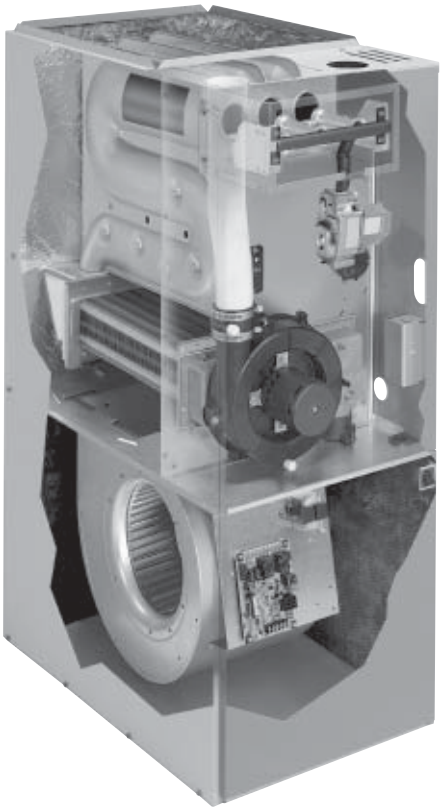
High Efficiency Gas Furnace

Upflow

ARMSTRONG AIR™

G1D91BU



ULTRA V

TECH 91

ENERGY STAR

HEAT EXCHANGER
- 409 Stainless steel tapered S-curve design primary.
- Stainless steel secondary.
- Crimped no-weld construction for longer life.

CABINET
- Compact 44" height.
- Insulated to increase efficiency and reduce sound levels.
- Unitized construction for cabinet integrity.
- Prepainted steel for maximum durability

BLOWER
- Isolated and insulated compartment to reduce sound.
- Easily removable slide-out design
- Multi-speed for wide airflow range.
- PSC permanently lubricated motor for low maintenance and maximum efficiency.
- Dynamically balanced blower with resilient motor mounts for smooth and quiet operation.

BURNERS
- Aluminized steel inshot burners for smooth ignition.

CONTROLS
- Honeywell 24 V gas valve
- Integrated ignition and fan control board
- Board features self diagnostics as well as saving last five (5) fault codes in nonvolatile memory for ease of service
- Provides reverse polarity protection
- Hot surface ignition using steel shrouded, high density Norton Mini-Ignitor™
- Fan control board features adjustable fan off time in the heating mode and a 60 second fan off time delay in the cooling mode
- Fan control board provides terminals for electronic air cleaner, humidifier, furnace twinning, and continuous low speed fan operations
- Control circuit is fuse protected
- 40 VA transformer
- Color coded control wiring

VENTING
- Permanently lubricated draft motor with stainless steel shaft, chrome alloy steel ball bearings, and fan cooled for long life.
- ABS and PVC approved.
- Design certified for direct and non-direct venting

INSTALLATION
- Left or right gas entry.
- Complies with California Low NOx regulations.
- Start holes for side return duct connection.
- Internal drain trap for compact installation.

ACCESSORIES
- Propane Conversion kit
- Twinning kit
- “Flush fit” coils
- Filter kit

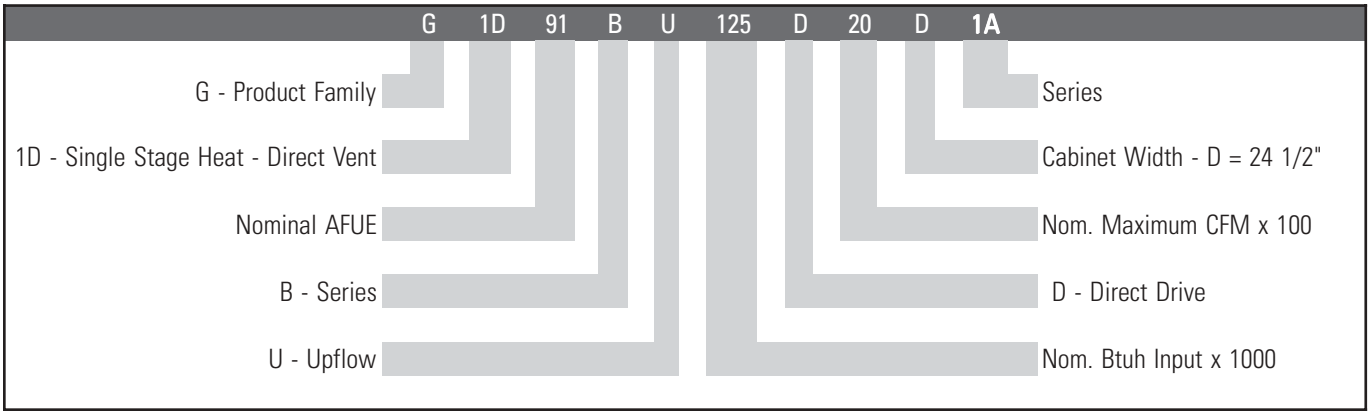
WARRANTY
- Limited lifetime non-prorated warranty on primary and secondary heat exchanger
- 5 year limited on all parts
- Extended protection plans available

DESIGN CERTIFIED ®

EFFICIENCY RATING CERTIFIED Gama

CERTIFIED ®

Model Number Guide



Physical & Electrical

Model	Input (Btuh)	Output (Btuh)	AFUE	Nom. Cooling Cap.	Gas Inlet (in.)	Volts/ Hz/Phase	Min. Time Delay Breaker or Fuse	Nominal F.L.A.	Trans. (V.A.)	Weight (lbs.)
G1D91BU050D12B	50,000	45,500	91	1.5-3.0	1/2	120/60/1	15	5.4	40	160
G1D91BU075D12B	75,000	68,250	91	1.5-3.0	1/2	120/60/1	15	6.1	40	185
G1D91BU075D16C	75,000	68,250	91	2.5-4.0	1/2	120/60/1	15	7.4	40	195
G1D91BU100D16C	100,000	91,000	91	2.5-4.0	1/2	120/60/1	15	7.2	40	195
G1D91BU100D20C	100,000	91,000	91	3.0-5.0	1/2	120/60/1	15	10.4	40	205
G1D91BU100D22D	100,000	91,000	91	3.0-5.0	1/2	120/60/1	15	9.6	40	205
G1D91BU125D20D	125,000	113,750	91	3.0-5.0	1/2	120/60/1	15	9.6	40	220

Filter Requirements

Airflow Descriptor	Disposable Filters			Permanent Filters		
	Min. Area (sq. in.)	Size (in.)	Quantity	Min. Area (sq. in.)	Size (in.)	Quantity
12	576	16x20	2	288	16x20	1
14	672	20x20	2	336	20x20	1
16	768	20x20	2	384	20x20	1
20	960	20x25	2	480	20x25	1

1. The Airflow Descriptor is the two digits following the "D" in the model number; e.g. "20" is the Airflow Descriptor for G1D91BU100D20C.
2. Areas and dimensions shown for permanent filters are based on filters rated at 600 feet per minute face velocity.
3. Typical filter sizes are shown, however, any combination of filters whose area equals or exceeds the minimum area shown is satisfactory.

Note: Two filters required for airflows exceeding 1600 cfm.

Vent Length Specifications - Maximum

Model	Pipe Size (in.)		
	2	2 1/2	3
G1D91BU050	60ft	90ft	90ft
G1D91BU075	60ft	90ft	90ft
G1D91BU100	20ft	50ft	60ft
G1D91BU125	NR	50ft	60ft

Allowance for vent and air intake terminals included in lengths shown.

One 90° elbow equals 5 ft. of pipe.

Min. lenght 5 ft. and 1 elbow not including the vent and air intake terminals.

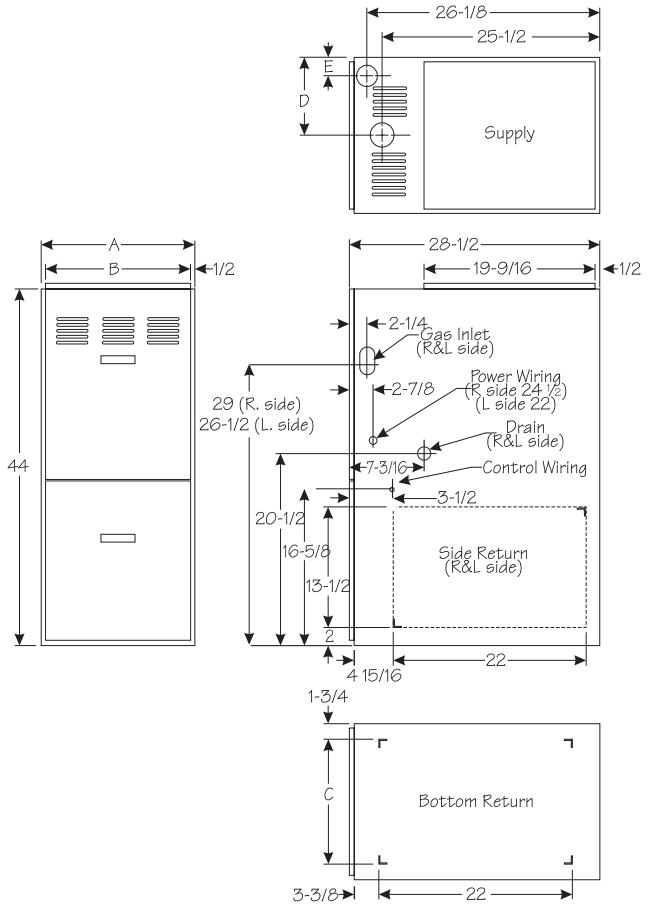
Blower Performance

Model	Motor Size (hp)	Blower Size	Temp. Rise (ºF)	Blower Speed	*CFM @ ext. Static Pressure - in. w.c. with Filter(s)							
					.20	.30	.40	.50	.60	.70	.80	.90
G1D91BU050D12B	1/3	10 x 8	40-70	Hi	1,354	1,307	1,253	1,200	1,120	1,060	980	880
				Med/Hi	1,087	1,075	1,044	1,010	965	615	840	750
				Med	823	854	840	816	780	738	678	607
				Low	740	730	720	680	665	620	573	500
G1D91BU075D12B	1/3	10 x 8	45-75	Hi	1,390	1,337	1,270	1,207	1,138	1,063	949	858
				Med/Hi	1,230	1,176	1,137	1,082	1,012	931	838	718
				Med	1,008	984	956	912	872	806	722	587
				Low	872	847	834	800	758	690	600	495
G1D91BU075D16C	3/4	12 x 10	35-65	Hi	1,921	1,888	1,831	1,759	1,668	1,624	1,549	1,445
				Med/Hi	1,750	1,720	1,682	1,661	1,625	1,494	1,397	1,327
				Med	1,515	1,491	1,462	1,421	1,397	1,330	1,258	1,185
				Med/Low	1,315	1,300	1,255	1,213	1,188	1,159	1,103	1,017
				Low	1,033	982	962	952	906	851	804	721
G1D91BU100D16C	3/4	12 x 10	45-75	Hi	1,976	1,924	1,866	1,806	1,745	1,667	1,582	1,494
				Med/Hi	1,707	1,666	1,620	1,584	1,536	1,476	1,399	1,301
				Med	1,481	1,455	1,423	1,395	1,347	1,302	1,240	1,182
				Med/Low	1,260	1,239	1,217	1,184	1,139	1,098	1,047	973
				Low	969	943	911	892	858	791	743	674
G1D91BU100D20C	.9	12 x 10	45-75	Hi	2,134	2,080	1,944	1,943	1,856	1,779	1,682	1,619
				Med/Hi	1,973	1,932	1,902	1,832	1,763	1,672	1,571	1,520
				Med	1,877	1,843	1,795	1,726	1,687	1,586	1,577	1,334
				Med/Low	1,732	1,742	1,715	1,653	1,582	1,520	1,410	1,339
				Low	1,633	1,586	1,555	1,504	1,462	1,385	1,308	1,250
G1D91BU100D22D	.9	12 x 10	45-75	Hi	2,395	2,330	2,260	2,185	2,112	2,024	1,965	1,844
				Med/Hi	2,200	2,150	2,093	2,044	1,994	1,895	1,827	1,736
				Med	2,053	1,996	1,963	1,913	1,860	1,799	1,712	1,605
				Med/Low	1,722	1,700	1,660	1,614	1,575	1,525	1,449	1,395
				Low	1,488	1,471	1,449	1,400	1,358	1,322	1,248	1,171
G1D91BU125D20D	.9	12 x 10	45-75	Hi	2,184	2,121	2,046	1,980	1,890	1,743	1,685	1,623
				Med/Hi	2,035	1,961	1,897	1,845	1,783	1,706	1,611	1,548
				Med	1,871	1,841	1,802	1,738	1,657	1,614	1,535	1,419
				Med/Low	1,725	1,685	1,642	1,613	1,567	1,486	1,385	1,342
				Low	1,591	1,549	1,532	1,475	1,447	1,363	1,279	1,206

*.50 in. w.c. Max. Approved Ext. Static Pressure

Dimensions (in.)

Model	A	B	C	D	E
G1D91BU050D12B	17 1/2	16 1/2	14	10 1/8	2
G1D91BU075D12B	17 1/2	16 1/2	14	11 3/4	2
G1D91BU075D16C	21	20	17 1/2	13 3/8	3 5/8
G1D91BU100D16C	21	20	17 1/2	15	2
G1D91BU100D20C					
G1D91BU100D22D	24 1/2	23 1/2	21	18	2
G1D91BU125D20D					



Clearances (in.)

Model	Top	Right Side	Left Side	Front	Back	Vent
G1D91BU050D12B	1	0	0	2	0	0
G1D91BU075D12B						
G1D91BU075D16C						
G1D91BU100D16C						
G1D91BU100D20C						
G1D91BU100D22D						
G1D91BU125D20D						

Accessories

Kit Number	Description	Used with
ALPKT572-3	Propane Conversion Kit	All Single Stage Ultra V 80-90/91 Models
ATWIN579	Twinning Kit	All Single Stage Ultra V Models
AFILTHA7-2	Side Return Filter Kit for Single Return with 5 tons airflow (double 16 x 20 filter)	All Ultra V Upflow Models
AFILT529-1	Bottom Return Filter Kit	All Ultra V Upflow Models
AFILT524	Upflow Side Return Filter Kit (16 x 25 Filter)	All Upflow Capable Ultra V Models
AFILT10PAK575-1	Pkg. of 10 AFILT524's	All Upflow Capable Ultra V Models
ACVK2-1	Concentric Vent Kit	All High Efficiency Ultra V Models
AFUSE576	Fuse Kit	All Single Stage Ultra V Models

Specifications subject to change without notice.

As an Energy Star Partner, Armstrong Air Conditioning Inc. has determined that this product meets the Energy Star Guidelines for energy efficiency.

ARMSTRONG AIR

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