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
S9X2B040U2PSAA	5 - HIGH	1161	1117	1074	1030	983	935	879	824	768
	4 - MED-HIGH	1002	958	911	858	802	739	681	619	560
	3 - MEDIUM	929	870	810	751	686	625	566	507	447
	2 - MED-LOW	868	800	732	664	600	536	472	411	349
	1 - LOW	499	385	272	160	—	-	-	-	-
S9X2B040U3PSAA	5 - HIGH	1338	1305	1267	1234	1200	1160	1121	1074	1019
	4 - MED-HIGH	1133	1089	1045	1002	956	903	845	791	738
	3 - MEDIUM	1003	965	922	873	814	755	701	644	587
	2 - MED-LOW	844	777	711	644	583	518	455	397	339
	1 - LOW	618	543	468	394	316	237	164	–	-
S9X2B060U3PSAA	5 - HIGH	1496	1464	1431	1396	1360	1321	1279	1239	1199
	4 - MED-HIGH	1188	1149	1107	1059	1014	971	919	865	814
	3 - MEDIUM	1053	1006	956	906	853	793	736	678	617
	2 - MED-LOW	963	909	854	803	736	673	604	543	492
	1 - LOW	814	748	687	613	543	465	406	344	273
S9X2B060U4PSAA	5 - HIGH	1723	1701	1681	1656	1631	1604	1576	1547	1518
	4 - MED-HIGH	1408	1371	1336	1300	1260	1218	1178	1139	1100
	3 - MEDIUM	1172	1129	1085	1038	990	942	888	839	789
	2 - MED-LOW	1103	1058	1010	956	904	846	793	742	694
	1 - LOW	999	877	801	738	673	611	566	525	484
S9X2B080U3PSAA	5 - HIGH	1603	1577	1552	1526	1499	1472	1444	1414	1379
	4 - MED-HIGH	1426	1399	1372	1344	1316	1283	1250	1214	1175
	3 - MEDIUM	1176	1144	1109	1074	1034	992	948	906	862
	2 - MED-LOW	1077	1027	990	950	905	856	807	763	714
	1 - LOW	1001	904	833	776	722	669	609	559	503
S9X2B080U4PSAA	5 - HIGH	1677	1652	1626	1601	1575	1548	1520	1489	1456
	4 - MED-HIGH	1598	1571	1545	1519	1492	1465	1435	1404	1369
	3 - MEDIUM	1468	1442	1417	1391	1362	1331	1297	1259	1220
	2 - MED-LOW	1141	1107	1073	1035	993	948	902	857	812
	1 - LOW	1007	925	877	824	770	720	669	613	559
S9X2C080U4PSAA	5 - HIGH	1928	1893	1858	1823	1780	1741	1699	1666	1632
	4 - MED-HIGH	1667	1625	1583	1540	1497	1456	1413	1368	1322
	3 - MEDIUM	1564	1525	1481	1433	1393	1348	1301	1245	1180
	2 - MED-LOW	1473	1425	1376	1328	1285	1234	1176	1111	1046
	1 - LOW	1160	1097	1034	972	890	815	755	687	619

Table 2. Upflow Cooling Table (continued)

S9X2C080U5PSAA	5 - HIGH	1976	1937	1898	1864	1825	1786	1748	1708	1666
	4 - MED-HIGH	1745	1708	1668	1633	1584	1544	1499	1456	1410
	3 - MEDIUM	1683	1642	1601	1560	1513	1471	1428	1380	1327
	2 - MED-LOW	1481	1434	1386	1339	1291	1242	1184	1116	1047
	1 - LOW	1187	1123	1058	993	912	837	771	700	630
S9X2C100U4PSAA	5 - HIGH	2338	2305	2271	2238	2204	2149	2093	2037	1981
	4 - MED-HIGH	2013	1980	1947	1915	1882	1845	1807	1769	1731
	3 - MEDIUM	1822	1787	1751	1716	1681	1639	1603	1562	1520
	2 - MED-LOW	1479	1434	1389	1344	1299	1246	1192	1138	1084
	1 - LOW	1234	1105	1049	989	913	836	763	689	615
S9X2C100U5PSAA	5 - HIGH	2305	2272	2240	2207	2171	2131	2070	2001	1931
	4 - MED-HIGH	2109	2079	2048	2018	1986	1951	1916	1877	1839
	3 - MEDIUM	1713	1679	1642	1604	1562	1523	1483	1441	1392
	2 - MED-LOW	1486	1443	1400	1357	1314	1269	1212	1153	1094
	1 - LOW	1209	1155	1100	1046	979	900	833	766	700
S9X2D120U5PSAA	5 - HIGH	2369	2333	2297	2261	2223	2188	2156	2122	2087
	4 - MED-HIGH	2049	2014	1979	1944	1908	1870	1831	1786	1741
	3 - MEDIUM	1854	1815	1777	1738	1700	1662	1620	1578	1536
	2 - MED-LOW	1504	1453	1403	1352	1300	1256	1185	1128	1072
	1 - LOW	1427	1377	1326	1275	1225	1167	1103	1037	972

Table 3. Downflow Cooling Table

FURNACE AIRFLOW (CFM) VS. STATIC PRESSURE (ins.w.g)										
MODEL	SPEED TAP	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
S9X2B040D2PSAA	5 - HIGH	1144	1097	1052	999	946	889	831	774	717
	4 - MED-HIGH	1047	998	944	888	830	768	707	645	585
	3 - MEDIUM	926	801	730	656	586	514	454	397	356
	2 - MED-LOW	880	742	601	520	441	382	319	236	166
	1 - LOW	558	439	331	238	136	-	—	—	—
S9X2B060D3PSAA	5 - HIGH	1462	1431	1400	1369	1335	1298	1256	1210	1165
	4 - MED-HIGH	1247	1205	1163	1121	1075	1026	977	927	876
	3 - MEDIUM	1094	1047	1000	953	899	844	787	736	685
	2 - MED-LOW	941	880	819	758	690	629	571	505	443
	1 - LOW	825	769	704	634	567	499	426	368	316
S9X2B080D4PSAA	5 - HIGH	1619	1590	1561	1532	1505	1479	1450	1422	1393
	4 - MED-HIGH	1430	1403	1375	1348	1318	1288	1254	1214	1175
	3 - MEDIUM	1280	1253	1227	1200	1165	1125	1085	1045	1003
	2 - MED-LOW	1113	1079	1045	1006	961	915	870	824	781
	1 - LOW	1006	957	909	860	801	747	695	642	590

Table 3. Downflow Cooling Table (continued)

S9X2C100D5PSAA	5 - HIGH	2130	2097	2064	2031	1997	1962	1924	1884	1837
	4 - MED-HIGH	1947	1912	1877	1842	1806	1768	1727	1687	1646
	3 - MEDIUM	1756	1720	1683	1645	1604	1562	1521	1479	1428
	2 - MED-LOW	1504	1461	1418	1372	1324	1273	1217	1153	1111
	1 - LOW	1341	1294	1242	1191	1133	1068	1016	956	898
S9X2D120D5PSAA	5 - HIGH	2377	2340	2308	2277	2241	2205	2167	2128	2072
	4 - MED-HIGH	2089	2056	2021	1984	1947	1909	1866	1822	1776
	3 - MEDIUM	1818	1781	1743	1705	1663	1622	1576	1530	1476
	2 - MED-LOW	1569	1527	1484	1442	1390	1339	1283	1228	1173
	1 - LOW	1493	1448	1396	1345	1290	1236	1174	1047	987

Table 4. 2nd Stage Heating Table — Upflow

CFM VS. 2ND STAGE TEMPERATURE RISE																		
MODEL	CFM (CUBIC FEET PER MINUTE)																	
	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
S9X2B040U2PSAA	63	56	50	44	40	36	32	28										
S9X2B040U3PSAA	63	55	48	44	39	36	33	30										
S9X2B060U3PSAA			66	62	56	51	49	45	42	40	37	35						
S9X2B060U4PSAA				63	58	52	49	46	43	41	40							
S9X2B080U3PSAA						71	68	62	57	55	50	45	39					
S9X2B080U4PSAA						64	61	57	54	51	48	44	39	35				
S9X2C080U4PSAA								63	58	55	51	48	46	44	42			
S9X2C080U5PSAA						65	59	56	54	49	46	44	42	40	38	36		
S9X2C100U4PSAA									65	62	57	53	50	48	46	44	43	41
S9X2C100U5PSAA										65	61	57	55	53	49	46	44	43
S9X2D120U5PSAA										67	65	60	55	54	51	54	48	44

Table 5. 2nd Stage Heating Table — Downflow

CFM VS. 2ND STAGE 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
S9X2B040D2PSAA	61	53	46	45	37	34	31												
S9X2B060D3PSAA					63	58	52	48	44	41	37								
S9X2B080D4PSAA							66	62	57	53	49	48	46						
S9X2C100D5PSAA										65	62	58	55	53	50	48	44		
S9X2D120D5PSAA											71	66	64	58	56	53	52	49	44

Table 6. 1st Stage Heating Table — Upflow

CFM VS. 1ST STAGE TEMPERATURE RISE																		
MODEL	CFM (CUBIC FEET PER MINUTE)																	
	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100
S9X2B040U2PSAA		49	42	37	33	28	24											
S9X2B040U3PSAA		50	41	36	32	28	25											
S9X2B060U3PSAA				52	47	42	37	33	28	23								
S9X2B060U4PSAA				48	44	41	41	35	29									
S9X2B080U3PSAA						58	56	43	29									
S9X2B080U4PSAA					60	54	49	45	40	36	32							
S9X2C080U4PSAA						57	52	48	44	41	38	36	34	32	29			
S9X2C080U5PSAA					62	56	50	44	39	35	33	30						
S9X2C100U4PSAA								58	56	46	44	41	38	35	32	29		
S9X2C100U5PSAA								59	52	48	45	43	40	37	34	31		
S9X2D120U5PSAA							68	61	57	51	47	42	38	33				

Table 7. 1st Stage Heating Table — Downflow

CFM VS. 1ST STAGE TEMPERATURE RISE																		
MODEL	CFM (CUBIC FEET PER MINUTE)																	
	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100
S9X2B040D2PSAA	51	41	36	33	31	28	25											
S9X2B060D3PSAA				51	46	42	39	36	32	29	25							
S9X2B080D4PSAA					60	53	48	42	36	30								
S9X2C100D5PSAA							60	54	49	46	42	39	36	32	29			
S9X2D120D5PSAA								65	60	55	52	46	44	42	40	39	37	35

Maximum Vent Length Table

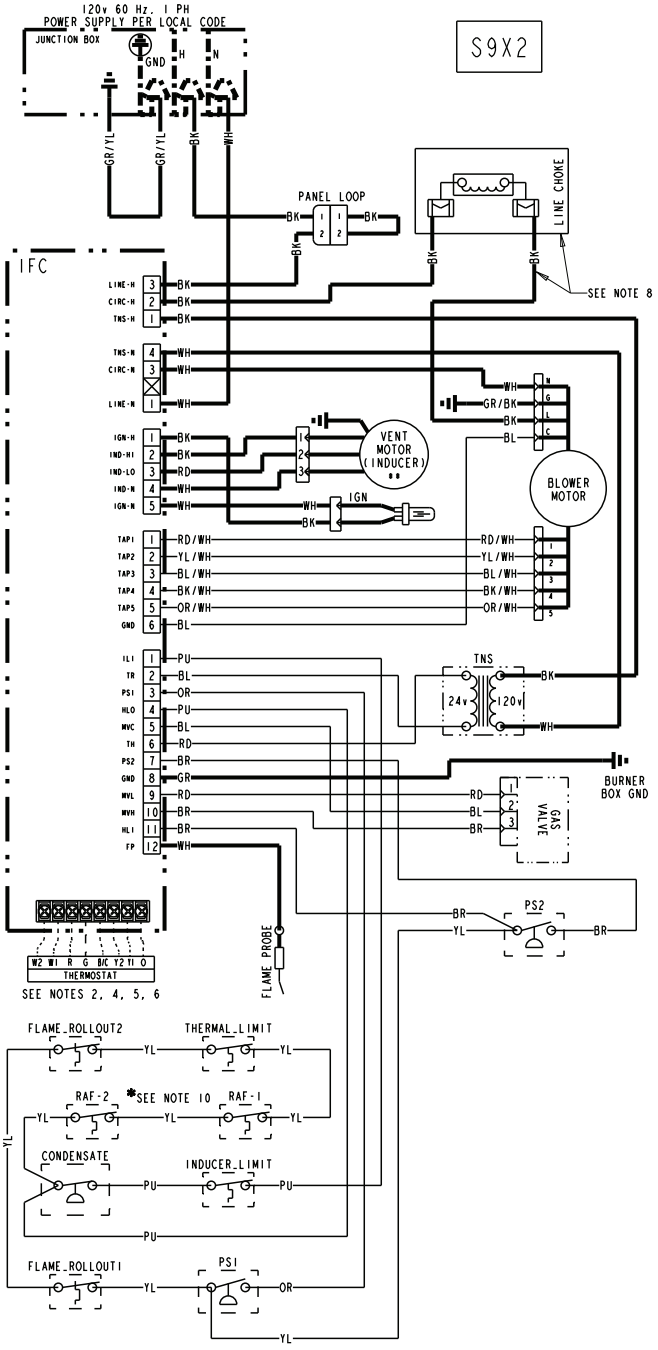
Maximum Vent Length Table	Maximum Total Equivalent Length In Feet for Vent and Inlet Air (See Notes)	
Model	2 Inch or 2.5 Inch Pipe	3 Inch or 4 Inch Pipe
Altitude 0–2,000 Feet		
S9X2B040U2PS, S9X2B040U3PS, S9X2B040D2PS, S9X2B060U3PS, S9X2B060D3PS, S9X2B060U4PS	200	200
S9X2B080U3PS, S9X2B080U4PS, S9X2B080D4PS, S9X2C080U4PS, S9X2C080U5PS	100	200
S9X2C100U4PS, S9X2C100U5PS, S9X2C100D5PS	50	200
S9X2D120U5PS, S9X2D120D5PS	Note 1	200
Altitude 2,001–5,400 Feet		
S9X2B040U2PS, S9X2B040U3PS, S9X2B040D2PS, S9X2B060U3PS, S9X2B060D3PS, S9X2B060U4PS	200	200
S9X2B080U3PS, S9X2B080U4PS, S9X2B080D4PS, S9X2C080U4PS, S9X2C080U5PS	80	120
S9X2C100U4PS, S9X2C100U5PS, S9X2C100D5PS	50	150
S9X2D120U5PS, S9X2D120D5PS	Note 1	200
Altitude 5,401–7,800 Feet		
S9X2B040U2PS, S9X2B040U3PS, S9X2B040D2PS, S9X2B060U3PS, S9X2B060D3PS, S9X2B060U4PS	100	150
S9X2B080U3PS, S9X2B080U4PS, S9X2B080D4PS, S9X2C080U4PS, S9X2C080U5PS	50	70
S9X2C100U4PS, S9X2C100U5PS, S9X2C100D5PS	Note 1	100
S9X2D120U5PS, S9X2D120D5PS	Note 1	100
Altitude 7,801–10,100 Feet		
S9X2B040U2PS, S9X2B040U3PS, S9X2B040D2PS, S9X2B060U3PS, S9X2B060D3PS, S9X2B060U4PS	90	90
S9X2B080U3PS, S9X2B080U4PS, S9X2B080D4PS, S9X2C080U4PS, S9X2C080U5PS	Note 1	50
S9X2C100U4PS, S9X2C100U5PS, S9X2C100D5PS	Note 1	50
S9X2D120U5PS, S9X2D120D5PS	Note 1	50

Notes:

1. Not allowed
2. **FOR DURAVENT MANUFACTURED MODULAR VENTING SYSTEMS THAT ARE IN THE APPROVED VENT PIPE MATERIAL TABLE, EQUIVALENT VENT LENGTHS MAY BE DIFFERENT FROM WHAT IS SHOWN ABOVE. REFER TO THE VENTING SYSTEM MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR APPROPRIATE VENTING DIAMETERS AND EQUIVALENT LENGTHS.**
3. Minimum vent length for all models: 15' equivalent.
4. DO NOT MIX PIPE DIAMETERS IN THE SAME LENGTH OF PIPE OUTSIDE THE FURNACE CABINET (Except adapters at the top of the furnace). If different inlet and vent pipe sizes are used, the vent pipe must adhere to the maximum length limit shown in the table above (See note 7 below for exception). The inlet pipe can be of a larger diameter, but never smaller than the vent pipe.
5. MAXIMUM PIPE LENGTHS MUST NOT BE EXCEEDED! THE LENGTH SHOWN IS NOT A COMBINED TOTAL, IT IS THE MAXIMUM LENGTH OF EACH (Vent or Inlet air pipes).
6. One SHORT radius 90° elbow is equivalent to 10' of 4" pipe, 10' of 3" pipe, or 8′ of 2" pipe. One LONG radius elbow is equivalent to 6' of 4" pipe, 7′ of 3" pipe, or 5' of 2" pipe. Two 45° elbows equal one 90° LONG elbow. One MITERED elbow is equivalent to 12′ of 3″ pipe or 12′ of 2″ pipe.
7. The termination tee or bend must be included in the total number of elbows. If the BAYAIR30AVENTA or BAYAIR30CNVENT termination kit is used, the equivalent length of pipe is 5 feet. For BAYVENT200B and BAYVENTCN200B the equivalent length is 0 feet.
8. For Canadian applications, venting systems must meet ULC-S636 requirements.
9. The INLET AIR of one pipe systems require the installation of a minimum of one 90° elbow (to prevent dust and debris from falling straight into the furnace).

S9X2 Wiring Diagram

S9X2 Wiring Diagram and Schematic



PS PRESSURE SWITCH
FRS FLAME ROLLOUT SWITCH
FP FLAME PROBE
IGN HOT SURFACE IGNITER
FUSE
LC LINE CHOKE
GROUND
CONDENSATE SWITCH
RAF REVERSE AIR FLOW
** INTERNAL THERMAL PROTECTION

LINE 24 V FACTORY WIRING
LINE 24 V FIELD WIRING

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

H	LINE	TH	24VAC (HOT)
N	NEUTRAL	TR	24VAC (COMMON)
GND	GROUND	MVC	VALVE COMMON
HLO	HIGH LIMIT OUTPUT	MVL	VALVE LOW STAGE
HLI	HIGH LIMIT INPUT	MVH	VALVE HIGH STAGE
PSI	1ST STAGE PRESSURE INPUT	TNS	TRANSFORMER
PS2	2ND STAGE PRESSURE INPUT	ILI	INDUCER LIMIT INPUT
IND	INDUCER	IGN	IGNITER
IFC	INTEGRATED FURNACE CONTROL	FP	FLAME PROBE
RAF	REVERSE AIR FLOW	HI	SECOND STAGE
		LO	FIRST STAGE

INTEGRATED FURNACE CONTROL

REPLACE WITH PART CNT07113
OR EQUIVALENT

ELECTRICAL RATING

INPUT: 24 VAC, 60 HZ.
XFMR SEC. CURRENT: 450 MA. + MV LOAD
MV OUTPUT: 1.5A @ 24 VAC
IND OUTPUT: 2.2 FLA,3.5 LRA @ 120 VAC MAX.
IGN OUTPUT: 2.0 A @ 120 VAC
CIRC. BLOWER OUTPUT: 14.5 FLA,25 LRA @ 120 VAC
HUMIDIFIER & AIR CLEANER
MAX. LOAD: 1.0 A @ 120 VAC
FUSE: 5A

TIMINGS

PREPURGE: 0 SEC.
INTERPURGE: 60 SEC.
POST PURGE: 5 SEC.
IGN WARMUP: 20 SEC.
IAP: 2; TFI: 5 SEC.
RETRIES: 2 RECYCLES: 10
HEAT ON DELAY: 30 SEC.
COOL ON DELAY: 0 SEC.
AUTO RESTART: 60 MIN.
AUTO RESTART PURGE: 60 SEC.

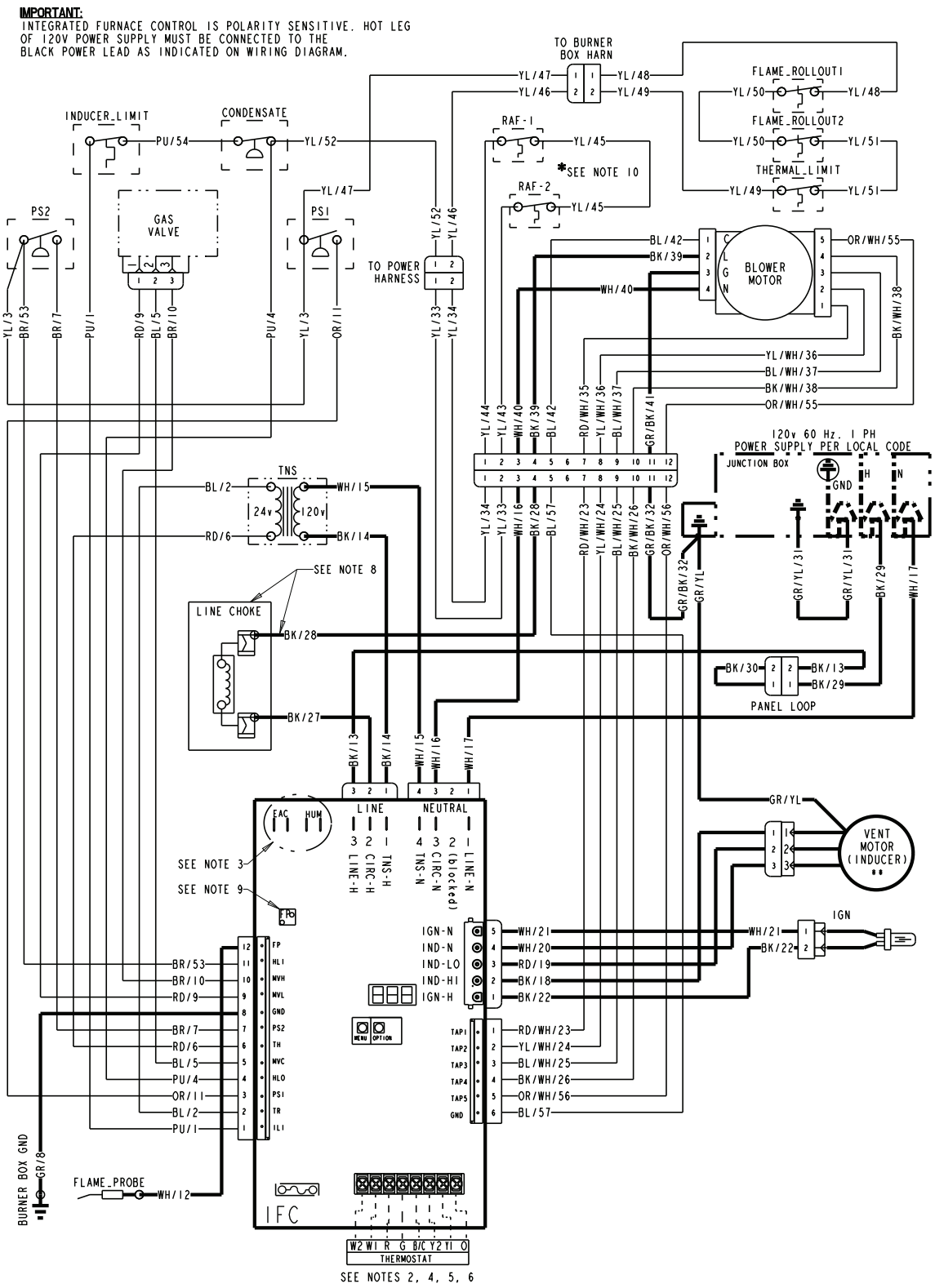
DEFAULT BLOWER MOTOR TAP SELECTIONS

CFP (CONSTANT FAN): TAP 1
CL1 (FIRST STAGE COOLING): TAP 2
CL2 (SECOND STAGE COOLING): TAP 4
HT1 (FIRST STAGE HEAT): TAP 2
HT2 (SECOND STAGE HEAT): TAP 5

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. FOR PROPER AIRFLOW IN COOLING/HEAT PUMP MODE, "Y1" MUST BE CONNECTED TO THE THERMOSTAT FOR SINGLE STAGE UNITS. FOR TWO STAGE UNITS, "Y1" AND "Y2" MUST BE CONNECTED TO THE THERMOSTAT.
3. EAC AND HUM ARE DRY CONTACTS WITH MAX. LOAD OF 1A @ 120V EACH.
4. FOR SINGLE STAGE THERMOSTATS, JUMPER "W1" AND "W2" TERMINALS. SECOND STAGE HEATING WILL BE ENERGIZED ONCE THE INTER-STAGE DELAY HAS EXPIRED. "HT2" WILL BE SHOWN ON SEVEN SEGMENT DISPLAY AT ALL TIMES.
5. FOR HEAT PUMP SYSTEMS, "Y1" AND "O" TERMINALS MUST BE CONNECTED TO THE ROOM THERMOSTAT. FOR TWO STAGE UNITS, "Y1", "Y2", AND "O" TERMINALS MUST ALL BE CONNECTED TO THE ROOM THERMOSTAT.
6. FOR TWO STAGE SYSTEMS, USE "Y1" FOR LOW SPEED AND "Y2" FOR HIGH SPEED CONNECTION TO THE LOW-VOLTAGE TERMINAL BLOCK. SINGLE STAGE SYSTEMS USE "Y1" FOR THE CONNECTION TO THE LOW-VOLTAGE TERMINAL BLOCK.
7. THE INDOOR BLOWER MOTOR AIRFLOW TABLES ARE LOCATED IN THE SERVICE FACTS. TO CHANGE AIRFLOW USE THE MENU/OPTIONS BUTTONS.
8. LINE CHOKE AND WIRE BK/28 ONLY USED ON MODELS WITH 3/4 AND 1 HP MOTORS.
9. FLAME SENSE TEST PADS: 1 VDC = 1 MICROAMP. FLAME CURRENT CAN VARY DEPENDING ON THE VOM THAT IS USED AND THE VOLTAGE SUPPLIED TO THE FURNACE. THE ACCEPTABLE RANGE IS 0.75-3 MICROAMPS.
10. DOWNFLOW MODELS USE ONLY ONE REVERSE AIRFLOW SWITCH.

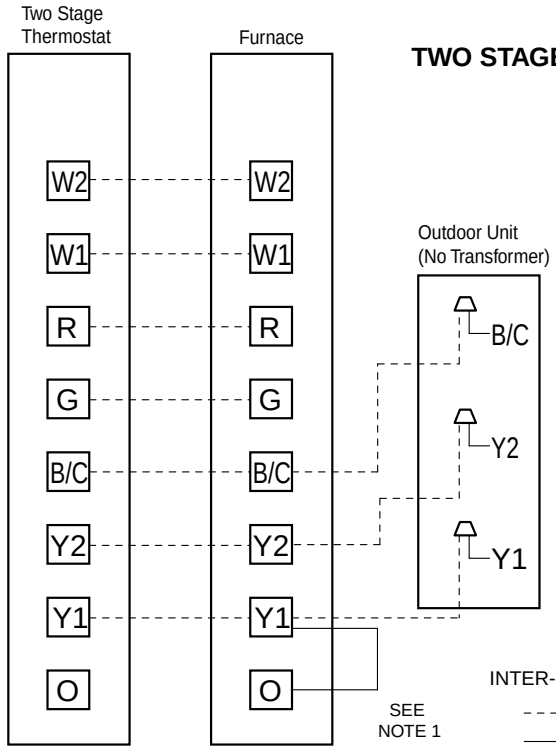
SEE D345788P01.DRW FOR TRI-FOLD ARTWORK


IMPORTANT:
INTEGRATED FURNACE CONTROL IS POLARITY SENSITIVE. HOT LEG OF 120V POWER SUPPLY MUST BE CONNECTED TO THE BLACK POWER LEAD AS INDICATED ON WIRING DIAGRAM.
TO BURNER BOX HARN
FLAME_ROLLOUT1
FLAME_ROLLOUT2
THERMAL_LIMIT
INDUCER_LIMIT
CONDENSATE
RAF-1
RAF-2
*SEE NOTE 10
PS2
PS1
GAS VALVE
TO POWER HARNESS
BLOWER MOTOR
120v 60 Hz. 1 PH POWER SUPPLY PER LOCAL CODE
JUNCTION BOX
GND
TNS
24v
120v
SEE NOTE 8
LINE CHOKE
PANEL LOOP
VENT MOTOR (INDUCER) **
IGN
SEE NOTE 3
SEE NOTE 9
EAC
HUM
LINE
NEUTRAL
IGN-N
IND-N
IND-LO
IND-HI
IGN-H
TAP1
TAP2
TAP3
TAP4
TAP5
GND
MENU
OPTION
IFC
FLAME_PROBE
BURNER BOX GND
THERMOSTAT
W2 W1 R G B/C Y2 Y1 O
SEE NOTES 2, 4, 5, 6

Electrical Connections

Make wiring connections to the unit as indicated on enclosed wiring diagram. As with all gas appliances using electrical power, this furnace shall be connected into a permanently live electric circuit. It is recommended that furnace be provided with a separate "circuit protection device" electric circuit. The furnace must be electrically grounded in accordance with local codes or in the absence of local codes with the National Electrical Code, ANSI/NFPA 70 or CSA C22.1 Electrical Code, if an external electrical source is utilized. ***The integrated furnace control is polarity sensitive.*** The hot leg of the 120V power supply must be connected to the black power lead as indicated on the wiring diagram. Refer to the SERVICE FACTS literature and unit wiring diagram attached to furnace.

Field Wiring



FIELD WIRING DIAGRAM FOR
TWO STAGE HEATING THERMOSTAT, TWO STAGE COOLING

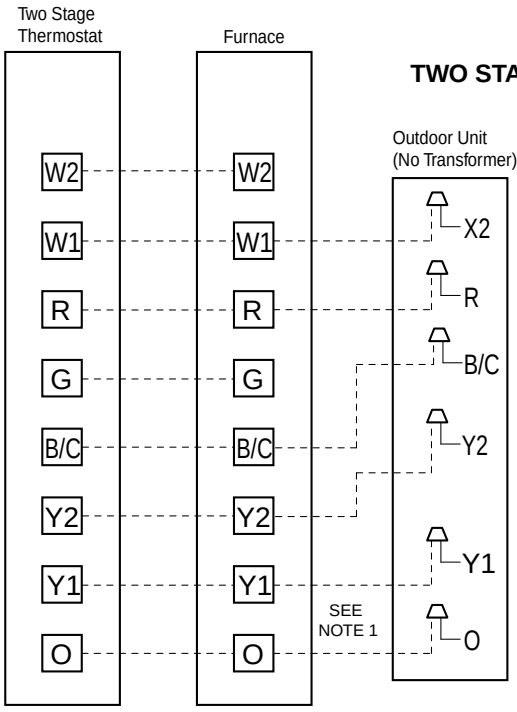
NOTES:

1) The factory Y1-O jumper must remain in place for proper LED read out in cooling mode.
2) Y1 and Y2 wiring from the thermostat must connect to the IFC for proper airflow and LED readout.
3) Single compressor and two stage airflow is automatically set with the IFC Menu options in ODU section.
   2-1=2 stage / 1 compressor
   Note: First stage airflow should be set to deliver between 70-80% of second stage airflow

INTER-COMPONENT WIRING

- - - - - - - - - 24 V FIELD WIRING

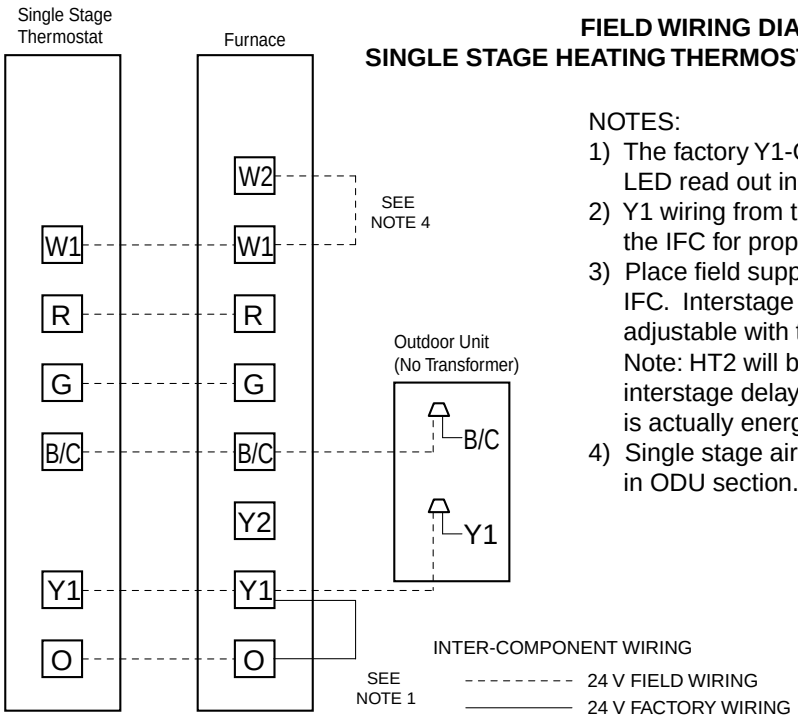
———— 24 V FACTORY WIRING



FIELD WIRING DIAGRAM FOR
TWO STAGE HEATING THERMOSTAT, TWO STAGE HEAT PUMP

NOTES:
1) Remove the factory Y1-O jumper for HP systems for proper LED read out.
2) Y1 and Y2 wiring from the thermostat must connect to Y1 and Y2 of the IFC for proper airflow and LED readout.
3) Single compressor and two stage airflow is automatically set with the IFC Menu options in ODU section.
   2-1=2 stage / 1 compressor
   Note: First stage airflow should be set to deliver between 70-80% of second stage airflow

INTER-COMPONENT WIRING
- - - - - - - - - 24 V FIELD WIRING
——————— 24 V FACTORY WIRING

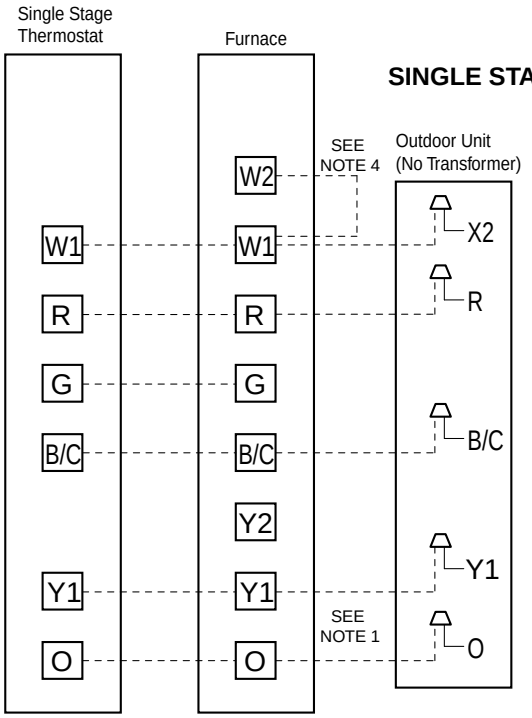


FIELD WIRING DIAGRAM FOR
SINGLE STAGE HEATING THERMOSTAT, SINGLE STAGE COOLING

NOTES:
1) The factory Y1-O jumper must remain in place for proper LED read out in cooling mode.
2) Y1 wiring from the thermostat must connect to Y1 of the IFC for proper airflow and LED readout.
3) Place field supplied jumper between W1 and W2 on the IFC. Interstage delay is factory set for 10 minutes but is field adjustable with the Menu option in the ISD section.
   Note: HT2 will be shown during the entire heating cycle but the interstage delay setting will control when 2nd stage heating is actually energized.
4) Single stage airflow is set with the IFC Menu options in ODU section. Select 1-1.

INTER-COMPONENT WIRING
- - - - - - - - - 24 V FIELD WIRING
——————— 24 V FACTORY WIRING

FIELD WIRING DIAGRAM FOR
SINGLE STAGE HEATING THERMOSTAT, SINGLE STAGE HEAT PUMP



NOTES:

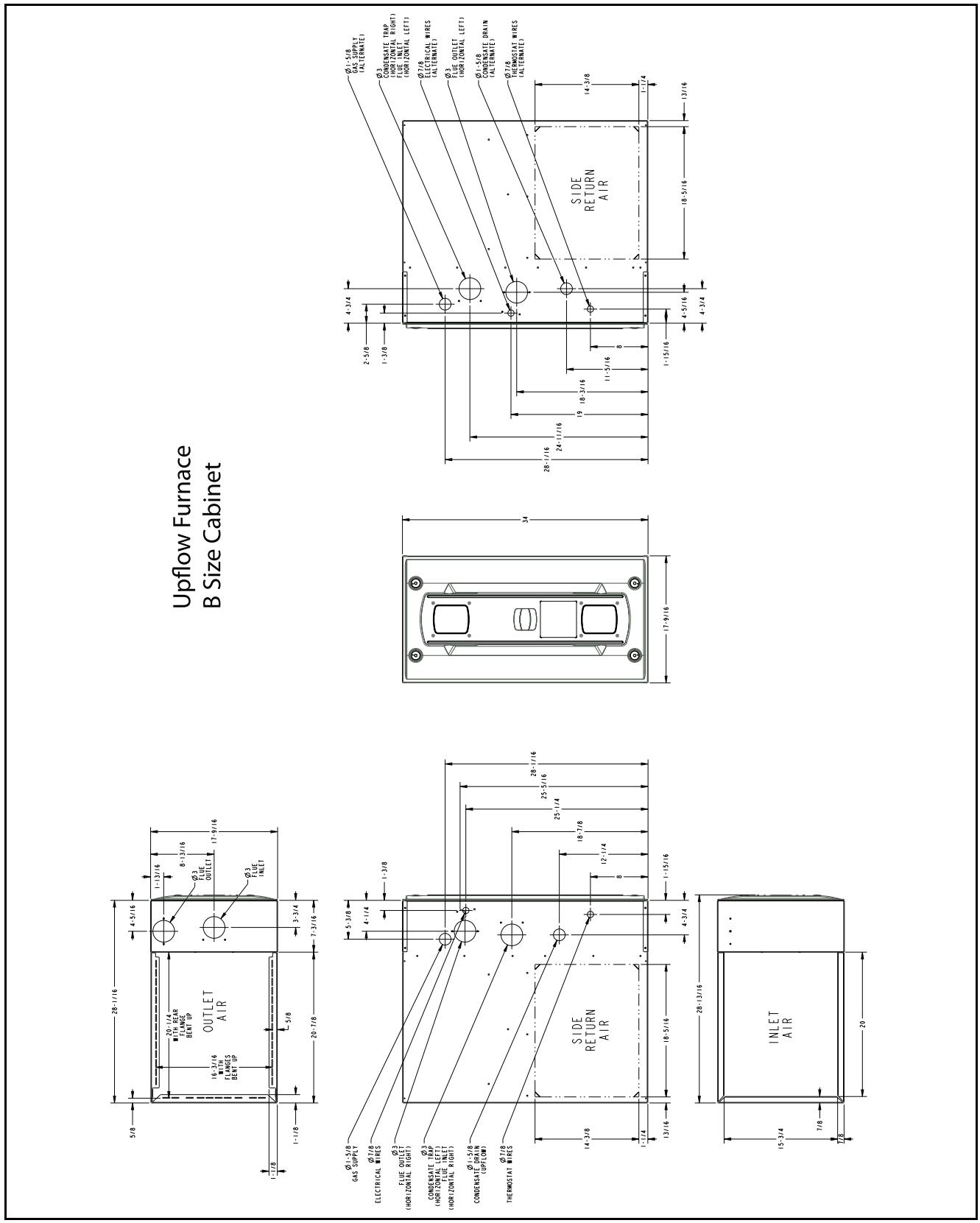
1) Remove the factory Y1-O jumper for HP systems for proper LED read out.
2) Y1 wiring from the thermostat must connect to Y1 of the IFC for proper airflow and LED readout.
3) Place field supplied jumper between W1 and W2 on the IFC. Interstage delay is factory set for 10 minutes but is field adjustable with the Menu option in the ISD section.
   Note: HT2 will be shown during the entire heating cycle but the interstage delay setting will control when 2nd stage heating is actually energized.
4) Single stage airflow is set with the IFC Menu options in ODU section. Select 1-1.

INTER-COMPONENT WIRING

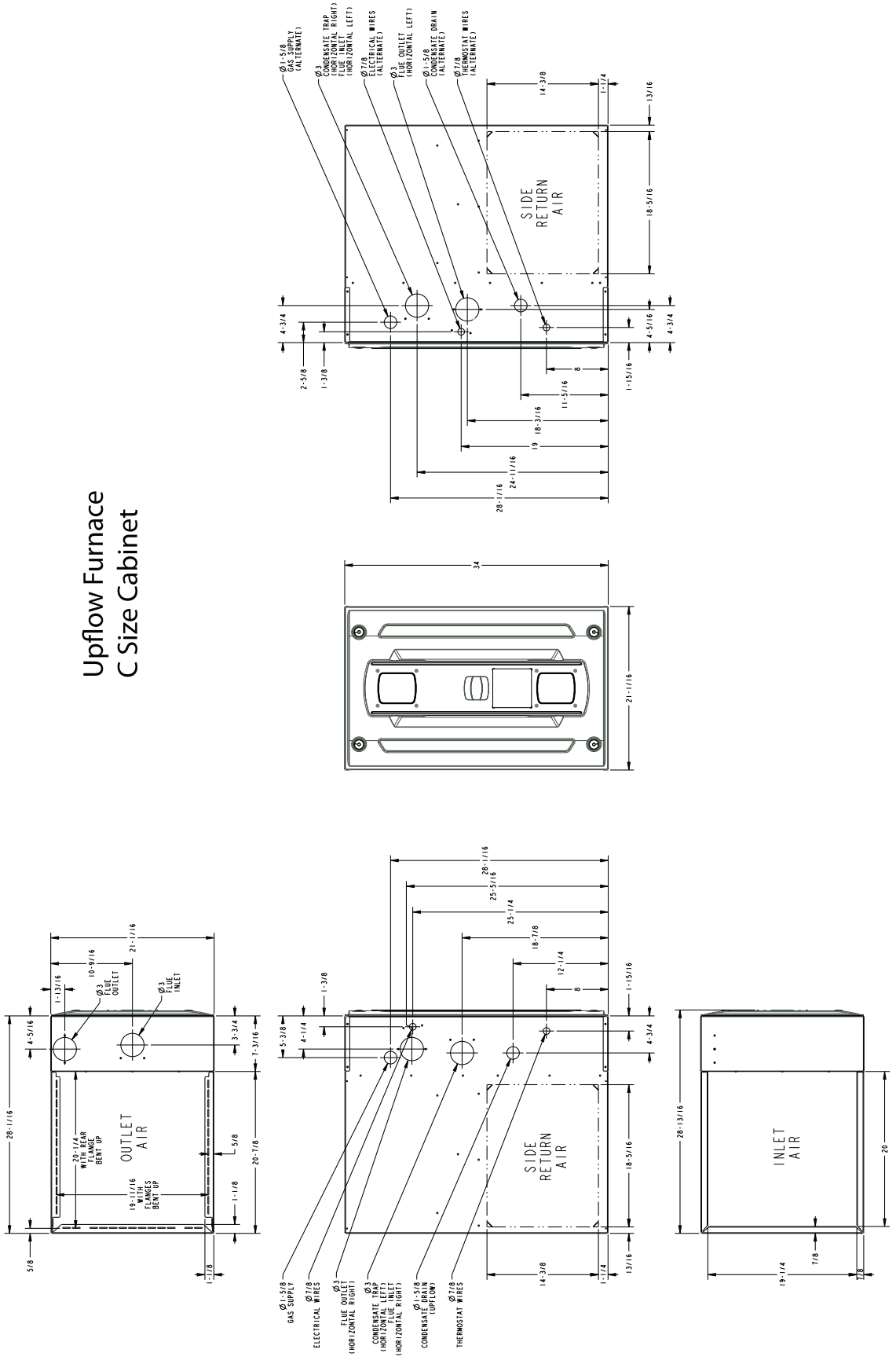
- - - - - - - - - 24 V FIELD WIRING

———————— 24 V FACTORY WIRING

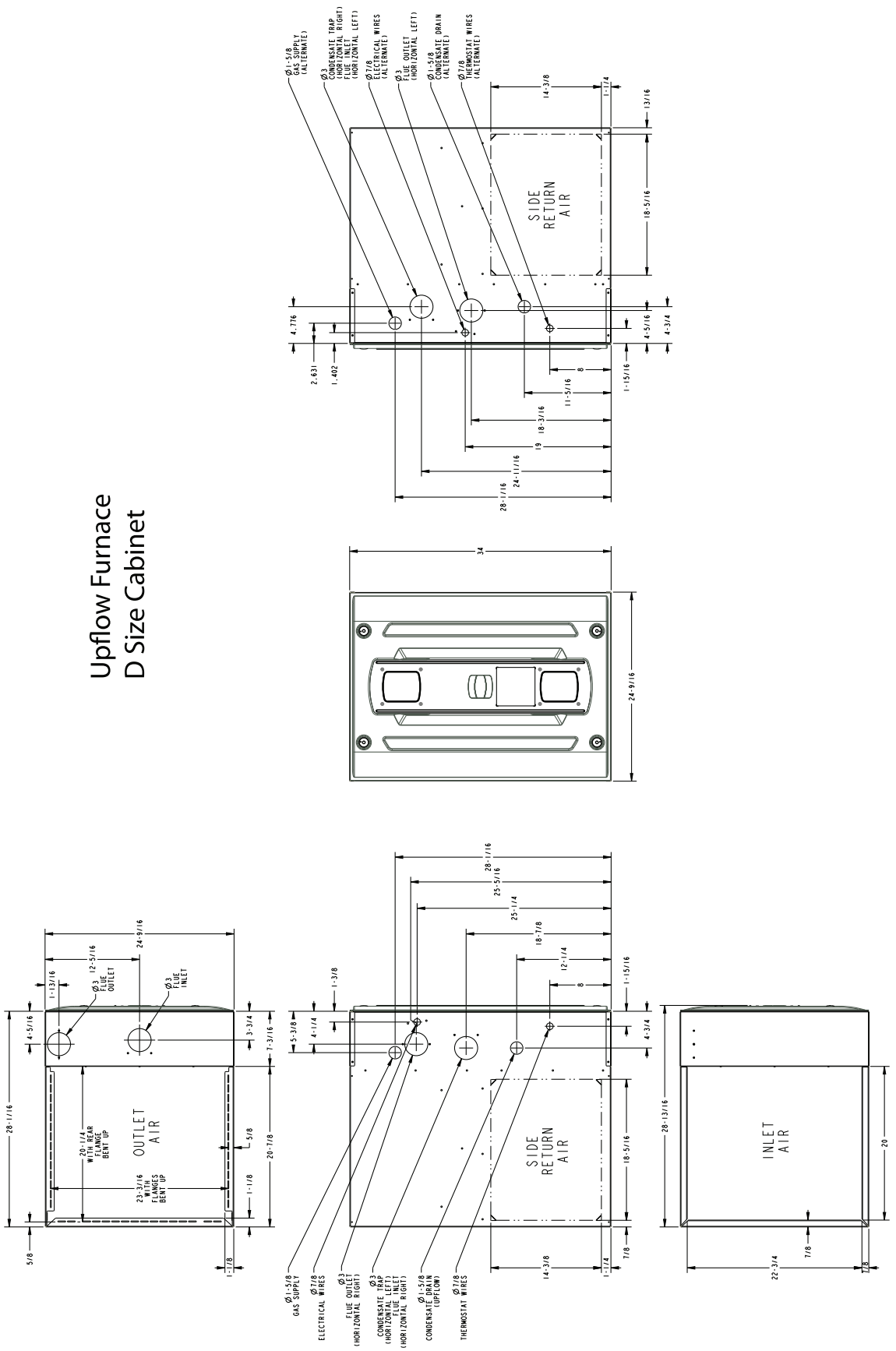
Outline Drawings

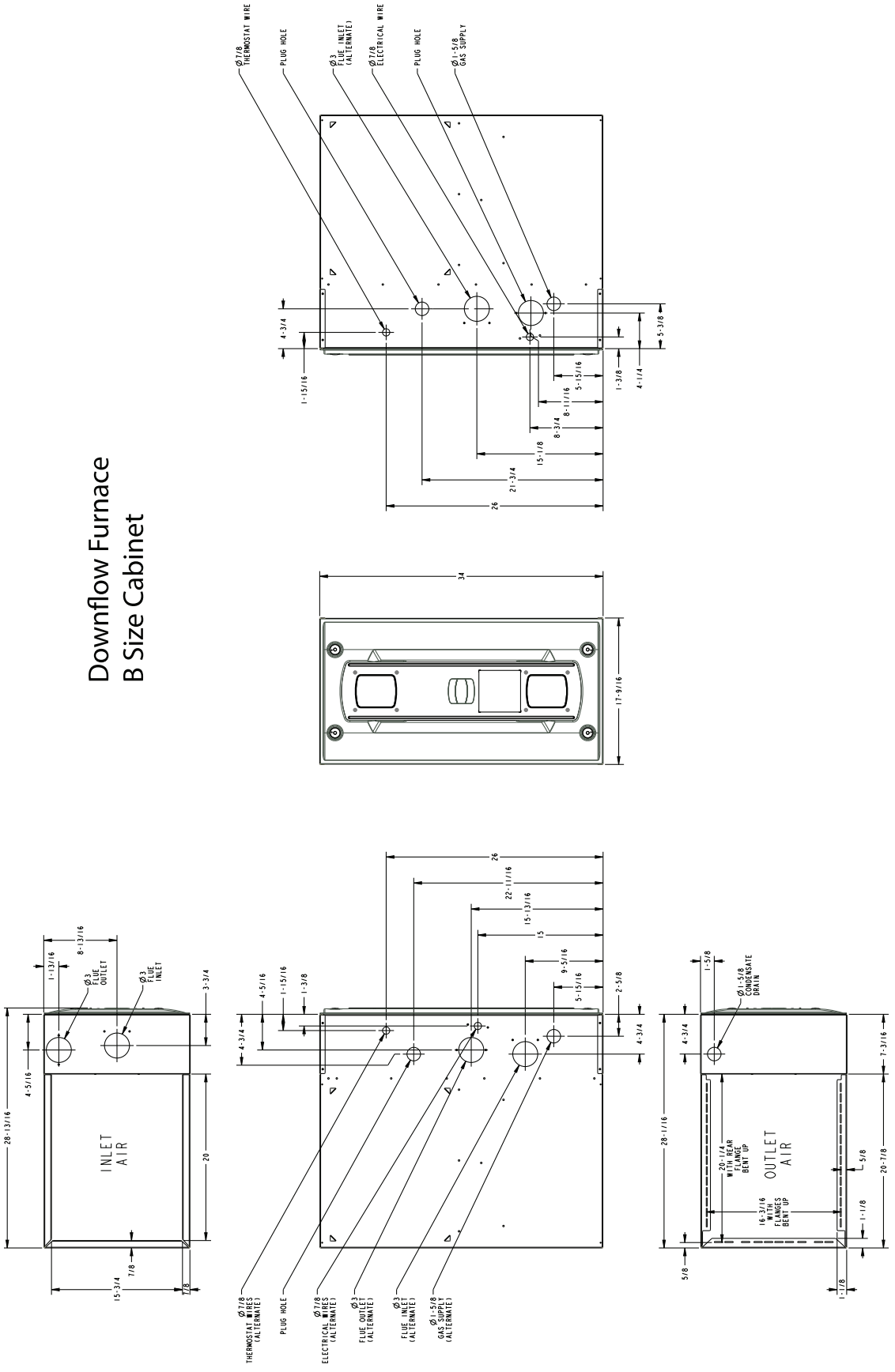


Upflow Furnace
C Size Cabinet

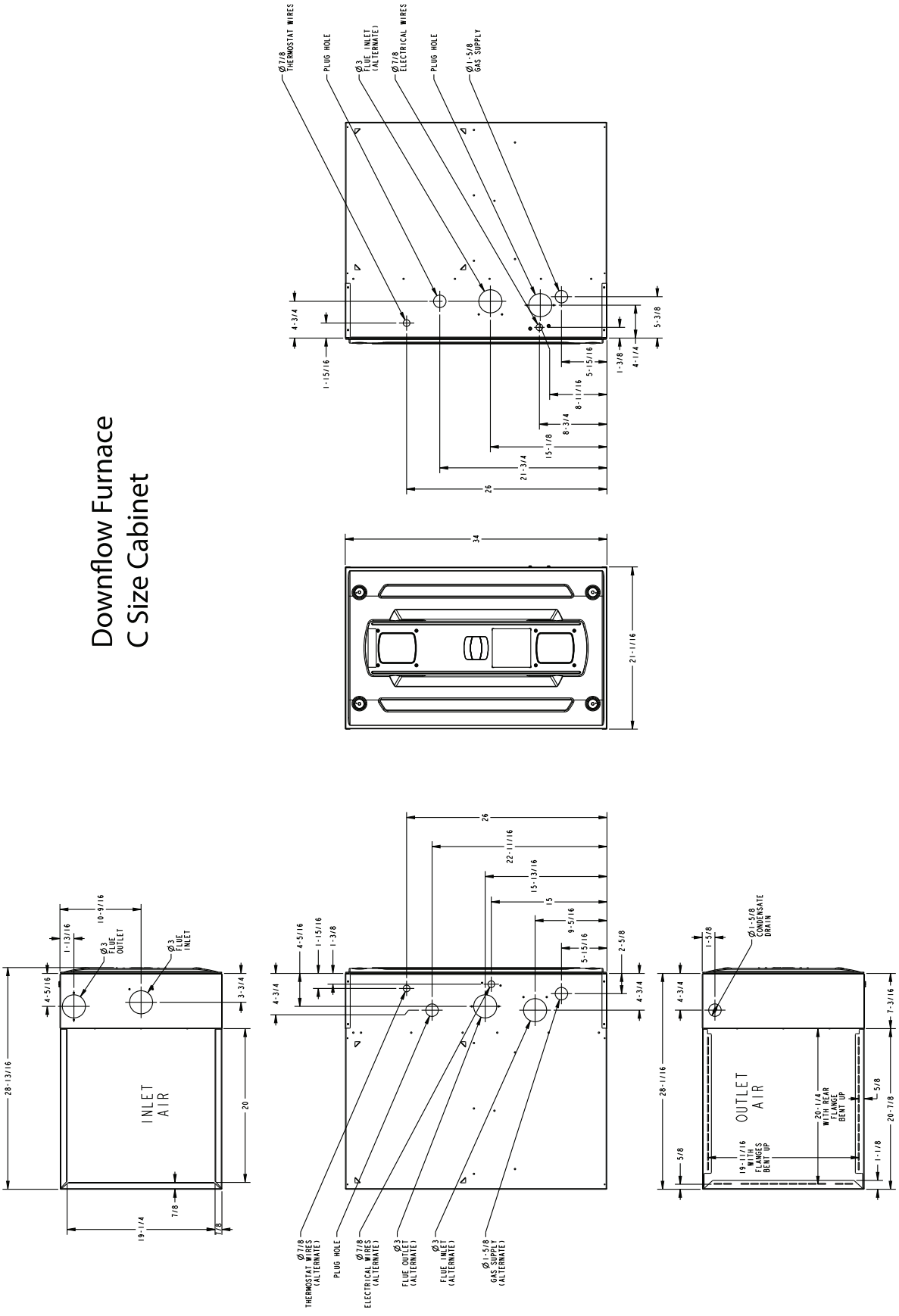


Upflow Furnace
D Size Cabinet

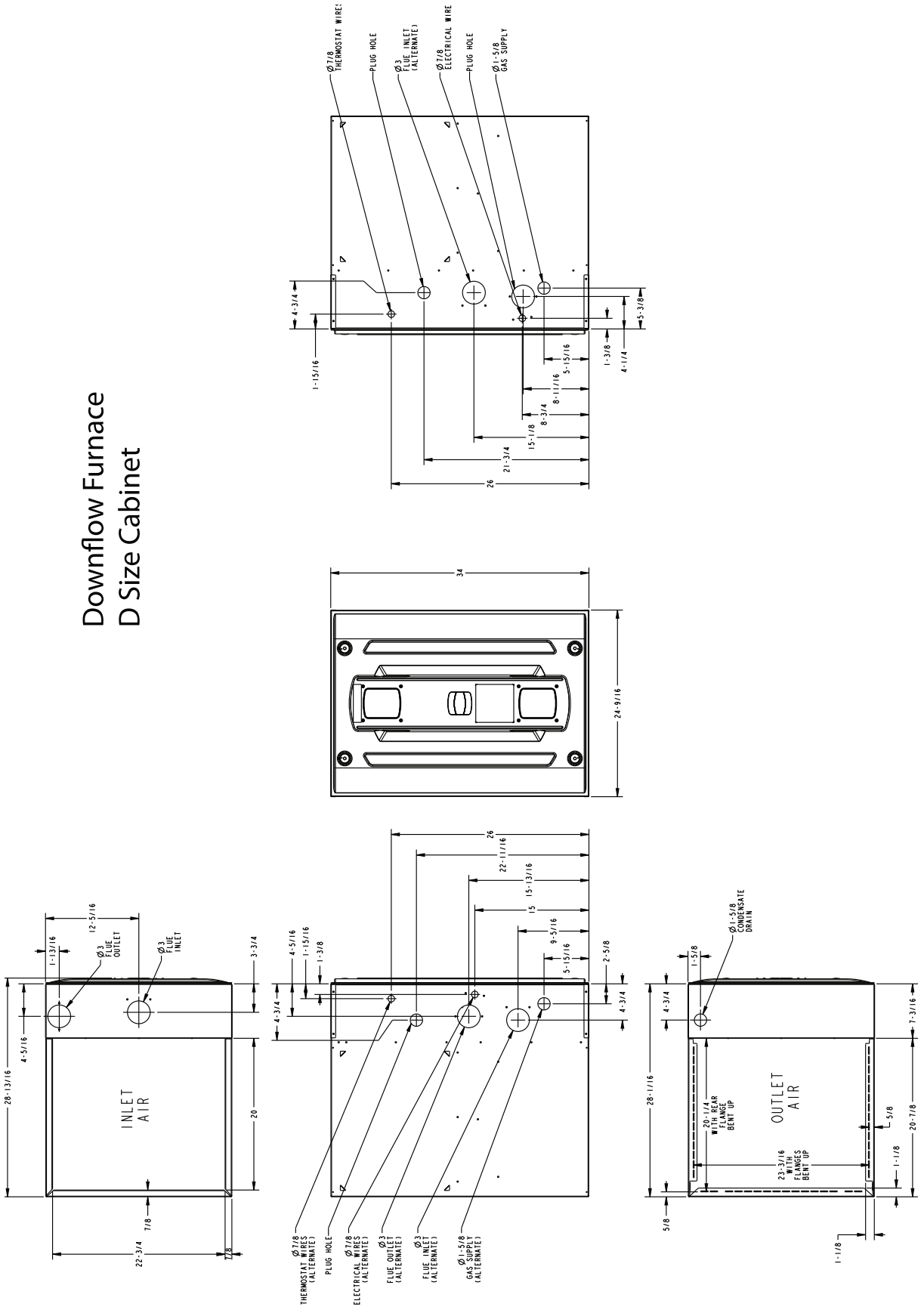



Downflow Furnace
B Size Cabinet
Ø7/8 THERMOSTAT WIRE
PLUG HOLE
Ø3 FLUE INLET (ALTERNATE)
Ø7/8 ELECTRICAL WIRE
PLUG HOLE
Ø1-5/8 GAS SUPPLY
4-3/4
1-15/16
5-3/8
1-3/8
4-1/4
5-15/16
8-11/16
8-3/4
15-1/8
21-3/4
26
34
17-9/16
INLET AIR
Ø3 FLUE OUTLET
Ø3 FLUE INLET
8-13/16
1-13/16
3-3/4
4-5/16
28-13/16
20
15-3/4
7/8
1-15/16
1-3/8
2-5/8
9-5/16
15
15-13/16
22-11/16
Ø7/8 THERMOSTAT WIRES (ALTERNATE)
PLUG HOLE
Ø7/8 ELECTRICAL WIRES (ALTERNATE)
Ø3 FLUE OUTLET (ALTERNATE)
Ø3 FLUE INLET (ALTERNATE)
Ø1-5/8 GAS SUPPLY (ALTERNATE)
Ø1-5/8 CONDENSATE DRAIN
1-5/8
7-3/16
20-1/4 WITH REAR FLANGE BENT UP
OUTLET AIR
16-3/16 WITH FLANGES BENT UP
20-7/8
1-1/8
5/8

Downflow Furnace
C Size Cabinet



Downflow Furnace
D Size Cabinet



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Supersedes (New)