

## TECHNICAL SPECIFICATIONS

### G8SD Series

#### Single Stage Upflow/Horizontal Gas Furnaces

**Induced Draft - 95+ AFUE, Ultra-Low NOx  
Input 50,000 - 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.



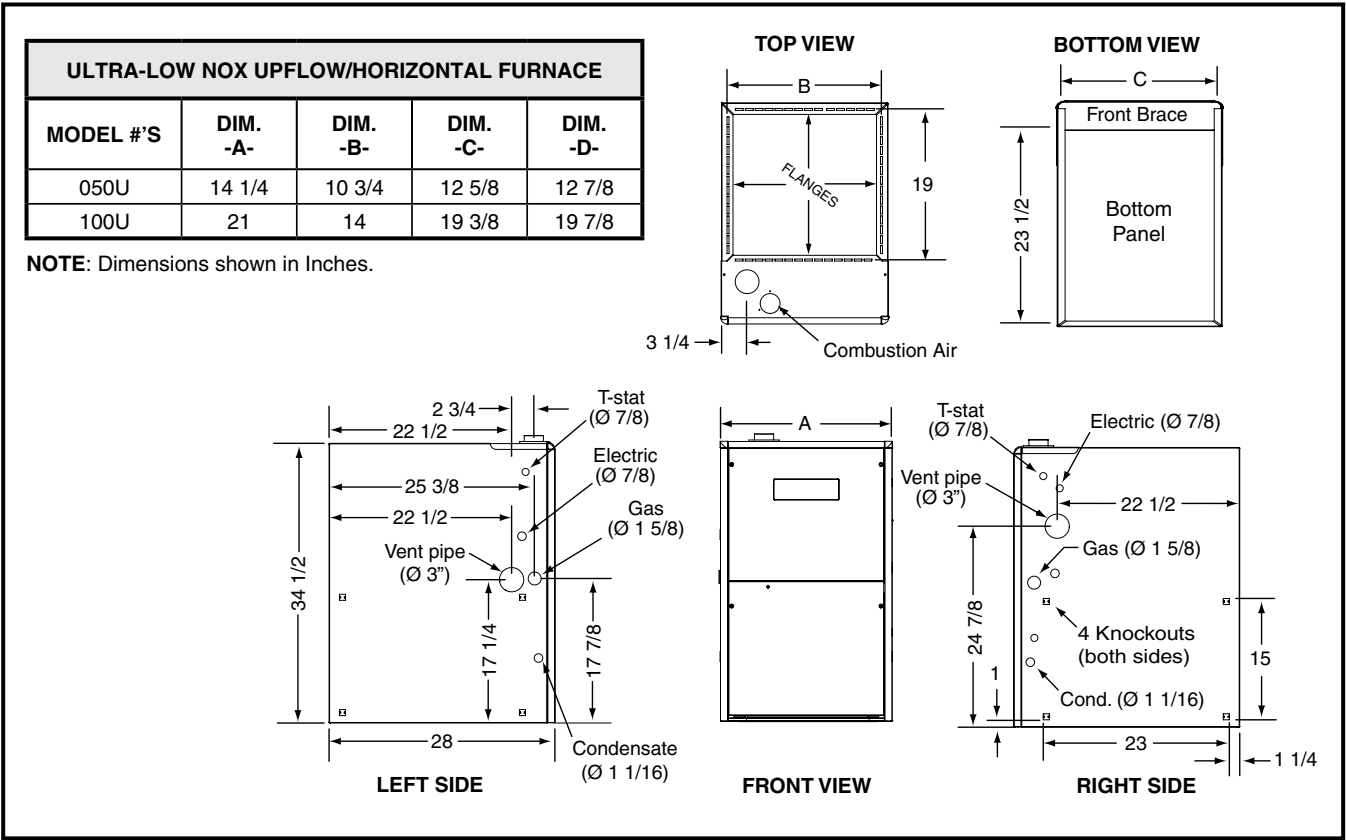
This furnace series is approved and certified by the SCAQMD and the SJVAPC Districts in the state of California with NOx levels below 14 ng/J when operating on natural gas.

#### **FEATURES and BENEFITS**

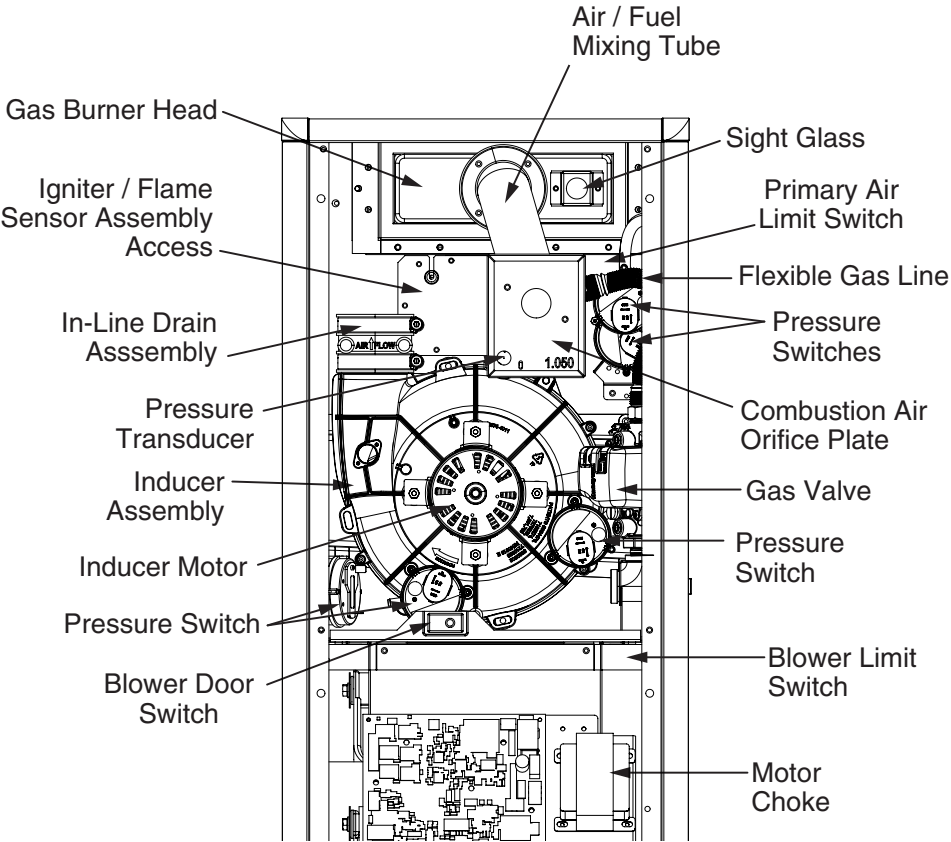
- **Ultra-low emissions:** 65% less NOx than standard furnaces.
- **100% fired and tested:** All units and each component are tested on the manufacturing line.
- **Best packaging in the industry:** Unique corner post design assures product will arrive to the homeowner dent free.
- **Low Boy Height:** 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 IV 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.
- **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.



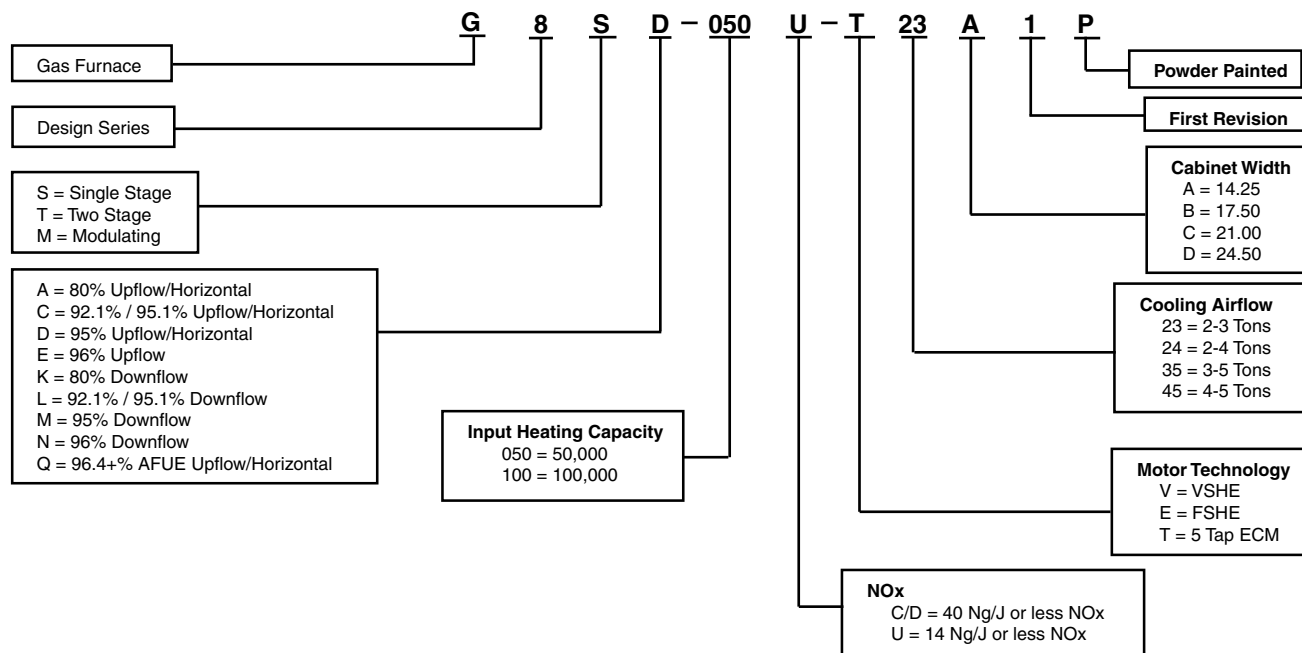
# GAS FURNACE DIMENSIONS



# GAS FURNACE COMPONENTS



## MODEL IDENTIFICATION CODE



## SPECIFICATIONS

G8SD MODEL NUMBERS	-050U-T23A1	-100U-T35C1
Input - Btuh (a)	50000	100000
Heating Capacity - BtuH	48000	95000
<b>AFUE</b>	95.0	95.0
Motor H.P. - Speed - Type	3/4 - 9 - ECM	1 - 9 - ECM
Motor FLA	8.4	11
Rated Ext. SP - In. W.C.	0.5	0.5
Temperature Rise Range - F	30-60	35-65
Shipping Weights	115	153
NOx	<14ng/J	<14ng/J

# ACCESSORIES

G8SD KITS	
Description	SKU
Side return filter kit	541036

## AIRFLOW DATA

HEATING AIRFLOW (CFM) & TEMPERATURE RISE (°F)													
MODEL NAME/ HEATING INPUT G8SD	RETURN AIR VIA:	MOTOR SPEED	TORQUE SETTING	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
-050U-T23A*	Bottom	Tap 9	51.0										
		Tap 8	42.0										
		Tap 7	33.0										
		Tap 6	27.6										
		Tap 5	22.5	970	45	935	47	915	48	880	50	845	52
		Tap 4	18.2	875	50	835	53	810	54	770	57	735	60
		Tap 3	16.2	835	53	795	55	765	57				
		Tap 2	9.5										
		Tap 1	6.0										
	Side	Tap 9	51.0										
		Tap 8	42.0										
		Tap 7	33.0										
		Tap 6	27.6										
		Tap 5	22.5	935	47	915	48	880	50	845	52	805	55
		Tap 4	18.2	850	52	815	54	780	56	745	59		
		Tap 3	16.2	815	54	775	57	740	59				
		Tap 2	9.5										
		Tap 1	6.0										

COOLING AIRFLOW (CFM)											
MODEL NAME/ HEATING INPUT G8SD	RETURN AIR VIA:	MOTOR SPEED	TORQUE SETTING	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)
-050U-T23A*	Bottom Only	Tap 9	51.0	1,420	1,395	1,360	1,330	1,300	1,280	1,245	1,220
		Tap 8	42.0	1,310	1,270	1,245	1,215	1,180	1,145	1,120	1,095
		Tap 7	33.0	1,180	1,145	1,115	1,085	1,050	1,020	990	955
		Tap 6	27.6	1,085	1,050	1,015	985	950	920	890	855
		Tap 5	22.5	970	935	915	880	845	810	780	745
		Tap 4	18.2	875	835	810	770	735	700	665	630
		Tap 3	16.2	835	795	765	725	690	655	615	580
		Tap 2	9.5	650	590	560	520	465	430	380	340
		Tap 1	6.0	550	485	450	405	330	290	250	195
	Left Side Only Motor	Tap 9	51.0	1,410	1,380	1,350	1,315	1,285	1,255	1,225	1,200
		Tap 8	42.0	1,290	1,260	1,230	1,195	1,160	1,135	1,100	1,070
		Tap 7	33.0	1,145	1,115	1,090	1,055	1,030	995	960	920
		Tap 6	27.6	1,045	1,015	980	950	920	885	855	825
		Tap 5	22.5	935	915	880	845	805	775	745	695
		Tap 4	18.2	850	815	780	745	715	665	625	585
		Tap 3	16.2	815	775	740	700	675	620	575	540
		Tap 2	9.5	605	575	530	495	445	390	325	235
		Tap 1	6.0	495	470	410	365	320	260	160	

### 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 G8SD	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
G8SD-100U-T35C*	Bottom Only	9	---	---	---	---	---	---	---	---	---	---
		8	---	---	---	---	---	---	---	---	---	---
		7	---	---	---	---	---	---	---	---	---	---
		6 *	1,850	48	1,790	49	1,745	50	1,700	52	1,650	53
		5 **	1,745	50	1,690	52	1,645	53	1,590	55	1,535	57
		4	1,480	59	1,420	62	1,360	65	1,300		1,230	
		3	1,315		1,245		1,170		1,100		1,025	
		2	1,140		1,055		975		890		820	
		1 ***	1,025		920		830		745		690	
	Side Only	9	---	---	---	---	---	---	---	---	---	---
		8	---	---	---	---	---	---	---	---	---	---
		7	---	---	---	---	---	---	---	---	---	---
		6 *	1,785	49	1,740	51	1,690	52	1,640	54	1,590	55
		5 **	1,690	52	1,640	54	1,595	55	1,540	57	1,490	59
		4	1,435	61	1,375	64	1,300		1,250		1,195	
		3	1,265		1,190		1,140		1,070		1,005	
		2	1,095		1,015		945		870		790	
		1 ***	980		905		835		740		665	
	Side + Bottom	9	---	---	---	---	---	---	---	---	---	---
		8	---	---	---	---	---	---	---	---	---	---
		7	---	---	---	---	---	---	---	---	---	---
		6 *	1,865	47	1,810	49	1,755	50	1,695	52	1,645	53
		5 **	1,760	50	1,705	52	1,655	53	1,595	55	1,535	57
		4	1,495	59	1,430	62	1,365	64	1,290		1,235	
		3	1,325		1,245		1,175		1,095		1,035	
		2	1,175		1,065		965		900		810	
		1 ***	1,040		930		850		750		680	

## 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 (default) COOL setting, "\*\*\*\*" denotes the factory (default) HEAT setting, and "\*\*\*\*\*" denotes the factory (default) FAN setting. If an alternate speed is to be used, refer to the installation instructions for Speed Tap Selection.

# AIRFLOW DATA

COOLING AIRFLOW (CFM)										
MODEL NAME/ HEATING INPUT G8SD	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)
G8SD-100U- T35C*	Bottom Only	9	2,250	2,250	2,190	2,130	2,080	2,025	1,975	1,915
		8	2,055	2,010	1,970	1,900	1,840	1,790	1,730	1,675
		7	1,900	1,845	1,795	1,750	1,700	1,650	1,575	1,520
		6 *	1,850	1,790	1,745	1,700	1,650	1,595	1,535	1,470
		5 **	1,745	1,690	1,645	1,590	1,535	1,485	1,420	1,365
		4	1,480	1,420	1,360	1,300	1,230	1,165	1,110	1,055
		3	1,315	1,245	1,170	1,100	1,025	975	915	860
		2	1,140	1,055	975	890	820	765	705	660
		1 ***	1,025	920	830	745	690	625	580	500
	Side Only	9	2,155	2,110	2,075	2,020	1,975	1,965	1,950	1,900
		8	1,980	1,940	1,890	1,850	1,805	1,760	1,710	1,650
		7	1,835	1,785	1,740	1,685	1,635	1,585	1,545	1,495
		6 *	1,785	1,740	1,690	1,640	1,590	1,540	1,490	1,440
		5 **	1,690	1,640	1,595	1,540	1,490	1,440	1,390	1,340
		4	1,435	1,375	1,300	1,250	1,195	1,140	1,080	1,020
		3	1,265	1,190	1,140	1,070	1,005	935	875	815
		2	1,095	1,015	945	870	790	715	665	615
		1 ***	980	905	835	740	665	590	525	440
	Bottom + Side	9	2,245	2,195	2,155	2,095	2,065	2,070	2,015	1,950
		8	2,080	2,030	1,980	1,930	1,880	1,820	1,765	1,705
		7	1,915	1,875	1,820	1,765	1,715	1,655	1,600	1,535
		6 *	1,865	1,810	1,755	1,695	1,645	1,585	1,530	1,485
		5 **	1,760	1,705	1,655	1,595	1,535	1,480	1,430	1,370
		4	1,495	1,430	1,365	1,290	1,235	1,170	1,115	1,065
		3	1,325	1,245	1,175	1,095	1,035	970	910	855
		2	1,175	1,065	965	900	810	775	705	635
		1 ***	1,040	930	850	750	680	610	560	475

## 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 (10/2020)