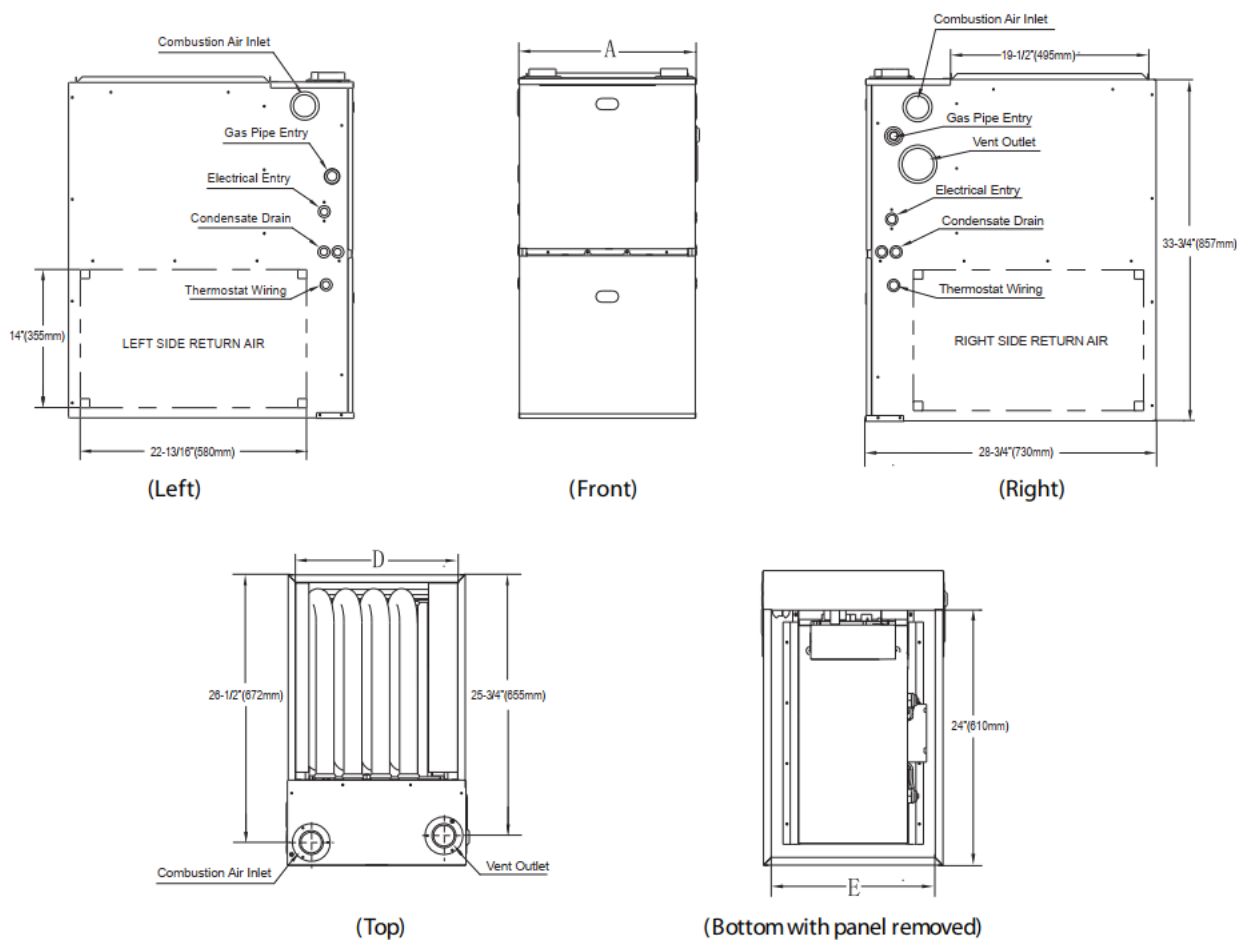


Submittal

TAG:

AGF96M120D5A

Heating capacity: 20 – 120 KBTU/h



FURNACE SIZE	A CABINET WIDTH IN.	D SUPPLY AIR WIDTH IN.	E RETURN AIR WIDTH IN.	NET/SHIP WT (lbs)
120D5A	24.5	23	22-27/32	176/190

Specifications

	AGF96M120D5A
FUEL TYPE	Natural/Propane Gas
GAS HEATING PERFORMANCE	
High Fire Input (BTU/h)	120000
High Fire Output (BTU/h)	
Natural Gas	115000
LP Gas	115000
Low Fire Input (BTU/h)	78000
Low Fire Output (BTU/h)	
Natural Gas	75000
LP Gas	75000
AFUE	96
Available AC @ 0.5" ESP	3.5/4/4.5/5
Temperature Rise Range (° F)	40-70
Static pressure(in.w.c)	
Heating	0.2
Cooling	0.5
ELECTRICAL DATA	
Voltage/Phase(60Hz)	115
Min. / Max. Voltage	104/127
Min. Circuit Ampacity	10.5
Max. Overcurrent Protection	20
FAN MOTOR	
Motor Type	ECM
Horsepower	1
Rated RPM	1050
Full Load Amps (FLA)	10.5
Capacitor (uF)	/
CIRCULATOR BLOWER	
Material	Metal

Size (D x H) (in.)	12-6/8 x 11-1/4
Vent Diameter ¹	3"
No. of Burners	6
Speed Mode Number	5

Consumption system specifications

Model			AGF96M 120D5A
Max. Inlet Gas Press	Natural Gas	in.w.c	10.5
	Propane Gas (LP)	in.w.c	13
Min. Inlet Gas Press	Natural Gas	in.w.c	4.5
	Propane Gas (LP)	in.w.c	11
Natural Gas Manifold Pressure (High fire)		in.w.c	3.5
Natural Gas Manifold Pressure (Low fire)		in.w.c	1.6
Propane Gas Manifold Pressure (High fire)		in.w.c	10
Propane Gas Manifold Pressure (Low fire)		in.w.c	4
Natural Gas Factory Orifice (0-2000 feet)		#	45
Propane Gas (LP) Factory Orifice (0-2000 feet)		#	55
Gas Connection Size		in. NPT	1/2
Igniton Device		Hot surface	
Number of Burners		#	6
Primary Heat exchanger Diameter		Inch	1-6/8
Primary Heat exchanger		# tubes	6
Secondary Heat Exchanger Diameter		Inch	3/8
Secondary Heat Exchanger		# tubes	48
Flue Vent Diameter		Inch	3"
Safety Switch Settings			
Pressure Switch Factory Setting	High	in.w.c	1.1
Pressure Switch Factory Setting	Low	in.w.c	0.55
Rollout switch - resettable	Off/On	°F	300
Inlet High Temperature Limit switch - fixed	Off/On	°F	150/120

Airflow Data

Air Delivery - CFM without filter

FURNACE SIZE	RETURN-AIR INLET	SPEED		EXTERNAL STATIC PRESSURE(IN.W.C)									
				0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
120D	Bottom or Sides	H	CFM	2290	2253	2213	2170	2127	2080	2031	1985	1937	1888
			Temp Rise-1st stage°F	--	--	--	--	--	--	--	--	--	--
			Temp Rise-2nd stage°F	46.4	47.2	48.0	49.0	50.0	51.1	52.3	53.5	54.9	56.3
		Mid-H	CFM	2079	2037	1993	1950	1907	1856	1813	1767	1726	1675
			Temp Rise-1st stage°F	--	--	--	--	--	--	--	--	40.0	41.2
			Temp Rise-2nd stage°F	51.1	52.2	53.3	54.5	55.7	57.3	58.6	60.1	61.6	63.4
		Mid	CFM	1809	1764	1719	1668	1620	1572	1528	1487	1432	1364
			Temp Rise-1st stage°F	--	--	40.2	41.4	42.6	43.9	45.2	46.5	48.2	50.6
			Temp Rise-2nd stage°F	58.7	60.2	61.8	63.7	65.6	67.6	69.6	--	--	--
		Mid-L	CFM	1489	1429	1373	1311	1265	1208	1137	1083	1032	972
			Temp Rise-1st stage°F	46.4	48.3	50.3	52.7	54.6	57.2	60.7	63.8	66.9	--
			Temp Rise-2nd stage°F	--	--	--	--	--	--	--	--	--	--
		Low	CFM	1123	1051	1352	899	814	741	688	605	551	507
			Temp Rise-1st stage°F	61.5	65.7	--	--	--	--	--	--	--	--
			Temp Rise-2nd stage°F	--	--	--	--	--	--	--	--	--	--

A filter is required for each return -air Inlet. Airflow performance Included 3/4-In. (19 mm) washable filter media such as contained In factory-authorized accessory filter rack. To determine airflow performance with this filter, assume an additional 0.1 in.w.c available external static pressure.

Filter Size Information - In.

FURNACE CASING WIDTH (IN.)	FILTER SIZE		FILTER TYPE
	SIDE RETURN (IN.)	BOTTOM RETURN (IN.)	
14-1/2	16X25	14X25	High Velocity (600 FPM)
17-1/2	16X25	16X25	
21	16X25	20X25	
24.5	16X25	24X25	

NOTES:

- Air velocity through throwaway type filters may not exceed 300 feet per minute (91.4 m/min). All velocities over this require the use of high velocity filters.
- Do not exceed 1800 CFM using a single side return and a 16x25 filter. For CFM greater than 1800, you may use two side returns or one side and the bottom or one side return with a transition to allow use of a 20x25 filter.

Minimum Area in Square Inch Required for Each Opening

BTUH Input Rating	Minimum Free Area in Square Inch Required for Each Opening
120,000	120 in ²

Minimum Free Area Required for Each Opening

BTUH Input Rating	Minimum Free Area Required for Each Opening		
	Horizontal Duct (2,000 BTUH)	Vertical Duct or Opening to Outside (4,000 BTUH)	Round Duct (4,000 BTUH)
120,000	60 in ²	30 in ²	7"

EXAMPLE: Determining Free Area.

Appliance 1 Appliance 2 Total Input

100,000 + 30,000 = (130,000 ÷ 4,000) = 32.5 Sq. In. Vertical

Appliance 1 Appliance 2 Total Input

100,000 + 30,000 = (130,000 ÷ 2,000) = 65 Sq. In. Horizontal

Piston

High Altitude Derate Orifice Size Chart (Natural and LP Gas*) US installation

Input Rate KBTU/H	Number of Burner	Elevation (Ft)									
		0-2000		2000-4000		4000-6000		6000-8000		8000-10000	
		Nat	LP	Nat	LP	Nat	LP	Nat	LP	Nat	LP
120	6	45	55	47	56	48	57	49	58	50	59

*LP orifice based on 10 in.w.c manifold pressure

The input to the furnace must be checked AFTER reorificing.

High Altitude Derate Orifice Size Chart (Natural and LP Gas*) Canada installation

Input Rate KBTU/H	Number of Burner	Elevation (Ft)									
		0-2000		2000-4000		4000-6000		6000-8000		8000-10000	
		Nat	LP	Nat	LP	Nat	LP	Nat	LP	Nat	LP
120	6	45	55	47	56	48	57	49	58	50	59

*LP orifice based on 10 in.w.c manifold pressure

The input to the furnace must be checked AFTER reorificing.

For Canada application, based on regulation that requires 10% derating between 2000-4500ft. orifice change is NOT required up to 4500ft.

Features

- Durable aluminized steel tubular heat exchanger. Stainless-steel secondary heat exchanger.
- Two-stage gas valve.
- Hot surface igniter.
- Quiet multi-speed ECM circulator blower motor.
- Control board with self-diagnostics and Low-voltage terminal block.
- Natural gas and propane (LP) convertible.
- Designed for multi-position installation: Up flow, horizontal. Industry-standard cabinet sizes for easy replacement, installation and add-on cooling.
- Convenient left or right connection for gas and electric service.
- Removable bottom for side or bottom return applications.

Note: Product specifications change from time to time as product improvements and developments are released and may vary from those in this document. Tuttokool has a policy of continuous product and product data improvement and it reserves the right to change design and specification without notice.

