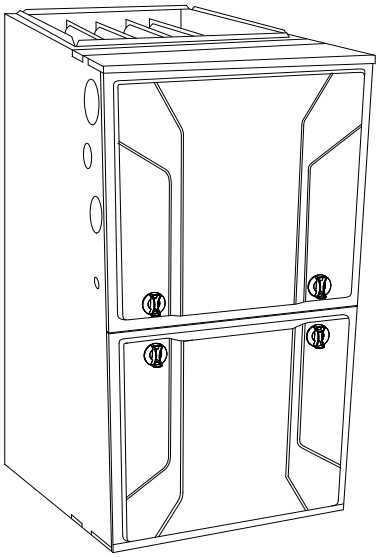
926SA
Preferred™ Single-Stage, Variable Speed Non-Communicating, 4-Way Multipoise 35-in. (889 mm) Tall Condensing Gas Furnace

bryant®

Product Data



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The 926SA Multipoise Preferred™ single-stage Condensing Gas Furnace features a variable-speed constant-torque ECM motor to provide a range of airflow options for installation flexibility. This motor is a great match-up for two-stage cooling and allows advanced dehumidification capability when paired with thermostat with dehumidification capability. With an Annual Fuel Utilization Efficiency (AFUE) up to 96.2% AFUE, this furnace provides exceptional savings when compared to standard gas furnaces. This Preferred Gas Furnace also features 4-way multipoise, can be vented for direct vent/two-pipe, ventilated combustion air or single-pipe applications for installation flexibility. All sizes are design certified in Canada. Select sizes can be twinned when using the approved accessory kit.

PERFORMANCE

- Variable-speed, Constant-Torque ECM blower motor, and single-stage gas valve.
- Fully-insulated casing including blower section.
- Aluminized-steel primary heat exchanger.
- Stainless-steel condensing secondary heat exchanger.
- Silicon Nitride Perfect Heat™ Hot Surface Igniter.
- Adjustable blower speed for heating, cooling, continuous fan, and dehumidification.
- Fan On Plus™ technology allows control of continuous fan speed from a compatible thermostat.

INSTALLATION FLEXIBILITY

- 4-way multipoise design for upflow, downflow or horizontal installations, with unique vent elbow and optional through-the-cabinet downflow venting capability.
- Factory-configured ready for upflow applications.
- Installation flexibility: sidewall or vertical vent.
- Ideal height 35” (889 mm) cabinet: short enough for taller coils, but still allows enough room for service.
- Direct-vent/sealed combustion, single-pipe venting or ventilated combustion air.

APPLICATIONS

- Convertible to propane with gas conversion accessory kit.
- Convenient Air Purifier and Humidifier connections.
- Twinning capable with accessory kit on select sizes.

CERTIFICATIONS

- All sizes meet ENERGY STAR® Version 4.1 criteria for gas furnaces: 95.0%+ AFUE.
- Cabinet air leakage less than 2.0% at 1.0 in. W.C. and cabinet air leakage less than 1.4% at 0.5 in. W.C. when tested in accordance with ASHRAE standard 193.
- All sizes can be installed in air quality management districts with a 40 ng/J NOx emissions requirement

Preferred™ SERIES

ENERGY STAR

DESIGN CERTIFIED®

CERTIFIED®

AHRI CERTIFIED™ www.ahridirectory.org

Use of the AHRI Certified™ Mark indicates a manufacturer’s participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.

Certified System™

ISO 9001 Quality

FACTORY AUTHORIZED PARTS ENGINEERED QUALITY

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FURNACE SIZE	CASING DIMENSIONS (IN.)			RATED HEATING OUTPUT (BTUH)*	AFUE		ENERGY STAR	HEATING AIRFLOW		COOLING CFM @ 0.5 ESP (in. W.C.)	MOTOR HP
	H	D	W		UPFLOW/ HZ	DOWN-FLOW		CFM Heating	Heating ESP (in. W.C.)		
30040V14	35	29.50	14.20	39,000	96.0%	95.0%	YES	785	0.10	1030	1/2
36040V17	35	29.50	17.50	39,000	96.2%	95.0%	YES	740	0.10	1105	1/2
36060V14	35	29.50	14.20	58,000	95.0%	95.0%	YES	970	0.12	1115	1/2
42060V17	35	29.50	17.50	58,000	96.2%	95.0%	YES	1080	0.12	1555	3/4
48080V17	35	29.50	17.50	78,000	96.2%	95.0%	YES	1355	0.12	1655	3/4
60080V21	35	29.50	21.00	78,000	96.2%	95.0%	YES	1485	0.12	2090	1
60100V21	35	29.50	21.00	97,000	96.2%	95.0%	YES	1810	0.15	2160	1
66120V24	35	29.50	24.00	116,000	96.1%	95.0%	YES	2035	0.20	2250	1

*. Capacity in accordance with DOE test procedures. Ratings are position dependent. See rating plate.
ESP - External Status Pressure

FEATURES AND BENEFITS

SmartEvap™ Technology - When paired with a compatible thermostat, this dehumidification feature overrides the cooling blower off-delay when there is a call for dehumidification. By deactivating the blower off-delay, SmartEvap technology prevents condensate that remains on the coil after a dehumidification cycle from re-humidifying throughout the home. This results in reduced humidity and a more comfortable indoor environment for the homeowner.

Unlike competitive systems, SmartEvap technology only overrides the cooling blower off delay when humidity control is needed. Once humidity is back in control, SmartEvap re-enables the energy-saving cooling blower off-delay.

Fan On Plus™ Technology - Sometimes the constant fan setting on a standard furnace system can actually reduce homeowner comfort by providing too much or too little air! Fan On Plus technology improves comfort all year long by allowing the homeowner to select the continuous fan speed of their choice using a compatible thermostat.

HYBRID HEAT® Dual Fuel - This system can provide more control over your monthly energy bills by automatically selecting the most economical method of heating. With HYBRID HEAT® Dual Fueldual fuel, our system automatically switches between the gas furnace and the electric heat pump as outside temperatures change to maintain greater efficiency and comfort than with any traditional single-source heating system. The heat pump also delivers high-efficiency cooling in the summer.

Perfect Heat™ **Robust Igniter** - Bryant's unique SiN igniter is not only physically robust is also electrically robust. It is capable of running at line voltage and does not require complex voltage regulators. This unique feature further enhances the gas furnace reliability and continues Bryant's tradition of technology leadership and innovation in providing a reliable and durable product.

ECM Motors - Our variable-speed, constant torque ECM (Electronically Commutated Motor) optimizes comfort levels in the home year round; features such as passive/active dehumidification, ramping profiles, and quiet operation. It can provide cooling match enhancements to increase the effective SEER of select Bryant air conditioner or heat pump systems. This motor does not report back RPM and static pressure to the furnace control.

Reliable Heat Exchanger Design - The aluminized steel, clam shell primary heat exchanger features a crimped, no-weld seam to create an efficient, robust design for this essential component.

The condensing heat exchanger, a stainless steel fin and tube design, is positioned in the furnace to extract additional heat. Stainless steel coupling box componentry between heat exchangers has exceptional corrosion resistance in both natural gas and propane applications.

Optional Media Filter Cabinet - Enhanced indoor air quality in the home is made easier with our media filter cabinet (available as an accessory). When installed as a part of the system, this cabinet allows for easy and convenient addition of a Bryant high efficiency air filter.

4-Way Multipoise Design - One model for all applications – there is no need to stock special downflow or horizontal models when one unit will do it all.

Direct or Single-pipe Venting, or Optional Ventilated Combustion Air - This furnace can be installed as a 2-pipe (Direct Vent) furnace, in an optional ventilated combustion air application, or in single-pipe, non-direct vent applications. This provides added flexibility to meet diverse installation needs.

Sealed Combustion System - This furnace brings in combustion air from outside the furnace, which results in especially quiet operation. By sealing the entire combustion vestibule, the entire furnace can be made quieter, not just the burners.

Insulated Casing - Foil-faced insulation in heat exchanger section of the casing minimizes heat loss. The acoustical insulation in the blower compartment reduces air and motor noise for quiet operation.

Monoport Burners - The burners are specially designed and finely tuned for smooth, quiet combustion and economical operation.

Bottom Closure - Factory-installed for side return; easily removable for bottom return. The multi-use bottom closure can also serve for roll-out protection in horizontal applications, and act as the bottom closure for the optional return air base accessory.

Certifications - This furnace is CSA (AGA and CGA) design certified for use with natural and propane gases. The furnace is factory-shipped for use with natural gas. A CSA listed gas conversion kit is required to convert furnace for use with propane gas. The efficiency is AHRI efficiency rating certified.

MODEL NUMBER NOMENCLATURE

1 Heat Exchanger 9	2 Tier/NOx 8	3 AFUE/NOx 7	4 Heating Stages M	5 Major Series B	6, 7 Cooling Capacity (CFM) 42	8 - 10 Heat Input 060	11 Motor Type C	12 - 13 Width 17	14 Voltage (1-phase) A	15 Un-used -	16 Minor Series A
8 = 80% 9 = 90+%	0 = Base 1 = Legacy Line 2 = Preferred 3 = Ultra Low Nox 8 = Evolution	0 = 80% 1 = 80% Low Nox ---- 2 = 92% 5 = 95% 6 = 96% 7 = 97% 8 = 98%	M = Modulating S = Single Stage T = Two-Stage	A B C D ---	24 = 800 CFM 30 = 1000 CFM 36 = 1200 CFM 42 = 1400 CFM 48 = 1600 CFM 60 = 2000 CFM 66 = 2200 CFM	026 = 26,000 BTU/h 040 = 40,000 BTU/h 060 = 60,000 BTU/h ---	C = Comm. Variable-Speed Constant Airflow (VCA) ECM E= Fixed-Speeds Constant Torque (FCT) ECM V = Variable-Speed Constant Torque (VCT) ECM	14 = 14.2" 17 = 17.5" 21 = 21.0" 24 = 24.5"	A = 110V/60Hz B = 230V/50Hz	-	A B C ---

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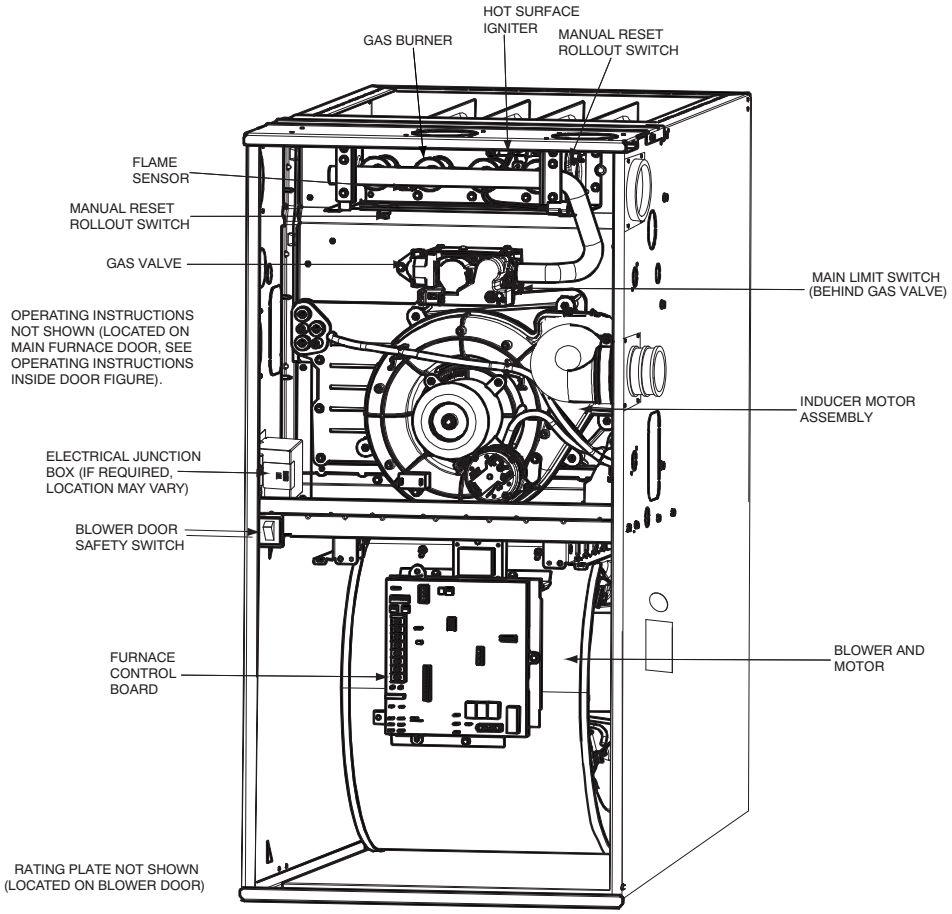
FURNACE COMPONENTS



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SPECIFICATIONS

The furnace should be sized to provide 100 percent of the design heating load requirement plus any margin that occurs because of furnace model size capacity increments. None of the furnace model sizes can be used if the heating load is 20,000 BTU or lower. Use Air Conditioning Contractors of America (Manual J and S); American Society of Heating, Refrigerating, and Air-Conditioning Engineers; or other approved engineering method to calculate heating load estimates and select the furnace. Excessive oversizing of the furnace may cause the furnace and/or vent to fail prematurely, customer discomfort and/or vent freezing.

Failure to follow these guidelines is considered faulty installation and/or misapplication of the furnace; and resulting failure, damage, or repairs may impact warranty coverage.

Heating Capacity and Efficiency		30040V14	36040V17	36060V14	42060V17	48080V17	60080V21	60100V21	66120V24
Input	Heat (BTUH)	40,000	40,000	60,000	60,000	80,000	80,000	100,000	120,000
Output	Heat (BTUH)	39,000	39,000	58,000	58,000	78,000	78,000	97,000	117,000
Certified Temperature Rise Range °F (°C)	Heating	40 - 70 (22 - 39)	40 - 70 (22 - 39)	45 - 75 (25 - 42)	40 - 70 (22 - 39)	40 - 70 (22 - 39)	40 - 70 (22 - 39)	40 - 70 (22 - 39)	40 - 70 (22 - 39)
Airflow Capacity and Blower Data									
Rated External Static Pressure (in. w.c.)	Heating	0.10	0.10	0.12	0.12	0.12	0.12	0.15	0.20
	Cooling	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Airflow Delivery @ Rated ESP (CFM)	Heating	785	740	970	1080	1355	1485	1810	2035
	Cooling	1030	1105	1115	1555	1655	2090	2160	2250
Cooling Capacity (tons) @ 400, 350 CFM/ton	400 CFM/ton	2	2.5	2.5	3.5	4	5	5	5
	350 CFM/ton	2.5	3	3	4	4.5	5.5	5.5	6
Direct-Drive Motor Type		Electronically Commutated Motor (ECM)							
Direct-Drive Motor HP		1/2	1/2	1/2	3/4	3/4	1	1	1
Motor Full Load Amps Default		6.3	6.5	6.3	9.6	9.2	12.0	11.7	11.7
RPM Range		600 - 2000	400 - 1200	600 - 2000	400 - 1200	400 - 1200	400 - 1300	400 - 1200	400 - 1200
Blower Wheel Dia x Width	in.	11 x 7	11 x 8	11 x 7	11 x 8	11 x 8	11 x 10	11 x 10	11 x 11
Air Filtration System		Field Supplied Filter							
Filter Used for Certified Watt Data		325531-40*							
Electrical Data									
Input Voltage	Volts-Hertz-Phase	115-60-1							
Operating Voltage Range	Min-Max	104-127							
Maximum Input Amps Default	Amps	7.0	7.2	7.1	10.4	10.0	12.8	12.6	12.6
Unit Ampacity Default	Amps	9.7	10	9.8	13.9	13.4	16.9	16.7	16.7
Minimum Wire Size Default	AWG	14	14	14	14	14	12	12	12
Maximum Wire Length @ Minimum Wire Size Default	Feet	38	37	38	26	27	34	34	34
	(M)	(11.7)	(11.4)	(11.5)	(8.1)	(8.4)	(10.3)	(10.5)	(10.5)
Maximum Fuse/Ckt Bkr (Time-Delay Type Recommended)Default	Amps	15	15	15	15	15	20	20	20
Transformer Capacity (24vac output)		VA							
External Control Power Available	Heating	24.3 VA							
	Cooling	34.6 VA							
Controls									
Gas Connection Size		1/2" - NPT							
Burners (Monoport)		2	2	3	3	4	4	5	6
Gas Valve (Redundant)	Manufacturer	White Rodgers							
Minimum Inlet Gas pressure (in. wc)		4.50							
Maximum Inlet Gas pressure (in. wc)		13.60							
Manufactured (Mobile) Home Kit		Not approved for MH use							
Ignition Device		Silicon Nitride							
Heating Blower Control (Heating Off-Delay)		Adjustable: 90, 120, 150, 180 seconds							
Cooling Blower Control (Time Delay Relay)		90 seconds							
Communication System		None							
Thermostat Connections		R, W, Y/Y2, Y1, G, Com 24V, DHUM							
Accessory Connections		EAC (115vac); HUM (24vac); 1 and 2-stg. AC (via Y/Y2 and Y1)							

*. See Accessory List for Part numbers available

ACCESSORIES

DESCRIPTION	PART NUMBER	30040V14	36040V17	36060V14	42060V17
Vent Kit - Through the Cabinet	KGADC0101BVC	X	X	X	X
Vent Terminal - Concentric - 2” (51 mm)	KGAVT0701CVT	See Venting Tables			
Vent Terminal - Concentric - 3” (76 mm)	KGAVT0801CVT				
Vent Terminal Bracket - 2” (51 mm)	KGAVT0101BRA				
Vent Terminal Bracket - 3” (76 mm)	KGAVT0201BRA				
Vent Kit - Rubber Coupling	KGAAC0101RVC				
Freeze Protect Kit - Condensate Drain Line Tape	KGAHT0101CFP	X	X	X	X
Freeze Protect Kit - Condensate Trap with Heat Pad	KGAHT0201CFP	X	X	X	X
CPVC to PVC Drain Adapters - 1/2” CPVC to 3/4” PVC	KGAAD0110PVC	X	X	X	X
Horizontal Trap Grommet - Direct Vent	KGACK0101HCK	All 2-Pipe Horizontal			
Condensate Neutralizer Kit	P908-0001	X	X	X	X
External Trap Kit	KGAET0201ETK	X	X	X	X
Downflow Furnace Base Kit for Combustible Floors	KGASB0201ALL	X	X	X	X
Coil Adapter Kits - No Offset	KGADA0101ALL	X	X	X	X
Coil Adapter Kits - Single Offset	KGADA0201ALL	X	X	X	X
Coil Adapter Kits - Double Offset	KGADA0301ALL	X	X	X	X
Return Air Base (Upflow Applications) 14.0-in. wide	KGARP0301B14	X		X	
Return Air Base (Upflow Applications) 17.5-in. wide	KGARP0301B17		X		X
IAQ Device Duct Adapters 20.0-in. IAQ to 16 in. Side Return	KGAAD0101MEC	20”x25” IAQ Devices			
IAQ Device Duct Adapters 24.0-in. IAQ to 16 in. Side Return	KGAAD0201MEC	24”x25” IAQ Devices			
Gas Conversion Kit - Nat to LP	AGAGC9NPS01B	X	X	X	X
Gas Conversion Kit - LP to Nat	AGAGC9PNS01B	X	X	X	X
Gas Valve Tower Port Adapter Kit	92-1003	X	X	X	X
Twinning Kit	AGATWNPUA01A				X
External Bottom Return Filter Rack*	FHG1425-2	X		X	
	FHG1625-2		X		X
Unframed Filter 3/4-in. (19 mm)*	325531-402	X	X	X	X

*. Purchased through Replacement Components
X Used with the model furnace

DESCRIPTION	PART NUMBER	48080V17	60080V21	60100V21	66120V24
Vent Kit - Through the Cabinet	KGADC0101BVC	X	X	X	X
Vent Terminal - Concentric - 2” (51 mm)	KGAVT0701CVT	See Venting Tables			
Vent Terminal - Concentric - 3” (76 mm)	KGAVT0801CVT				
Vent Terminal Bracket - 2” (51 mm)	KGAVT0101BRA				
Vent Terminal Bracket - 3” (76 mm)	KGAVT0201BRA				
Vent Kit - Rubber Coupling	KGAAC0101RVC				
Freeze Protect Kit - Condensate Drain Line Tape	KGAHT0101CFP	X	X	X	X
Freeze Protect Kit - Condensate Trap with Heat Pad	KGAHT0201CFP	X	X	X	X
CPVC to PVC Drain Adapters - 1/2” CPVC to 3/4” PVC	KGAAD0110PVC	X	X	X	X
Horizontal Trap Grommet - Direct Vent	KGACK0101HCK	All 2-Pipe Horizontal			
Condensate Neutralizer Kit	P908-0001	X	X	X	X
External Trap Kit	KGAET0201ETK	X	X	X	X
Downflow Furnace Base Kit for Combustible Floors	KGASB0201ALL	X	X	X	X
Coil Adapter Kits - No Offset	KGADA0101ALL	X	X	X	X
Coil Adapter Kits - Single Offset	KGADA0201ALL	X	X	X	X
Coil Adapter Kits - Double Offset	KGADA0301ALL	X	X	X	X
Return Air Base (Upflow Applications) 17.5-in. wide	KGARP0301B17	X			
Return Air Base (Upflow Applications) 21.0-in. wide	KGARP0301B21		X	X	
Return Air Base (Upflow Applications) 24.5-in. wide	KGARP0301B24				X
IAQ Device Duct Adapters 20.0-in. IAQ to 16 in. Side Return	KGAAD0101MEC	20”x25” IAQ Devices			
IAQ Device Duct Adapters 24.0-in. IAQ to 16 in. Side Return	KGAAD0201MEC	24”x25” IAQ Devices			
Gas Conversion Kit - Nat to LP	AGAGC9NPS01B	X	X	X	X
Gas Conversion Kit - LP to Nat	AGAGC9PNS01B	X	X	X	X
Gas Valve Tower Port Adapter Kit	92-1003	X	X	X	X
Twinning Kit	AGATWNPUA01A	X	X	X	X
External Bottom Return Filter Rack*	FHG1625-2	X			
	FHG2025-2		X	X	
	FHG2424-2				X
Unframed Filter 3/4-in. (19 mm)*	325531-402	X			
	325531-403		X	X	
	325531-404				X

*. Purchased through Replacement Components
X Used with the model furnace

ACCESSORIES (CONTINUED)

DESCRIPTION		
Gas Orifice Kit - #42 (Nat Gas)	LH32DB207	See Installation Instructions for model, altitude, and heat value usages.
Gas Orifice Kit - #43 (Nat Gas)	LH32DB202	
Gas Orifice Kit - #44 (Nat Gas)	LH32DB200	
Gas Orifice Kit - #45 (Nat Gas)	LH32DB205	
Gas Orifice Kit - #46 (Nat Gas)	LH32DB208	
Gas Orifice Kit - #47 (Nat Gas)	LH32DB078	
Gas Orifice Kit - #48 (Nat Gas)	LH32DB076	
Gas Orifice Kit - #54 (LP)	LH32DB203	
Gas Orifice Kit - #55 (LP)	LH32DB201	
Gas Orifice Kit - #56 (LP)	LH32DB206	
Gas Orifice Kit - 1.25mm (LP)	LH32DB209	
Gas Orifice Kit - 1.30mm (LP)	LH32DB210	

DESCRIPTION	ACCESSORY
HUMIDIFIER	Model HUM
HEAT RECOVERY VENTILATOR	Model HRV
ENERGY RECOVERY VENTILATOR	Model ERV
UV LIGHTS	Model UVL

Bryant has a wide variety of thermostats for your system, please visit **www.Bryant.com** to see all thermostat and IAQ products.

DESCRIPTION	ACCESSORY	14”	17”	21”	24”
Bryant Carbon Monoxide Alarm (10 pack)	COALMBBNRB02-A10	X	X	X	X
Bryant Evolution Air Purifier - 16x25 (407x635 mm)	DGAPAXX1625	X	X		
Bryant Evolution Air Purifier - 20x25 (508x635 mm)	DGAPAXX2025			X	X
Bryant Evolution Air Purifier Repl. Filter- 16x25 (407x635 mm)	PGAPXCAR1625A02	X	X		
Bryant Evolution Air Purifier Repl. Filter- 20x25 (508x635 mm)	PGAPXCAR2025A02			X	X
Cartridge Media Filter - 16” (407 mm) (MERV 11)	FILXXCAR0116	X	X		
Cartridge Media Filter - 16” (407 mm) (MERV 8)	FILXXCAR0016	X	X		
Cartridge Media Filter - 20” (508 mm) (MERV 8)	FILXXCAR0020			X	
Cartridge Media Filter - 20” (508 mm) (MERV11)	FILXXCAR0120			X	
Cartridge Media Filter - 24” (610 mm) (MERV 8)	FILXXCAR0024				X
Cartridge Media Filter - 24” (610 mm) (MERV11)	FILXXCAR0124				X
EZ Flex Cabinet Side or Bottom - 16”	EZXCAB--0016	X	X		
EZ Flex Cabinet Side or Bottom - 20”	EZXCAB--0020			X	X
EZ Flex Replacement Filters 16” MERV 10	EXPXXFIL0016	X	X		
EZ Flex Replacement Filters 16” MERV 13	EXPXXFIL0316	X	X		
EZ Flex Replacement Filters 20” MERV 10	EXPXXFIL0020			X	
EZ Flex Replacement Filters 20” MERV 13	EXPXXFIL0320			X	
EZ Flex Replacement Filters 24” MERV 10	EXPXXFIL0024				X
EZ Flex Replacement Filters 24” MERV 13	EXPXXFIL0324				X
EZ-Flex Filter with End Caps - 16” (407 mm) (MERV 10)	EXPXXUNV0016	X	X		
EZ-Flex Filter with End Caps - 16” (407 mm) (MERV 13)	EXPXXUNV0316	X	X		
EZ-Flex Filter with End Caps - 20” (508 mm) (MERV 10)	EXPXXUNV0020			X	
EZ-Flex Filter with End Caps - 20” (508 mm) (MERV 13)	EXPXXUNV0320			X	
EZ-Flex Filter with End Caps - 24” (610 mm) (MERV 10)	EXPXXUNV0024				X
EZ-Flex Filter with End Caps - 24” (610 mm) (MERV 13)	EXPXXUNV0324				X
Media Filter Cabinet - 20”	FILCABXL0020			X	
Media Filter Cabinet - 24”	FILCABXL0024				X
Media Filter Cabinet -16”	FILCABXL0016	X	X		

AIR DELIVERY

Air Delivery - CFM (With Filter)

COOLING[4] AND HEATING AIR DELIVERY - CFM (Bottom Return[5] with Filter) (SW1-5 and SW4-3 set to OFF, except as indicated. See Notes 1 and 2.)													
Unit Size: 30040V14	Clg/CF Switch settings			External Static Pressure (ESP)									
Clg Switches:	**SW2-8**	**SW2-7**	**SW2-6**	**0.1**	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**	**1.0**
Clg Default:	OFF	OFF	OFF	1125	1105	1080	1055	1030	1005	975	955	930	905
Cooling (SW2-8,7,6)	OFF	OFF	ON	605	565	525	485	445	See Note 4				
	OFF	ON	OFF	760	730	695	655	625	590	555	525	490	455
	OFF	ON	ON	950	925	900	870	840	810	785	760	730	705
	ON	OFF	OFF	1125	1105	1080	1055	1030	1005	975	955	930	905
	ON	OFF	ON	1130	1105	1080	1055	1030	1005	980	955	930	905
	ON	ON	OFF	1130	1105	1080	1055	1030	1005	980	955	930	905
	ON	ON	ON	1130	1105	1080	1055	1030	1005	980	955	930	905
	Maximum Clg Airflow[2]			1130	1105	1080	1055	1030	1005	980	955	930	905
CF Switches	**SW2-5**	**SW2-4**	**SW2-3**										
Low-Clg Default:	OFF	OFF	OFF	605	565	525	485	445	See Note 4				
Low-Cooling (SW2-5,4,3)	OFF	OFF	ON	605	565	525	485	445	See Note 4				
	OFF	ON	OFF	760	730	695	655	625	590	555	525	490	455
	OFF	ON	ON	950	925	900	870	840	810	785	760	730	705
	ON	OFF	OFF	1125	1105	1080	1055	1030	1005	975	955	930	905
	ON	OFF	ON	1130	1105	1080	1055	1030	1005	980	955	930	905
	ON	ON	OFF	1130	1105	1080	1055	1030	1005	980	955	930	905
	ON	ON	ON	1130	1105	1080	1055	1030	1005	980	955	930	905
Cont. Fan Default:	OFF	OFF	OFF	385	335	See Note 4							
Continuous Fan (SW2-5,4,3)	OFF	OFF	ON	245	180	See Note 4							
	OFF	ON	OFF	310	245	See Note 4							
	OFF	ON	ON	385	335	See Note 4							
	ON	OFF	OFF	385	335	See Note 4							
	ON	OFF	ON	385	335	See Note 4							
	ON	ON	OFF	385	335	See Note 4							
	ON	ON	ON	385	335	See Note 4							
Heating (SW1)	Heat Airflow[3]			785	750	715	685	655	625	595	560	535	505
Unit Size: 36040V17	**Clg/CF Switch settings**			**External Static Pressure (ESP)**									
Clg Switches:	**SW2-8**	**SW2-7**	**SW2-6**	**0.1**	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**	**1.0**
Clg Default:	OFF	OFF	OFF	1240	1210	1180	1145	1105	1060	1005	950	895	835
Cooling (SW2-8,7,6)	OFF	OFF	ON	585	540	490	445	400	See Note 4				
	OFF	ON	OFF	780	740	695	655	620	580	545	510	480	445
	OFF	ON	ON	975	945	910	870	835	805	775	740	710	680
	ON	OFF	OFF	1170	1140	1115	1085	1050	1020	985	945	890	835
	ON	OFF	ON	1240	1210	1180	1145	1105	1060	1005	950	895	835
	ON	ON	OFF	1240	1210	1180	1145	1105	1060	1005	950	895	835
	ON	ON	ON	1240	1210	1180	1145	1105	1060	1005	950	895	835
	Maximum Clg Airflow[2]			1240	1210	1180	1145	1105	1060	1005	950	895	835
CF Switches	**SW2-5**	**SW2-4**	**SW2-3**										
Low-Clg Default:	OFF	OFF	OFF	585	540	490	445	400	See Note 4				
Low-Cooling (SW2-5,4,3)	OFF	OFF	ON	585	540	490	445	400	See Note 4				
	OFF	ON	OFF	780	740	695	655	620	580	545	510	480	445
	OFF	ON	ON	975	945	910	870	835	805	775	740	710	680
	ON	OFF	OFF	1170	1140	1115	1085	1050	1020	985	945	890	835
	ON	OFF	ON	1240	1210	1180	1145	1105	1060	1005	950	895	835
	ON	ON	OFF	1240	1210	1180	1145	1105	1060	1005	950	895	835
	ON	ON	ON	1240	1210	1180	1145	1105	1060	1005	950	895	835
Cont. Fan Default:	OFF	OFF	OFF	585	540	490	445	400	See Note 4				
Continuous Fan (SW2-5,4,3)	OFF	OFF	ON	305	235	See Note 4							
	OFF	ON	OFF	470	410	350	See Note 4						
	OFF	ON	ON	585	540	490	445	400	See Note 4				
	ON	OFF	OFF	585	540	490	445	400	See Note 4				
	ON	OFF	ON	585	540	490	445	400	See Note 4				
	ON	ON	OFF	585	540	490	445	400	See Note 4				
	ON	ON	ON	585	540	490	445	400	See Note 4				
Heating (SW1)	Heat Airflow[3]			740	695	650	610	575	540	500	465	430	395

Air Delivery - CFM (With Filter) (Continued)

COOLING[4] AND HEATING AIR DELIVERY - CFM (Bottom Return[5] with Filter) (SW1-5 and SW4-3 set to OFF, except as indicated. See Notes 1 and 2.)													
Unit Size: 36060V14	Clg/CF Switch settings			External Static Pressure (ESP)									
Clg Switches:	**SW2-8**	**SW2-7**	**SW2-6**	**0.1**	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**	**1.0**
Clg Default:	OFF	OFF	OFF	1180	1150	1130	1100	1075	1045	1020	995	965	935
Cooling (SW2-8,7,6)	OFF	OFF	ON	625	585	540	See Note 4						
	OFF	ON	OFF	820	785	745	710	670	635	595	560	525	490
	OFF	ON	ON	1000	970	935	905	875	845	815	785	755	725
	ON	OFF	OFF	1180	1150	1130	1100	1075	1045	1020	995	965	935
	ON	OFF	ON	1220	1195	1170	1140	1115	1090	1065	1035	1010	985
	ON	ON	OFF	1220	1195	1170	1140	1115	1090	1065	1035	1010	985
	ON	ON	ON	1220	1195	1170	1140	1115	1090	1065	1035	1010	985
	Maximum Clg Airflow[2]			1220	1195	1170	1140	1115	1090	1065	1035	1010	985
CF Switches	**SW2-5**	**SW2-4**	**SW2-3**										
Low-Clg Default:	OFF	OFF	OFF	625	585	540	See Note 4						
Low-Cooling (SW2-5,4,3)	OFF	OFF	ON	625	585	540	495	445	See Note 4				
	OFF	ON	OFF	820	785	745	710	670	635	595	560	525	490
	OFF	ON	ON	1000	970	935	905	875	845	815	785	755	725
	ON	OFF	OFF	1180	1150	1130	1100	1075	1045	1020	995	965	935
	ON	OFF	ON	1220	1195	1170	1140	1115	1090	1065	1035	1010	985
	ON	ON	OFF	1220	1195	1170	1140	1115	1090	1065	1035	1010	985
	ON	ON	ON	1220	1195	1170	1140	1115	1090	1065	1035	1010	985
Cont. Fan Default:	OFF	OFF	OFF	375	315	See Note 4							
Continuous Fan (SW2-5,4,3)	OFF	OFF	ON	200	125	See Note 4							
	OFF	ON	OFF	285	215	See Note 4							
	OFF	ON	ON	375	315	See Note 4							
	ON	OFF	OFF	375	315	See Note 4							
	ON	OFF	ON	375	315	See Note 4							
	ON	ON	OFF	375	315	See Note 4							
	ON	ON	ON	375	315	See Note 4							
Heating (SW1)	Heat Airflow[3]			980	950	920	890	860	825	795	765	735	705
Unit Size: 42060V17	Clg/CF Switch settings			External Static Pressure (ESP)									
Clg Switches:	**SW2-8**	**SW2-7**	**SW2-6**	**0.1**	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**	**1.0**
Clg Default:	OFF	OFF	OFF	1350	1315	1285	1250	1215	1180	1150	1115	1085	1050
Cooling (SW2-8,7,6)	OFF	OFF	ON	635	575	515	See Note 4						
	OFF	ON	OFF	825	775	725	675	630	575	See Note 4			
	OFF	ON	ON	1015	975	930	890	845	805	765	720	See Note 4	
	ON	OFF	OFF	1190	1150	1115	1075	1040	1005	965	930	895	855
	ON	OFF	ON	1350	1315	1285	1250	1215	1180	1150	1115	1085	1050
	ON	ON	OFF	1540	1510	1480	1450	1420	1390	1360	1330	1300	1270
	ON	ON	ON	1715	1675	1635	1595	1555	1515	1475	1435	1390	1350
	Maximum Clg Airflow[2]			1715	1675	1635	1595	1555	1515	1475	1435	1390	1350
CF Switches	**SW2-5**	**SW2-4**	**SW2-3**										
Low-Clg Default:	OFF	OFF	OFF	635	575	515	See Note 4						
Low-Cooling (SW2-5,4,3)	OFF	OFF	ON	635	575	515	See Note 4						
	OFF	ON	OFF	825	775	725	675	630	575	See Note 4			
	OFF	ON	ON	1015	975	930	890	845	805	765	720	See Note 4	
	ON	OFF	OFF	1190	1150	1115	1075	1040	1005	965	930	895	855
	ON	OFF	ON	1350	1315	1285	1250	1215	1180	1150	1115	1085	1050
	ON	ON	OFF	1540	1510	1480	1450	1420	1390	1360	1330	1300	1270
	ON	ON	ON	1715	1675	1635	1595	1555	1515	1475	1435	1390	1350
Cont. Fan Default:	OFF	OFF	OFF	635	575	515	See Note 4						
Continuous Fan (SW2-5,4,3)	OFF	OFF	ON	635	575	515	See Note 4						
	OFF	ON	OFF	825	775	725	675	630	575	See Note 4			
	OFF	ON	ON	1015	975	930	890	845	805	765	720	See Note 4	
	ON	OFF	OFF	1015	975	930	890	845	805	765	720	See Note 4	
	ON	OFF	ON	1015	975	930	890	845	805	765	720	See Note 4	
	ON	ON	OFF	1015	975	930	890	845	805	765	720	See Note 4	
	ON	ON	ON	1015	975	930	890	845	805	765	720	See Note 4	
Heating (SW1)	Heat Airflow[3]			1090	1050	1010	970	925	885	850	815	775	735

Air Delivery - CFM (With Filter) (Continued)

COOLING[4] AND HEATING AIR DELIVERY - CFM (Bottom Return[5] with Filter) (SW1-5 and SW4-3 set to OFF, except as indicated. See Notes 1 and 2.)												
Unit Size: 48080V17	Clg/CF Switch settings			External Static Pressure (ESP)								
Clg Switches:	**SW2-8**	**SW2-7**	**SW2-6**	**0.1**	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**	**1.0**
Clg Default:	OFF	OFF	OFF	1595	1560	1530	1500	1470	1440	1405	1370	1340	1290
Cooling (SW2-8,7,6)	OFF	OFF	ON	625	555	495	See Note 4						
	OFF	ON	OFF	810	755	700	645	595	540	480	425	380	330
	OFF	ON	ON	1040	995	950	900	860	815	770	725	680	630
	ON	OFF	OFF	1215	1175	1135	1095	1055	1015	975	935	900	860
	ON	OFF	ON	1390	1355	1320	1285	1245	1210	1175	1140	1105	1070
	ON	ON	OFF	1595	1560	1530	1500	1470	1440	1405	1370	1340	1290
	ON	ON	ON	1790	1760	1735	1700	1655	1610	1570	1485	1395	1295
	Maximum Clg Airflow[2]			1790	1760	1735	1700	1655	1610	1570	1485	1395	1295
CF Switches	**SW2-5**	**SW2-4**	**SW2-3**										
Low-Clg Default:	OFF	OFF	OFF	625	555	495	See Note 4						
Low-Cooling (SW2-5,4,3)	OFF	OFF	ON	625	555	495	See Note 4						
	OFF	ON	OFF	810	755	700	645	595	540	480	425	380	330
	OFF	ON	ON	1040	995	950	900	860	815	770	725	680	630
	ON	OFF	OFF	1215	1175	1135	1095	1055	1015	975	935	900	860
	ON	OFF	ON	1390	1355	1320	1285	1245	1210	1175	1140	1105	1070
	ON	ON	OFF	1595	1560	1530	1500	1470	1440	1405	1370	1340	1290
	ON	ON	ON	1790	1760	1735	1700	1655	1610	1570	1485	1395	1295
Cont. Fan Default:	OFF	OFF	OFF	625	555	495	See Note 4						
Continuous Fan (SW2-5,4,3)	OFF	OFF	ON	465	390	300	See Note 4						
	OFF	ON	OFF	625	555	495	See Note 4						
	OFF	ON	ON	690	630	570	510	445	See Note 4				
	ON	OFF	OFF	690	630	570	510	445	See Note 4				
	ON	OFF	ON	690	630	570	510	445	See Note 4				
	ON	ON	OFF	690	630	570	510	445	See Note 4				
	ON	ON	ON	690	630	570	510	445	See Note 4				
Heating (SW1)	Heat Airflow[3]			1375	1340	1300	1265	1230	1195	1155	1120	1090	1050
Unit Size: 60080V21	Clg/CF Switch settings			External Static Pressure (ESP)								
Clg Switches:	**SW2-8**	**SW2-7**	**SW2-6**	**0.1**	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**	**1.0**
Clg Default:	OFF	OFF	OFF	1950	1910	1870	1835	1795	1760	1720	1680	1645	1605
Cooling (SW2-8,7,6)	OFF	OFF	ON	835	760	685	620	See Note 4					
	OFF	ON	OFF	1055	995	930	865	810	750	See Note 4			
	OFF	ON	ON	1225	1170	1115	1060	1000	945	895	840	See Note 4	
	ON	OFF	OFF	1405	1355	1305	1255	1205	1155	1105	1060	1015	965
	ON	OFF	ON	1605	1560	1515	1470	1425	1380	1335	1290	1245	1205
	ON	ON	OFF	1950	1910	1870	1835	1795	1760	1720	1680	1645	1605
	ON	ON	ON	2215	2180	2145	2110	2080	2040	1995	1945	1895	1840
	Maximum Clg Airflow[2]			2295	2245	2195	2145	2090	2040	1995	1945	1895	1840
CF Switches	**SW2-5**	**SW2-4**	**SW2-3**										
Low-Clg Default:	OFF	OFF	OFF	835	760	685	620	See Note 4					
Low-Cooling (SW2-5,4,3)	OFF	OFF	ON	690	605	See Note 4							
	OFF	ON	OFF	835	760	685	620	See Note 4					
	OFF	ON	ON	1055	995	930	865	810	750	See Note 4			
	ON	OFF	OFF	1225	1170	1115	1060	1000	945	895	840	See Note 4	
	ON	OFF	ON	1405	1355	1305	1255	1205	1155	1105	1060	1015	965
	ON	ON	OFF	1605	1560	1515	1470	1425	1380	1335	1290	1245	1205
	ON	ON	ON	1950	1910	1870	1835	1795	1760	1720	1680	1645	1605
Cont. Fan Default:	OFF	OFF	OFF	835	760	685	620	See Note 4					
Continuous Fan (SW2-5,4,3)	OFF	OFF	ON	690	605	See Note 4							
	OFF	ON	OFF	835	760	685	620	See Note 4					
	OFF	ON	ON	1055	995	930	865	810	750	See Note 4			
	ON	OFF	OFF	1225	1170	1115	1060	1000	945	895	840	See Note 4	
	ON	OFF	ON	1405	1355	1305	1255	1205	1155	1105	1060	1015	965
	ON	ON	OFF	1405	1355	1305	1255	1205	1155	1105	1060	1015	965
	ON	ON	ON	1405	1355	1305	1255	1205	1155	1105	1060	1015	965
Heating (SW1)	Heat Airflow[3]			1510	1460	1415	1365	1315	1270	1220	1170	1140	1090

Air Delivery - CFM (With Filter) (Continued)

COOLING[4] AND HEATING AIR DELIVERY - CFM (Bottom Return[5] with Filter) (SW1-5 and SW4-3 set to OFF, except as indicated. See Notes 1 and 2.)													
Unit Size: 60100V21	Clg/CF Switch settings			External Static Pressure (ESP)									
Clg Switches:	**SW2-8**	**SW2-7**	**SW2-6**	**0.1**	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**	**1.0**
Clg Default:	OFF	OFF	OFF	2015	1975	1935	1895	1855	1820	1785	1745	1705	1655
Cooling (SW2-8,7,6)	OFF	OFF	ON	840	760	675	See Note 4						
	OFF	ON	OFF	1065	1000	935	865	See Note 4					
	OFF	ON	ON	1250	1190	1135	1075	1015	See Note 4				
	ON	OFF	OFF	1435	1380	1330	1280	1230	1175	See Note 4			
	ON	OFF	ON	1640	1590	1545	1500	1455	1410	1365	1320	See Note 4	
	ON	ON	OFF	2015	1975	1935	1895	1855	1820	1785	1745	1705	1655
	ON	ON	ON	2220	2180	2145	2105	2070	2035	1995	1900	1790	1665
	Maximum Clg Airflow[2]			2360	2320	2265	2215	2160	2100	2005	1905	1790	1665
CF Switches	**SW2-5**	**SW2-4**	**SW2-3**										
Low-Clg Default:	OFF	OFF	OFF	840	760	675	See Note 4						
Low-Cooling (SW2-5,4,3)	OFF	OFF	ON	700	605	See Note 4							
	OFF	ON	OFF	840	760	675	See Note 4						
	OFF	ON	ON	1065	1000	935	865	See Note 4					
	ON	OFF	OFF	1250	1190	1135	1075	1015	See Note 4				
	ON	OFF	ON	1435	1380	1330	1280	1230	1175	See Note 4			
	ON	ON	OFF	1640	1590	1545	1500	1455	1410	1365	1320	See Note 4	
	ON	ON	ON	2015	1975	1935	1895	1855	1820	1785	1745	1705	1655
Cont. Fan Default:	OFF	OFF	OFF	840	760	675	See Note 4						
Continuous Fan (SW2-5,4,3)	OFF	OFF	ON	700	605	See Note 4							
	OFF	ON	OFF	840	760	675	See Note 4						
	OFF	ON	ON	1065	1000	935	865	See Note 4					
	ON	OFF	OFF	1065	1000	935	865	See Note 4					
	ON	OFF	ON	1065	1000	935	865	See Note 4					
	ON	ON	OFF	1065	1000	935	865	See Note 4					
	ON	ON	ON	1065	1000	935	865	See Note 4					
Heating (SW1)	Heat Airflow[3]			1855	1810	1765	1720	1680	1640	1595	1555	1515	1470
Unit Size: 66120V24	Clg/CF Switch settings			External Static Pressure (ESP)									
Clg Switches:	**SW2-8**	**SW2-7**	**SW2-6**	**0.1**	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**	**1.0**
Clg Default:	OFF	OFF	OFF	2025	1975	1925	1875	1830	1780	1730	1675	1630	1585
Cooling (SW2-8,7,6)	OFF	OFF	ON	920	830	See Note 4							
	OFF	ON	OFF	1125	1050	970	890	See Note 4					
	OFF	ON	ON	1275	1205	1130	1060	995	See Note 4				
	ON	OFF	OFF	1470	1410	1345	1280	1220	1160	See Note 4			
	ON	OFF	ON	1670	1610	1555	1500	1440	1380	1330	See Note 4		
	ON	ON	OFF	2025	1975	1925	1875	1830	1780	1730	1675	See Note 4	
	ON	ON	ON	2255	2210	2160	2120	2075	2030	1985	1940	1825	1685
	Maximum Clg Airflow[2]			2455	2410	2370	2315	2250	2190	2115	1985	1830	1685
CF Switches	**SW2-5**	**SW2-4**	**SW2-3**										
Low-Clg Default:	OFF	OFF	OFF	920	830	See Note 4							
Low-Cooling (SW2-5,4,3)	OFF	OFF	ON	770	665	See Note 4							
	OFF	ON	OFF	920	830	See Note 4							
	OFF	ON	ON	1125	1050	970	890	See Note 4					
	ON	OFF	OFF	1275	1205	1130	1060	995	See Note 4				
	ON	OFF	ON	1470	1410	1345	1280	1220	1160	See Note 4			
	ON	ON	OFF	1670	1610	1555	1500	1440	1380	1330	See Note 4		
	ON	ON	ON	2025	1975	1925	1875	1830	1780	1730	1675	See Note 4	
Cont. Fan Default:	OFF	OFF	OFF	920	830	See Note 4							
Continuous Fan (SW2-5,4,3)	OFF	OFF	ON	770	665	See Note 4							
	OFF	ON	OFF	920	830	See Note 4							
	OFF	ON	ON	1125	1050	970	890	See Note 4					
	ON	OFF	OFF	1125	1050	970	890	See Note 4					
	ON	OFF	ON	1125	1050	970	890	See Note 4					
	ON	ON	OFF	1125	1050	970	890	See Note 4					
	ON	ON	ON	1125	1050	970	890	See Note 4					
Heating (SW1)	Heat Airflow[3]			2085	2035	1985	1940	1890	1845	1795	1750	1700	1660

NOTES for Cooling and Heating Air Delivery - CFM (Bottom Return with Filter)

1. Nominal 350 CFM/ton cooling airflow is delivered with SW1-5 and SW4-3 set to OFF.
   Set both SW1-5 ON for nominal 400 CFM/ton (+15% airflow).
   Set SW4-3 to ON for nominal 325 CFM/ton (-7%).
   Set SW1-5 to OFF and SW4-3 to ON for nominal 370 CFM/ton (+7% airflow)
   The above adjustments in airflow are subject to motor horsepower range/capacity
   This applies to Cooling and Low-Cooling airflow, but does not affect continuous fan airflow.
2. Maximum cooling airflow is achieved when switches SW2-6, SW2-7, SW2-8 and SW1-5 are set to ON, and SW4-3 is set to OFF.
3. All heating CFM's are when comfort/efficiency adjustment switch SW1-4 is set to OFF.
4. Ductwork must be sized for high-heating CFM within the operational range of ESP. Operation within the blank areas of the chart is not recommended because high-heat operation will be above 1.0 ESP.
5. All airflows on 21" (533 mm) casing size furnaces are 5% less on side-return only installations.
6. Side returns for 24.5" (622 mm) casing sizes require two sides, or a side and bottom to allow sufficient airflow at the return of the furnace.
7. Airflows over 1800 CFM require bottom return, two-side return, or bottom and side return or excessive watt draw may result. A minimum filter size of 20x25" (508 x 635 mm) is required.

MAXIMUM ALLOWABLE EXPOSED VENT LENGTH

Maximum Allowable Exposed Vent Lengths in Unconditioned Space Insulation Table - Ft.

Winter Design Temp °F	Unit Size	40,000* BTUH									60,000 BTUH											
		Uninsulated			3/8-in. Insulation			1/2-in. Insulation			Uninsulated				3/8-in. Insulation				1/2-in. Insulation			
	Pipe Dia. in.	1 ½	2	2 ½	1 ½	2	2 ½	1 ½	2	2 ½	1 ½	2	2 ½	3	1 ½	2	2 ½	3	1 ½	2	2 ½	3
	20	20	20	20	20	50	45	20	60	50	20	30	30	25	20	75	65	60	20	85	75	65
	0	10	5	5	20	25	20	20	30	25	15	15	10	10	20	40	30	25	20	45	40	30
	-20	5			20	15	10	20	20	15	10	5			20	25	20	15	20	30	25	20
	-40				15	10	5	15	15	10	5				20	15	15	10	20	20	15	10

*. Pipe length (ft) specified for maximum pipe lengths located in unconditioned spaces. Pipes located in unconditioned space cannot exceed total allowable pipe length calculated from Maximum Equivalent Vent Length.

Winter Design Temp °F	Unit Size	80,000 BTUH														
		Uninsulated					3/8-in. Insulation					1/2-in. Insulation				
	Pipe Dia. in.	1 ½	2	2 ½	3	4	1 ½	2	2 ½	3	4	1 ½	2	2 ½	3	4
	20	15	40	40	35	30	15	50	90	75	65	15	50	70	70	70
	0	15	20	15	10	5	15	50	45	35	30	15	50	50	40	35
	-20	15	10	5			15	35	30	20	15	15	40	30	25	15
	-40	10	5				15	25	20	15	5	15	30	25	20	10

Winter Design Temp °F	Unit Size	100,000 BTUH												120,000 BTUH								
		Uninsulated				3/8-in. Insulation				1/2-in. Insulation				Uninsulated			3/8-in. Insulation			1/2-in. Insulation		
	Pipe Dia. in.	2	2 ½	3	4	2	2½	3	4	2	2½	3	4	2 ½	3	4	2 ½	3	4	2 ½	3	4
	20	20	50	40	35	20	80	95	80	20	80	105	90	10	50	40	10	75	95	10	75	105
	0	20	20	15	10	20	55	45	35	20	65	55	45	10	20	15	10	55	45	10	65	50
	-20	15	10	5		20	35	30	20	20	45	35	25	10	10		10	35	25	10	45	30
	-40	10	5			20	25	20	10	20	30	25	15	10	5		10	25	15	10	30	20

Maximum Allowable Exposed Vent Length in Unconditioned Space - Meters

Winter Design Temp °C	Unit Size	40,000* BTUH									60,000 BTUH											
		Uninsulated			3/8-in. Insulation			1/2-in. Insulation			Uninsulated				3/8-in. Insulation				1/2-in. Insulation			
	Pipe Dia. mm	38	51	64	38	51	64	38	51	64	38	51	64	76	38	51	64	76	38	51	64	76
	-7	6.1	6.1	6.1	6.1	15.2	13.7	6.1	18.3	15.2	6.1	9.1	9.1	7.6	6.1	22.9	19.8	18.3	6.1	25.9	22.9	19.8
	-18	3.0	1.5	1.5	6.1	7.6	6.1	6.1	9.1	7.6	4.6	4.6	3.0	3.0	6.1	12.2	9.1	7.6	6.1	13.7	12.2	9.1
	-29	1.5			6.1	4.6	3.0	6.1	6.1	4.6	3.0	1.5			6.1	7.6	6.1	4.6	6.1	9.1	7.6	6.1
	-40				4.6	3.0	1.5	4.6	4.6	3.0	1.5				6.1	4.6	4.6	3.0	6.1	6.1	4.6	3.0

*. Pipe length (ft) specified for maximum pipe lengths located in unconditioned spaces. Pipes located in unconditioned space cannot exceed total allowable pipe length calculated from Maximum Equivalent Vent Length..

Winter Design Temp °C	Unit Size	80,000 BTUH														
		Uninsulated					3/8-in. Insulation					1/2-in. Insulation				
	Pipe Dia. mm	38	51	64	76	102	38	51	64	76	102	38	51	64	76	102
	-7	4.6	12.2	12.2	10.7	9.1	4.6	15.2	27.4	22.9	19.8	4.6	15.2	21.3	21.3	21.3
	-18	4.6	6.1	4.6	3.0	1.5	4.6	15.2	13.7	10.7	9.1	4.6	15.2	15.2	12.2	10.7
	-29	4.6	3.0	1.5			4.6	10.7	9.1	6.1	4.6	4.6	12.2	9.1	7.6	4.6
	-40	3.0	1.5				4.6	7.6	6.1	4.6	1.5	4.6	9.1	7.6	6.1	3.0

Winter Design Temp °C	Unit Size	100,000 BTUH												120,000 BTUH								
		Uninsulated				3/8-in. Insulation				1/2-in. Insulation				Uninsulated			3/8-in. Insulation			1/2-in. Insulation		
	Pipe Dia. mm	51	64	76	102	51	64	76	102	51	64	76	102	64	76	102	64	76	102	64	76	102
	-7	6.1	15.2	12.2	10.7	6.1	24.4	28.9	24.4	6.1	24.4	32.0	27.4	3.0	15.2	12.2	3.0	22.9	28.9	3.0	22.9	32.0
	-18	6.1	6.1	4.6	3.0	6.1	16.8	13.7	10.7	6.1	19.8	16.7	13.7	3.0	6.1	4.6	3.0	16.8	13.7	3.0	19.8	15.2
	-29	4.6	3.0	1.5		6.1	10.7	9.1	6.1	6.1	13.7	10.7	7.6	3.0	3.0		3.0	10.7	7.6	3.0	13.7	9.1
	-40	3.0	1.5			6.1	7.6	6.1	3.0	6.1	9.1	7.6	4.6	3.0	1.5		3.0	7.6	4.6	3.0	9.1	6.1

Insulation thickness based on R value of 3.5 per in.

MAXIMUM EQUIVALENT VENT LENGTH - FT. (M)

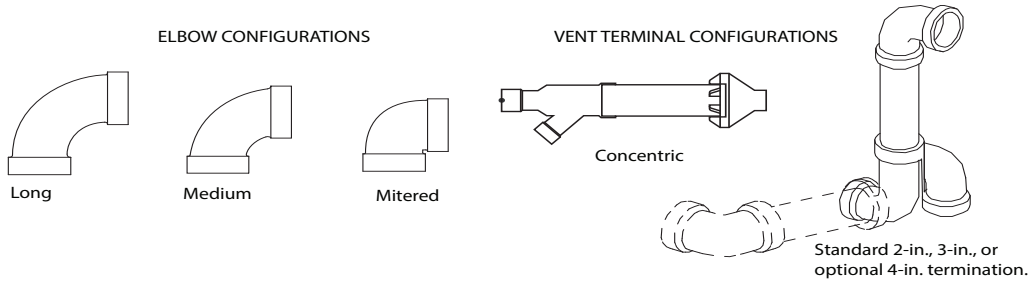
NOTE: *Maximum Equivalent Vent Length (MEVL) includes standard and concentric vent termination and does NOT include elbows. Use Deductions from Maximum Equivalent Vent Length to determine allowable vent length for each application.*

Unit Size		40,000 [1]			60,000 [2]				80,000					100,000				120,000 [3]		
Altitude (feet)	Pipe Dia. (in)	1 ½	2	2 ½	1 ½	2	2 ½	3	1 ½	2	2 ½	3	4	2	2 ½	3	4	2 ½	3	4
	0-2000	40	155	185	20	100	175	200	15	55	130	175	200	20	80	175	200	10	75	185
	2001-3000	35	150	175		95	165	185	10	49	125	165	185	15	75	165	185		70	175
	3001-4000	30	135	160	16	90	155	175			115	155	175			155	175	5	65	165
	4001-4500	25	130	155		85	150	170		44	110	150	165		70		170			160
	4501-5000		125	145	15	80	145	165				145	160	10	65	150	165		60	
	5001-6000	20	120	130		75	140	155		41	100	135	150			140	155			155
	6001-7000	15	110	120	13	70	130	145		38	90	125	140		60	135	145	N/A	50	140
	7001-8000	10	100	110	10	65	120	135	N/A	36		120	125		55	125	135		46	130
	8001-9000		90	95	5	60	115	125		33	80	110	115	N/A	50	115	125		43	120
	9001-10000	5	80	85	N/A	55	105	115		30	75	100	105		45	100	115		39	115

Maximum Equivalent Vent Length - Meters

Unit Size		40,000 [1]			60,000 [2]				80,000					100,000				120,000 [3]		
Altitude (meters)	Pipe Dia. (mm)	38	51	64	38	51	64	76	38	51	64	76	102	51	64	76	102	64	76	102
	0-610	12.1	47.2	56.3	6.0	30.4	53.3	60.9	4.5	16.7	39.6	53.3	60.9	6.0	24.3	53.3	60.9	3.0	22.8	56.3
	611-914	10.6	45.7	53.3		28.9	50.2	56.3	3.0	14.9	38.1	50.2	56.3	4.5	22.8	50.2	56.3		21.3	53.3
	915-1219	9.1	41.1	48.7	4.8	27.4	47.2	53.3			35.0	47.2	53.3			47.2	53.3	1.5	19.8	50.2
	1220-1370	7.6	39.6	47.2		25.9	45.7	51.8		13.4	33.5	45.7	50.2		21.3		51.8		18.2	48.7
	1371-1524		38.1	44.1	4.5	24.3	44.1	50.2				44.1	48.7	3.0	19.8	45.7	50.2			
	1525-1829	6.0	36.5	39.6		22.8	42.6	47.2		12.4	30.4	41.1	45.7			42.6	47.2			47.2
	1830-2134	4.5	33.5	36.5	3.9	21.3	39.6	44.1		11.5	27.4	38.1	42.6		18.2	41.1	44.1	NA	15.2	42.6
	2135-2438	3.0	30.4	33.5	3.0	19.8	36.5	41.1	NA	10.9		36.5	38.1		16.7	38.1	41.1		14.0	39.6
	2439-2743		27.4	28.9	1.5	18.2	35.0	38.1		10.0	24.3	33.5	35.0	NA	15.2	35.0	38.1		13.1	36.5
	2744-3048	1.5	24.3	25.9	NA	16.7	32.0	35.0		9.1	22.8	30.4	32.0		13.7	30.4	35.0		11.8	35.0

1. 40K Inducer Outlet Restrictor disk (P/N 337683-401; 1.25-in. (32 mm) Dia.) shipped in the loose parts bag or available through Replacement Components required under 10-ft. (3 M) TEVL in all orientations. Required for installations from 0 - 2000 ft. (0 to 610 M) above sea level. Failure to use an outlet restrictor may result in flame disturbances or flame sense lock-out.
2. 60K Inducer Outlet Restrictor disk (P/N 337683-401; .25-in. (32 mm) Dia. available through Replacement Components) required for less than 5-ft. (1.5 M) TEVL in downflow and horizontal orientations only. Required for installations from 0 - 2000 ft. (0 to 610 M) above sea level.
3. 120K Inducer Outlet Restrictor disk (P/N 337683-402; 1.50-in. (38 mm) Dia. available through Replacement Components) required for less than 5-ft. (1.5 M) TEVL in downflow and horizontal orientations only. Required for installations from 0 - 2000 ft. (0 to 610 M) above sea level.



A13110

Deductions from Maximum Equivalent Vent Length - Ft. (M)

Pipe Diameter (in):	1-1/2		2		2-1/2		3		4	
Mitered 90º Elbow	8	(2.4)	8	(2.4)	8	(2.4)	8	(2.4)	8	(2.4)
Medium Radius 90º Elbow	5	(1.5)	5	(1.5)	5	(1.5)	5	(1.5)	5	(1.5)
Long Radius 90º Elbow	3	(0.9)	3	(0.9)	3	(0.9)	3	(0.9)	3	(0.9)
Mitered 45º Elbow	4	(1.2)	4	(1.2)	4	(1.2)	4	(1.2)	4	(1.2)
Medium Radius 45º Elbow	2.5	(0.8)	2.5	(0.8)	2.5	(0.8)	2.5	(0.8)	2.5	(0.8)
Long Radius 45º Elbow	1.5	(0.5)	1.5	(0.5)	1.5	(0.5)	1.5	(0.5)	1.5	(0.5)
Tee	16	(4.9)	16	(4.9)	16	(4.9)	16	(4.9)	16	(4.9)
Concentric Vent Termination	NA		0	(0.0)	NA		0	(0.0)	NA	
Standard Vent Termination	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)

NOTE:

1. Use only the smallest diameter pipe possible for venting. Over-sizing may cause flame disturbance or excessive vent terminal icing or freeze-up.
2. NA - Not allowed. Pressure switch will not close, or flame disturbance may result.
3. Vent sizing for Canadian installations over 4500 ft (1370 M) above sea level are subject to acceptance by local authorities having jurisdiction.
4. Size both the combustion air and vent pipe independently, then use the larger size for both pipes.
5. Assume the two 45° elbows equal one 90° elbow. Wide radius elbows are desirable and may be required in some cases.
6. Elbow and pipe sections within the furnace casing and at the vent termination should not be included in vent length or elbow count.
7. The minimum pipe length is 5 ft. (2 M) linear feet (meters) for all applications.
8. Use 3-in. (76 mm) diameter vent termination kit for installations requiring 4-in. (102 mm) diameter pipe.

Venting System Length Calculations

The Total Equivalent Vent Length (TEVL) for **EACH** combustion air or vent pipe equals the length of the venting system, plus the equivalent length of elbows used in the venting system from Maximum Equivalent Vent Length..

Standard vent terminations or factory accessory concentric vent terminations count for zero deduction.

See vent system manufacturer's data for equivalent lengths of flexible vent pipe or other termination systems. **DO NOT ASSUME** that one foot of flexible vent pipe equals one foot of straight PVC/ABS DWV vent pipe.

Compare the Total Equivalent Vent Length to the Maximum Equivalent Vent Lengths in Deductions from Maximum Equivalent Vent Length Table

Example 1

A direct-vent 60,000 BTUH furnace installed at 2100 ft. (640M). Venting system includes **FOR EACH PIPE:**
70 feet (22 M) of vent pipe, 65 feet (20 M) of combustion air inlet pipe, (3) 90º long-radius elbows, (2) 45º long-radius elbows, and a factory accessory concentric vent kit.

Can this application use 2" (50 mm ND) PVC/ABS DWV vent piping?

Measure the required linear length of air inlet and vent pipe; insert the longest of the two here					70 ft. (22 M)	Use length of the longer of the vent or air inlet piping system
Add equiv length of (3) 90º long-radius elbows (use the highest number of elbows for either the vent or inlet pipe)	3	x	3 ft. (0.9 M)	=	9 ft. (2.7 M)	From Deductions from Maximum Equivalent Vent Length Table.
Add equiv length of (2) 45º long-radius elbows (use the highest number of elbows for either the vent or inlet pipe)	2	x	1.5 ft. (0.5 M)	=	3 ft. (0.9 M)	From Deductions from Maximum Equivalent Vent Length Table.
Add equiv length of factory concentric vent term					0 ft.	From From Deductions from Maximum Equivalent Vent Length Table.
Add correction for flexible vent pipe, if any					0 ft.	From Vent Manufacturer's instructions; zero for PVC/ABS DWV
Total Equivalent Vent Length (TEVL)					82 ft. (25 M)	Add all of the above lines
Maximum Equivalent Vent Length (MEVL)					95 ft. (29 M)	For 2" pipe from Maximum Equivalent Vent Length Table.
Is TEVL less than MEVL?					YES	Therefore, 2" pipe MAY be used

Example 2

A direct-vent 60,000 BTUH furnace installed at 2100 ft. (640M). Venting system includes **FOR EACH PIPE:**
100 feet (30 M) of vent pipe, 95 feet (29 M) of combustion air inlet pipe, (3) 90º long-radius elbows, and a polypropylene concentric vent kit. Also includes 20 feet (6.1 M) of flexible polypropylene vent pipe, included within the 100 feet (30 M) of vent pipe.

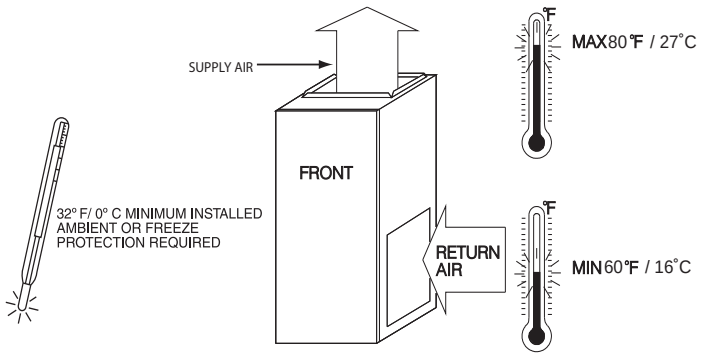
VERIFY FROM POLYPROPYLENE VENT MANUFACTURER'S INSTRUCTIONS for the multiplier correction for flexible vent pipe.

Can this application use 60mm o.d. (2") polypropylene vent piping? If not, what size piping can be used?

Measure the required linear length of **RIGID** air inlet and vent pipe; insert the longest of the two here: 100 ft. Of rigid pipe - 20 ft. Of flexible pipe				=	80 ft. (24 M)	Use length of the longer of the vent or air inlet piping system
Add equiv length of (3) 90º long-radius elbows (use the highest number of elbows for either the vent or inlet pipe)	3	x	5 ft. (1.5 M)	=	15 ft. (4.6 M)	Example from polypropylene vent manufacturer's instructions, Verify from vent manufacturer's instructions.
Add equiv length of 45º long-radius elbows (use the highest number of elbows for either the vent or inlet pipe)	0	x		=	0 ft. (0 M)	
Add equiv length of factory concentric vent term	9	x	3.3 ft (0.9 M)	=	30 ft. (9 M)	
Add correction for flexible vent pipe, if any	2*	x	20 ft. (6.1 M)	=	40 ft. (12.2 M)	
* VERIFY FROM VENT MANUFACTURER'S INSTRUCTIONS; For example only, assume 1 meter of flexible 60mm (2") or 80mm (3") polypropylene pipe equals 2.0 meters (6.5 ft.) of PVC/ABS pipe.						
Total Equivalent Vent Length (TEVL)					165 ft. (50 M)	Add all of the above lines
Maximum Equivalent Vent Length (MEVL)					95 ft. (29 M)	For 2" pipe from Maximum Equivalent Vent Length Table.
Is TEVL less than MEVL?					NO	Therefore, 60mm (2") pipe may NOT be used; try 80mm (3")
Maximum Equivalent Vent Length (MEVL)					185 ft. (57 M)	For 3" pipe from Maximum Equivalent Vent Length Table.
Is TEVL less than MEVL?					YES	Therefore, 80mm (3") pipe MAY be used

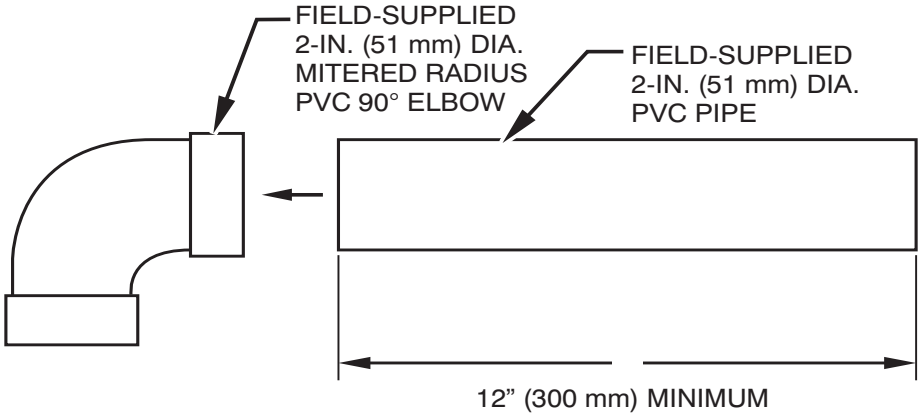
RETURN AIR TEMPERATURE

This furnace is designed for continuous return-air minimum temperature of 60°F (15°C) db or intermittent operation down to 55°F (13°C) db such as when used with a night setback thermometer. Return-air temperature must not exceed 80°F (27°C) db. Failure to follow these return air limits may affect reliability of heat exchangers, motors and controls.



A10490

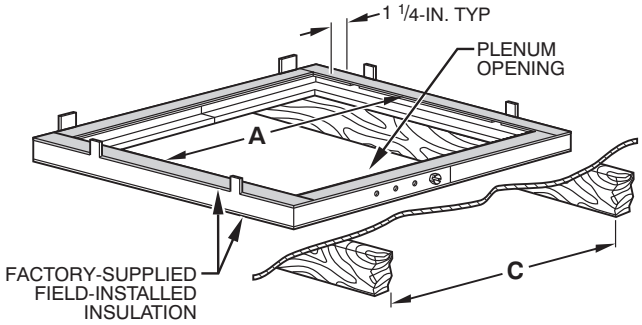
COMBUSTION-AIR PIPE FOR NON-DIRECT (1-PIPE) VENT APPLICATION



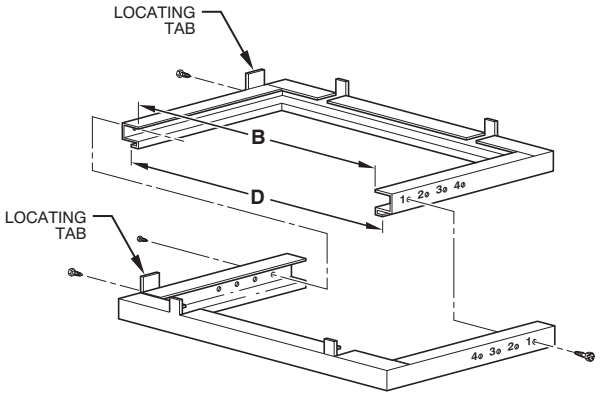
A12376

NOTE: See Installation Instructions for specific venting configurations.

DOWNFLOW SUBBASE



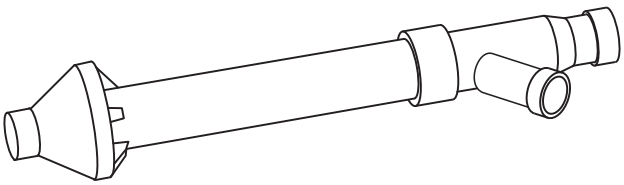
A97427



A88207

DIMENSIONS (IN. / MM)						
FURNACE CASING WIDTH	FURNACE IN DOWNFLOW APPLICATION	PLENUM OPENING*		FLOOR OPENING		HOLE NO. FOR WIDTH ADJUSTMENT
		A	B	C	D	
14-3/16 (360)	Furnace with or without Cased Coil Assembly or Coil Box	11-3/16 (322)	19 (483)	13-7/16 (341)	20-5/8 (600)	4
17-1/2 (445)	Furnace with or without Cased Coil Assembly or Coil Box	15-1/8 (384)	19 (483)	16-3/4 (426)	20-5/8 (600)	3
21 (533)	Furnace with or without Cased Coil Assembly or Coil Box	18-5/8 (396)	19 (483)	20-1/4 (514)	20-5/8 (600)	2
24-1/2 (622)	Furnace with or without Cased Coil Assembly or Coil Box	22-1/8 (562)	19 (483)	23-3/4 (603)	20-5/8 (600)	1

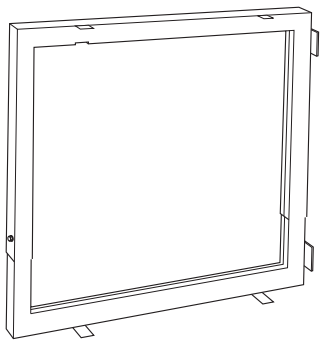
*. The plenum should be constructed 1/4-in. (6 mm) smaller in width and depth than the plenum dimensions shown above.



Concentric Vent Kit

A93086

A concentric vent kit allows vent and combustion-air pipes to terminate through a single exit in a roof or side wall. One pipe runs inside the other allowing venting through the inner pipe and combustion air to be drawn in through the outer pipe.

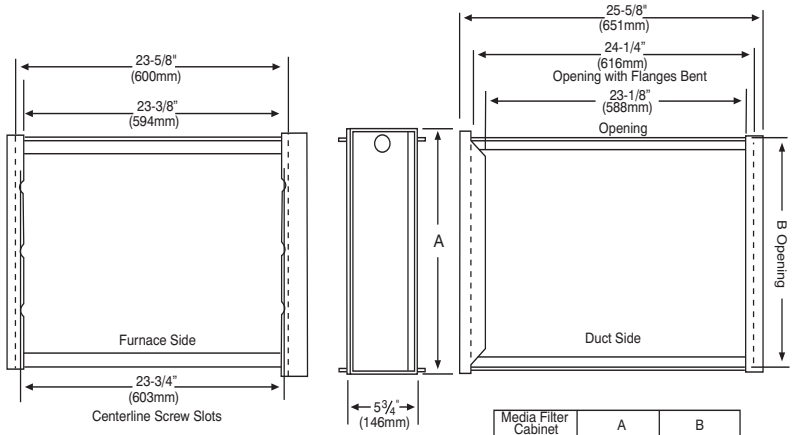


Downflow Subbase

A88202

One base fits all furnace sizes. The base is designed to be installed between the furnace and a combustible floor when no coil box is used or when a coil box other than a Bryant cased coil is used. It is CSA design certified for use with Bryant branded furnaces when installed in downflow applications.

MEDIA FILTER CABINET (OPTIONAL ACCESSORY)

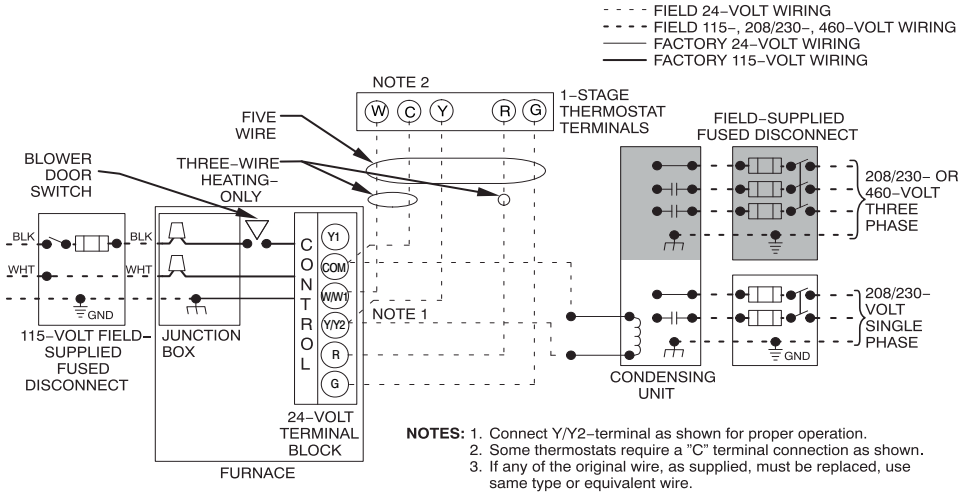


Media Filter Cabinet	A	B
16" (406mm)	17" (432mm)	16" (406mm)
20" (508mm)	21" (533mm)	20" (508mm)
24" (610mm)	25" (635mm)	24" (610mm)

NOTE: Media cabinet is matched to the bottom opening on furnace. May also be used for side return.

A12428

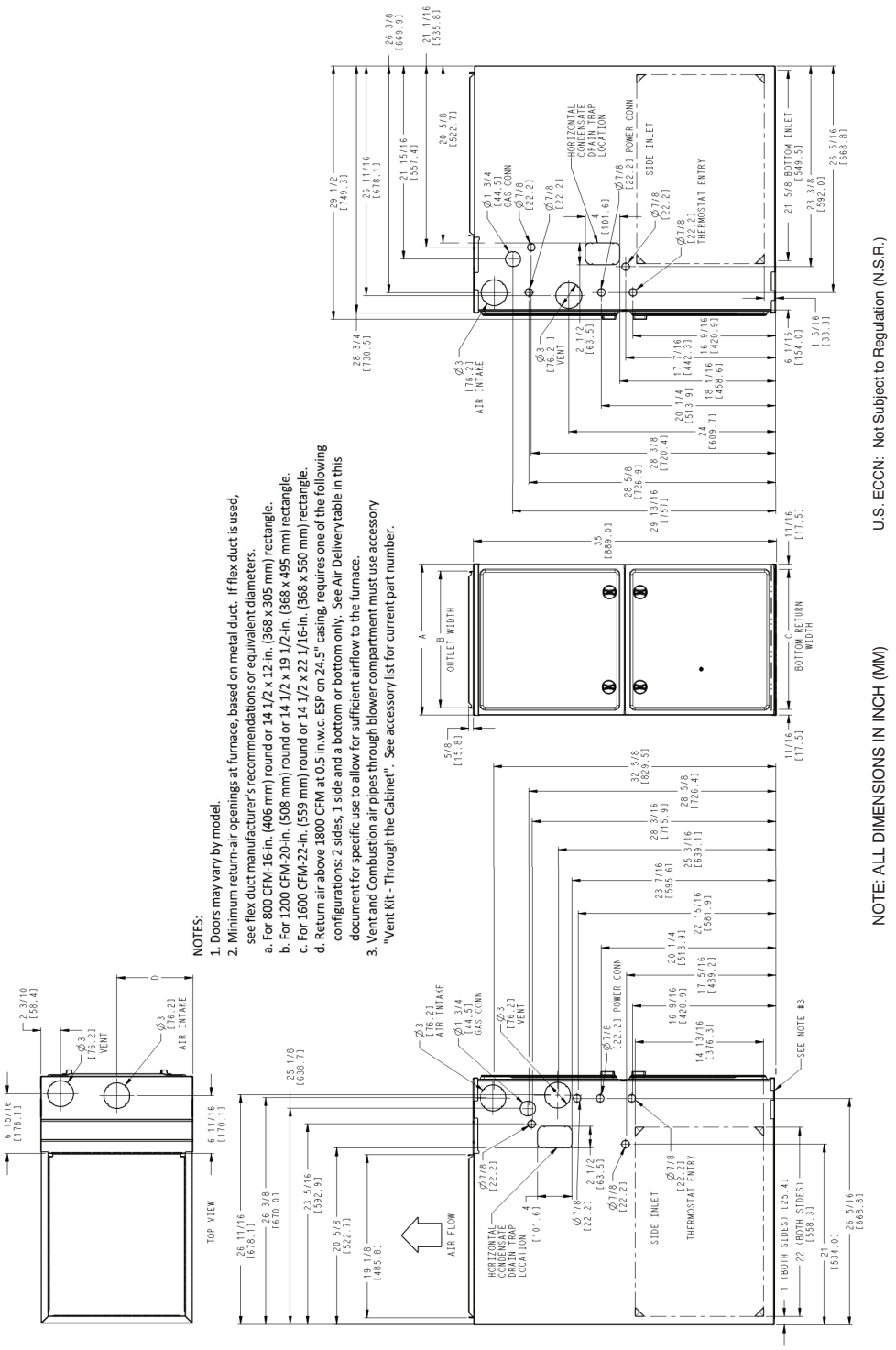
TYPICAL WIRING SCHEMATIC



NOTES: 1. Connect Y/Y2–terminal as shown for proper operation.
2. Some thermostats require a "C" terminal connection as shown.
3. If any of the original wire, as supplied, must be replaced, use same type or equivalent wire.

A200307

DIMENSIONAL DRAWING



A200327

FURNACE SIZE	A	B	C	D	SHIP WT.
	CABINET WIDTH	OUTLET WIDTH	BOTTOM INLET WIDTH	AIR INTAKE	LB (KG)
30040V14	14-3/16 (361)	12-1/2 (319)	12-9/16 (322)	7-1/8 (181)	123 (55.8)
36040V17	17-1/2 (445)	15-7/8 (403)	16 (406)	8-3/4 (222)	136 (61.7)
36060V14	14-3/16 (361)	12-1/2 (319)	12-9/16 (322)	7-1/8 (181)	132 (59.9)
42060V17	17-1/2 (445)	15-7/8 (403)	16 (406)	8-3/4 (222)	146 (66.2)
48080V17	17-1/2 (445)	15-7/8 (403)	16 (406)	8-3/4 (222)	150 (68)
60080V21	21 (533)	19-3/8 (492)	19-1/2 (495)	10-1/2 (267)	161 (73)
60100V21	21 (533)	19-3/8 (492)	19-1/2 (495)	10-1/2 (267)	170 (77.1)
66120V24	24-1/2 (622)	22-7/8 (581)	23 (584)	12-1/4 (311)	189 (85.6)

GUIDE SPECIFICATIONS

General

System Description

Furnish a _____ 4-way multipoise gas-fired condensing furnace for use with natural gas or propane (factory-authorized conversion kit required for propane).

Quality Assurance

Unit will be designed, tested and constructed to the current ANSI Z 21.47/CSA 2.3 design standard for gas-fired central furnaces.

Unit will be third party certified by CSA to the current ANSI Z 21.47/CSA 2.3 design standard for gas-fired central furnaces. Unit will carry the CSA Blue Star® and Blue Flame® labels. Unit efficiency testing will be performed per the current DOE test procedure as listed in the Federal Register.

Unit will be certified for capacity and efficiency and listed in the latest AHRI Consumer's Directory of Certified Efficiency Ratings.

Unit will carry the current Federal Trade Commission Energy Guide efficiency label.

Delivery, Storage, and Handling

Unit will be shipped as single package only and is stored and handled per unit manufacturer's recommendations.

Primary Heat Exchangers

Primary heat exchangers shall be 3-Pass corrosion-resistant aluminized steel of fold-and-crimp sectional design and applied operating under negative pressure.

Secondary Heat Exchangers

Secondary heat exchangers shall be of a stainless steel flow-through of fin-and-tube design and applied operating under negative pressure.

Controls

Controls shall include a micro-processor-based integrated electronic control board with at least 16 service troubleshooting codes displayed via diagnostic flashing LED light on the control, a self-test feature that checks all major functions of the furnace, and a replaceable automotive-type circuit protection fuse. Multiple operational settings available, including separate blower speeds for high heat, low cooling, high cooling and continuous fan. Continuous fan speed may be adjusted from the thermostat. Cooling airflow will be selectable between 325 to 400 CFM per ton of air conditioning. Features will also include temporary reduced airflow in the cooling mode for improved dehumidification when a T6-PRH is selected as the thermostat.

Operating Characteristics

Heating capacity shall be _____ Btuh input; _____ Btuh output capacity.

Fuel Gas Efficiency shall be_____ AFUE.

Air delivery shall be _____ cfm minimum at 0.50 in. W.C. external static pressure.

Dimensions shall be: depth_____in. (mm); width _____in. (mm); height_____in. (mm) (casing only). Height shall be _____in. (mm) with A/C coil and _____in. (mm) overall with plenum.

Electrical Requirements

Electrical supply shall be 115 volts, 60 Hz, single-phase (nominal). Minimum wire size shall be _____AWG; maximum fuse size of HACR-type designated circuit breaker shall be _____ amps.

Special Features

Refer to section of the product data identifying accessories and descriptions for specific features and available enhancements.

Warranty (for inclusion by specifying engineer)

U.S. and Canada only. Warranty certificate available upon request.

Equipment

Blower Wheel and ECM Blower Motor

Galvanized blower wheel shall be centrifugal type, statically and dynamically balanced. Blower motor of ECM type shall be permanently lubricated with sealed ball bearings, of _____hp, and have infinitely variable speed from 600-1200 RPM operating only when motor inputs are provided. Blower motor shall be direct drive and soft mounted to the blower housing to reduce vibration transmission.

Filters

Furnace shall have reusable-type filters. Filter shall be _____ in. (mm) X _____ in. (mm). An accessory highly efficient Media Filter is available as an option. _____ Media Filter.

Casing

Casing shall be of .030 in. thickness minimum, pre-painted steel.

Draft Inducer Motor

Draft inducer motor shall be single-speed PSC design.

Edition Date: 01/25
Catalog No: PDS926SA-01
A Carrier Company
Replaces: NEW