

## TECHNICAL SPECIFICATIONS

# G8SA Series

## Single Stage Upflow/Horizontal Gas Furnaces

**Induced Draft - 80+ AFUE, Ultra-Low NOx  
Input 55,000 - 100,000 Btuh**

The gas furnace may be installed free standing in a utility room, basement, or enclosed in an alcove or closet. The rounded corner jacket provides a pleasing "appliance appearance." Design certified by CSA for application in the United States.



This furnace series is approved and certified by the SCAQMD and the SJVAPC Districts in the state of California with NOx levels below 14 ng/J when operating on natural gas.

## FEATURES and BENEFITS

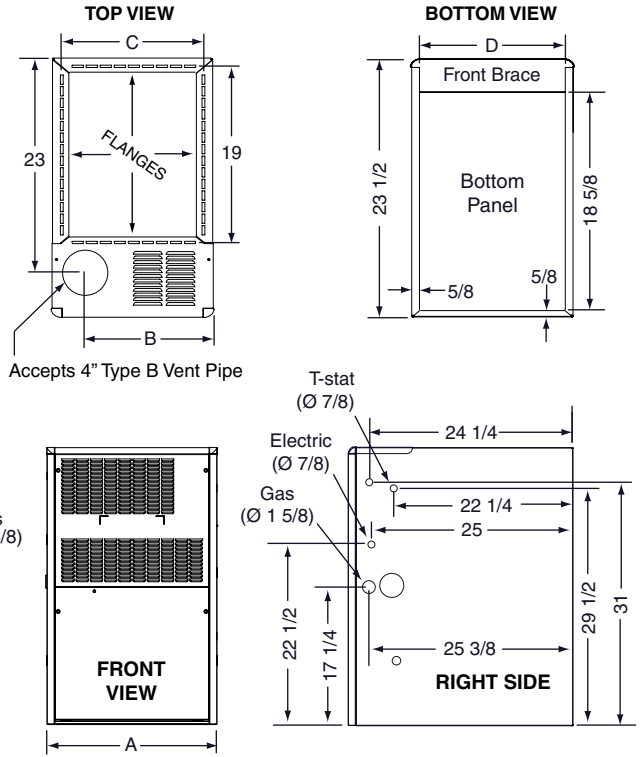
- **Ultra-low emissions:** 65% less NOx than standard furnaces.
- **100% fired and tested:** All units and each component are tested on the manufacturing line.
- **Best packaging in the industry:** Unique corner post design assures product will arrive to the homeowner dent free.
- **Low Boy Height:** Easy to apply in low ceiling applications, works well with taller high SEER coils, easier to handle and install.
- **Tubular primary heat exchanger:** Heavy gauge aluminized steel heat exchanger assures a long life.
- **30 second blower delay at start-up:** Assures a warm duct temperature at furnace start-up. Adjustable blower off settings (60, 90, 120 and 180 seconds).
- **30 second post purge:** Increases life of heat exchanger.
- **Hot surface igniter:** Innovative application of a silicon nitride igniter.
- **Color coded wire harness:** Designed to fit the components, all with quick-connect fittings for ease of service and replacement.
- **High static blowers:** All models equipped with high static blowers.
- **60 second cooling cycle blower-off delay (TDR):** increases cooling performance when matched with a Nortek Global HVAC coil.
- **Flexible category I venting system:** May be vented with dedicated venting system or common vented with other category one appliances.
- **High efficiency blower kits:** Maximize efficiencies and provide better temperature control, humidity control and air distribution.
- **Multi-speed direct drive blower:** Energy-efficient, brushless DC (ECM). Designed to give a wide range of cooling capacities. Switches on PCB, provide ultra easy motor speed selection.
- **Diagnostic lights for easy troubleshooting without counting flashes:** Dedicated light for flame signal strength and 2 lights in combination to indicate all other fault codes with easy to recognize states without counting flashes.
- **Integrated control board:** Incorporates connections for electronic air cleaner and humidifier. Ergonomically located for ease of service.
- **Two piece door design:** Enhances furnace appearance and uses captured screws to prevent losing door screws.
- **Furnace Air Leakage:** These furnaces comply with Energy Star cabinet air leakage requirement of less than or equal to 2%. Keep the conditioned air flowing to where it's needed.



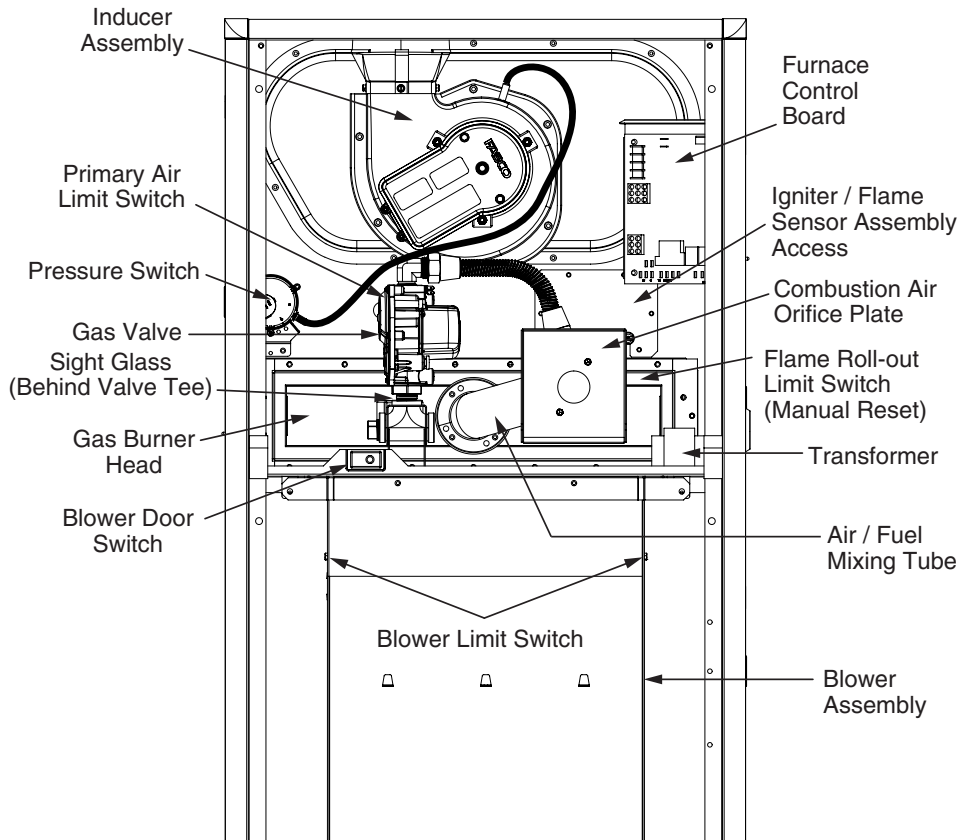
# GAS FURNACE DIMENSIONS

ULTRA-LOW NOX UPFLOW/HORIZONTAL FURNACE				
MODEL #'S	DIM. -A-	DIM. -B-	DIM. -C-	DIM. -D-
055U	14 1/4	10 3/4	12 5/8	12 7/8
070U	17 1/2	11 3/4	15 7/8	16 1/8
100U	21	14	19 3/8	19 7/8

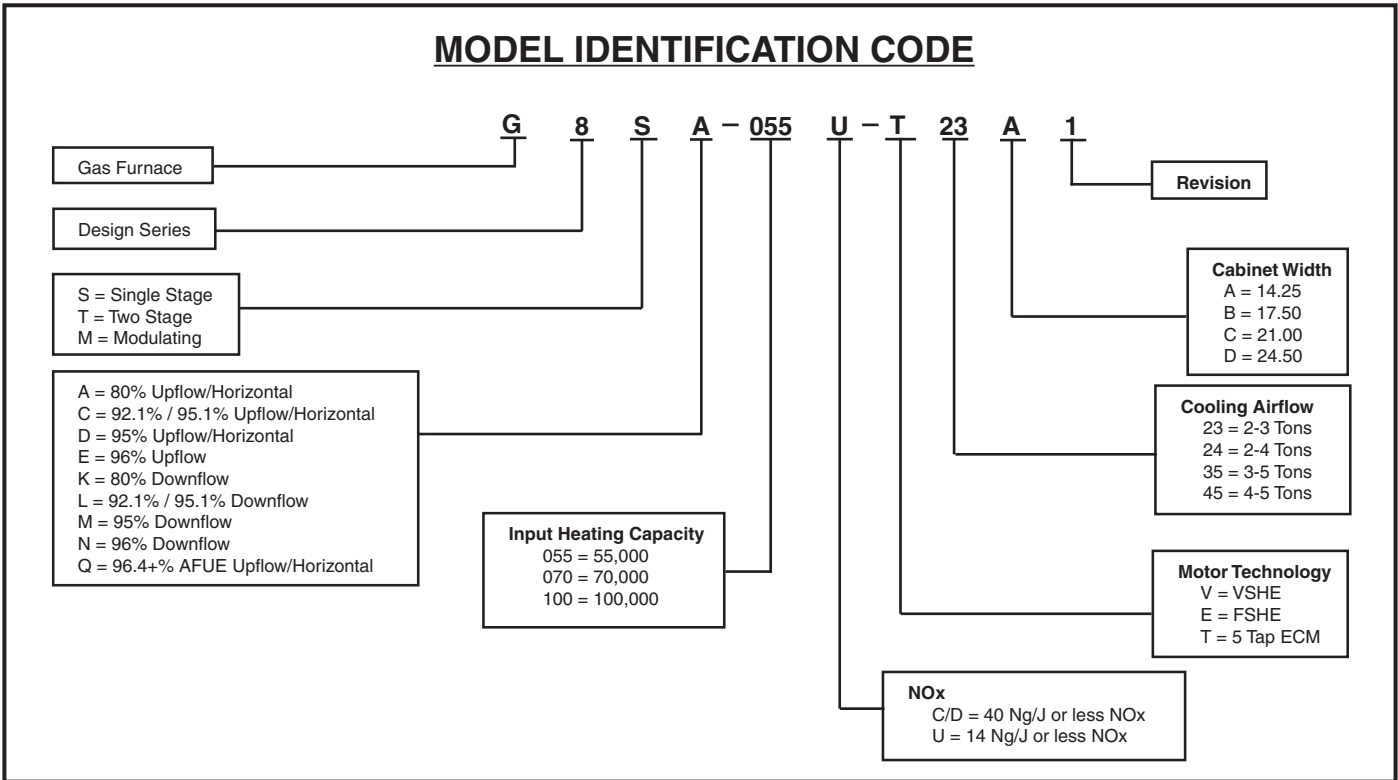
**NOTE:** Dimensions shown in Inches.



# GAS FURNACE COMPONENTS



## MODEL IDENTIFICATION CODE



## SPECIFICATIONS

<b>G8SA MODEL NUMBERS</b>	<b>-055U-T23A1</b>	<b>-070U-T24B1</b>	<b>-100U-T35C1</b>
Input - Btuh (a)	55000	70000	100000
Heating Capacity - BtuH	44000	56000	80000
<b>AFUE</b>	80.0	80.0	80.0
Motor H.P. - Speed - Type	1/2 - 5 - ECM	3/4 - 5 - ECM	1 - 5 - ECM
Motor FLA	6	8.4	11
Rated Ext. SP - In. W.C.	0.5	0.5	0.5
Temperature Rise Range - F	35-65	35-65	35-65
Shipping Weights	107	135	144
NOx	<14ng/J	<14ng/J	<14ng/J

# ACCESSORIES

G8SA KITS	
Description	SKU
Side return filter kit	541036

## AIRFLOW DATA

HEATING AIRFLOW (CFM) & TEMPERATURE RISE (°F)												
MODEL NAME/ HEATING INPUT G8SA	RETURN AIR VIA:	MOTOR SPEED TAP	EXTERNAL STATIC PRESSURE (IN. W.C.)									
			0.1		0.2		0.3		0.4		0.5	
			CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE
-055U-T23A*	Bottom	5 - High *										
		4 - Med-High										
		3 - Med-Low **	880	46	845	48	810	50	770	53	735	55
		2 - Alternate	705	58	650	63	610		570		530	
		1 - Low ***	640	64	600		555		510		470	
	Side	5 - High *										
		4 - Med-High										
		3 - Med-Low **	875	47	830	49	795	51	750	54	715	57
		2 - Alternate	685	59	650	63	595		555		515	
		1 - Low ***	640	64	585		540		500		460	

COOLING AIRFLOW (CFM)										
MODEL NAME/ HEATING INPUT G8SA	RETURN AIR VIA:	MOTOR SPEED TAP	EXTERNAL STATIC PRESSURE (IN. W.C.)							
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
			CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
-055U-T23A*	Bottom	5 - High *	1,180	1,140	1,110	1,080	1,045	1,015	985	955
		4 - Med-High	920	880	850	810	775	740	700	665
		3 - Med-Low **	880	845	810	770	735	700	665	630
		2 - Alternate	705	650	610	570	530	480	440	400
		1 - Low ***	640	600	555	510	470	430	390	340
	Side	5 - High *	1,160	1,125	1,095	1,065	1,040	1,010	975	945
		4 - Med-High	905	860	827	790	755	717	683	639
		3 - Med-Low **	875	830	793	752	715	684	642	606
		2 - Alternate	685	650	595	555	515	471	424	376
		1 - Low ***	640	585	540	500	460	415		

### NOTES:

1. To comply with government mandated efficiency standards, two openings are required for airflows above 1,600 CFM.
2. Data is shown without filter.
3. Temperature rises in the table are approximate. Actual temperature rises may vary.
4. Individual cells shaded in gray indicate a temperature rise outside of the recommended range.
5. To comply with government mandated efficiency standards, speed settings shaded in gray are not allowed in HEAT mode.
6. The "\*" denotes the factory COOL setting, "\*\*\*" denotes the factory HEAT setting, and "\*\*\*\*" denotes factory FAN setting. If the Alternate speed is to be used, the speed tap must be adjusted at the blower motor plug.

# AIRFLOW DATA

HEATING AIRFLOW (CFM) & TEMPERATURE RISE (°F)												
MODEL NAME/ HEATING INPUT	RETURN AIR VIA:	MOTOR SPEED TAP	EXTERNAL STATIC PRESSURE (IN. W.C.)									
			0.1		0.2		0.3		0.4		0.5	
			CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE
-070U-T24B*	Bottom	5 - High *										
		4 - Med-High										
		3 - Med-Low **										
		2 - Alternate	1,130	46	1,070	48	1,010	51	960	54	890	58
		1 - Low ***	820	63	730		630		570		540	
	Side	5 - High *										
		4 - Med-High										
		3 - Med-Low **										
		2 - Alternate	1,090	48	1,020	51	970	53	920	56	860	60
		1 - Low ***	740		680		620		560		510	

COOLING AIRFLOW (CFM)										
MODEL NAME/ HEATING INPUT	RETURN AIR VIA:	MOTOR SPEED TAP	EXTERNAL STATIC PRESSURE (IN. W.C.)							
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
			CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
-070U-T24B*	Bottom	5 - High *	1,790	1,740	1,690	1,640	1,590	1,540	1,490	1,440
		4 - Med-High	1,650	1,590	1,560	1,500	1,450	1,400	1,350	1,290
		3 - Med-Low **	1,395	1,340	1,290	1,235	1,190	1,130	1,070	1,010
		2 - Alternate	1,130	1,070	1,010	960	890	820	770	720
		1 - Low ***	820	730	630	570	540	490	430	380
	Side	5 - High *	1,740	1,700	1,660	1,610	1,550	1,510	1,460	1,400
		4 - Med-High	1,610	1,550	1,510	1,460	1,410	1,360	1,310	1,250
		3 - Med-Low **	1,350	1,295	1,245	1,185	1,140	1,085	1,035	985
		2 - Alternate	1,090	1,020	970	920	860	800	750	700
		1 - Low ***	740	680	620	560	510	450	410	360

**NOTES:**

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6. The "\*" denotes the factory COOL setting, "\*\*\*" denotes the factory HEAT setting, and "\*\*\*\*" denotes factory FAN setting. If the Alternate speed is to be used, the speed tap must be adjusted at the blower motor plug.

# AIRFLOW DATA

HEATING AIRFLOW (CFM) & TEMPERATURE RISE (°F)												
MODEL NAME/ HEATING INPUT G8SA	RETURN AIR VIA:	MOTOR SPEED TAP	EXTERNAL STATIC PRESSURE (IN. W.C.)									
			0.1		0.2		0.3		0.4		0.5	
			CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE
-100U-T35C*	Bottom	5 - High *										
		4 - Med-High										
		3 - Med-Low **	880	46	845	48	810	50	770	53	735	55
		2 - Alternate	705	58	650	63	610		570		530	
		1 - Low ***	640	64	600		555		510		470	
	Side	5 - High *										
		4 - Med-High										
		3 - Med-Low **	875	47	830	49	795	51	750	54	715	57
		2 - Alternate	685	59	650	63	595		555		515	
		1 - Low ***	640	64	585		540		500		460	
	Side + Bottom or 2 Sides	5 - High *										
		4 - Med-High										
		3 - Med-Low **	1,600	46	1,530	48	1,460	51	1,400	53	1,340	55
		2 - Alternate	1,525	49	1,455	51	1,390	53	1,330	56	1,265	59
		1 - Low ***	1,370	54	1,300	57	1,230	60	1,150	64	1,090	

COOLING AIRFLOW (CFM)										
MODEL NAME/ HEATING INPUT G8SA	RETURN AIR VIA:	MOTOR SPEED TAP	EXTERNAL STATIC PRESSURE (IN. W.C.)							
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
			CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
-100U-T35C*	Bottom	5 - High *	2,310	2,260	2,200	2,150	2,100	2,040	1,990	1,940
		4 - Med-High	1,870	1,820	1,760	1,720	1,670	1,610	1,560	1,490
		3 - Med-Low **	1,580	1,530	1,480	1,420	1,360	1,290	1,230	1,155
		2 - Alternate	1,500	1,450	1,400	1,340	1,280	1,210	1,130	1,050
		1 - Low ***	1,390	1,320	1,260	1,200	1,130	1,060	970	890
	Side	5 - High *	2,160	2,100	2,060	2,020	2,050	1,990	1,950	1,880
		4 - Med-High	1,810	1,750	1,710	1,660	1,620	1,560	1,510	1,440
		3 - Med-Low **	1,540	1,490	1,440	1,380	1,330	1,270	1,210	1,150
		2 - Alternate	1,470	1,420	1,360	1,310	1,260	1,200	1,130	1,070
		1 - Low ***	1,310	1,250	1,190	1,150	1,080	1,000	950	880
	Side + Bottom or 2 sides	5 - High *	2,280	2,220	2,170	2,120	2,090	2,080	2,020	1,950
		4 - Med-High	1,880	1,820	1,770	1,720	1,670	1,610	1,560	1,490
		3 - Med-Low **	1,600	1,530	1,460	1,400	1,340	1,270	1,200	1,120
		2 - Alternate	1,525	1,455	1,390	1,330	1,265	1,190	1,120	1,045
		1 - Low ***	1,370	1,300	1,230	1,150	1,090	1,000	920	860

**NOTES:**

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### GENERAL TERMS OF LIMITED WARRANTY

Nortek Global HVAC, LLC will furnish a replacement for any part of this product which fails in normal use and service within the terms and conditions of the warranty.

For complete details of the Limited Warranty, including applicable terms and conditions, see your local installer or contact the Nortek Global HVAC, LLC warranty department for a copy.

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer. Specifications and illustrations subject to change without notice and without incurring obligations. Printed in U.S.A (05/2020)