

# Advantage 93% Gas Furnace

G1D93

## HEAT EXCHANGER DESIGN

- 409 Stainless steel primary heat exchanger material
- AL29-4C Stainless steel secondary heat exchanger material
- Weldless crimped S-curve primary heat exchanger design for maximum durability

## BURNERS

- Aluminized steel in shot burners for smooth ignition
- Isolated burner enclosure for quiet operation

## CABINET CONSTRUCTION

- Unitized construction for cabinet integrity
- Heat exchanger compartment and blower compartment insulated to increase efficiency and reduce sound levels
- Baked on prepainted steel cabinet finish

## AIR DELIVERY SYSTEM

- Direct drive multi-speed PSC blower motor
- Easily removable slide-out blower design
- Dynamically balanced blower wheel with resilient motor mounts for smooth and quiet operation

## CONTROLS

- Single stage gas valve
- Integrated ignition and fan control
- System Sentry™ control features five (5) fault codes with push button memory recall, regardless of power interruption
- Hot surface ignition system uses high density mini ignitor with stainless steel shroud
- Control features 120 volt electronic air cleaner and humidifier terminals
- Control circuit is fuse protected
- Color coded control wiring

## INSTALLATION FEATURES

- Left or right gas and electric entry
- Laser cut base for easy removal of knockout upflow/horizontal models



Upflow  
Upflow/Horizontal (shown above)  
Counterflow



## VENTING

- Single speed induced draft motor with stainless steel shaft, steel ball bearings, and fan cooled for long life
- Certified for direct and non-direct vent applications
- Internal condensate drain trap for upflow and counterflow installations
- External condensate drain kit factory provided for US horizontal applications, available for Canadian applications

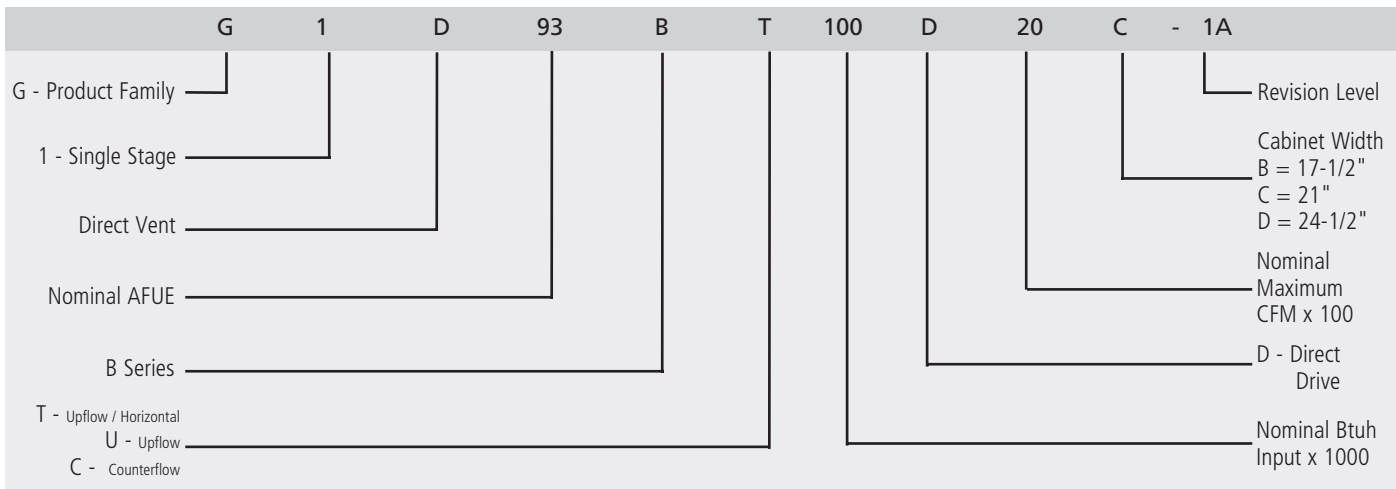
## WARRANTY

- 10 year limited parts warranty / lifetime heat exchanger warranty available. See limited warranty document for details.

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# Model Number Guide



## Physical and Electrical Data

Model	Input	Output	AFUE (ICS)	Nom. Cooling Capacity	Gas Inlet (in.)	Volts/ Hz/ Phase	Min. Time Delay Breaker or Fuse	Nominal F.L.A.	Trans. (V.A.)	Approx. Weight (lbs.)
G1D93B(T,U,C)045D12B	45,000	41,000	92.5%	1.5 - 3.0	1/2	120/60/1	15	T,U = 5.4	40	T,U = 160
								C = 5.9		C = 150
G1D93B(T,U,C)067D12B	67,500	62,000	T = 93.0%	1.5 - 3.0	1/2	120/60/1	15	T,U = 6.1	40	T,U = 185
			U,C = 92.5%					C = 5.9		C = 180
G1D93B(T,U,C)067D16C	67,500	62,000	T = 93.0%	2.5 - 4.0	1/2	120/60/1	15	T,U = 7.4	40	T,U = 195
			U,C = 92.5%					C = 6.9		C = 180
G1D93B(T,U,C)090D16C	90,000	83,000	T = 93.0%	2.5 - 4.0	1/2	120/60/1	15	T,U = 7.2	40	T,U = 195
			U,C = 92.5%					C = 6.9		C = 190
G1D93B(T,U,C)090D20C	90,000	83,000	T = 93.0%	3.0 - 5.0	1/2	120/60/1	15	T,U = 10.4	40	T,U = 205
			U,C = 92.5%					C = 8.8		C = 190
G1D93B(T,C)112D20C	112,500	104,000	T = 93.0%	3.0 - 5.0	1/2	120/60/1	15	T = 9.6	40	T = 220
			C = 92.5%					C = 8.8		C = 215
G1D93BU112D20D	112,500	104,000	92.5%	3.0 - 5.0	1/2	120/60/1	15	9.6	40	220

## Filter Requirement Data

Maximum Airflow (CFM) <sup>1</sup>	Disposable Filters			Permanent (Cleanable) Filters <sup>2</sup>		
	Minimum Area (sq. in.) <sup>3</sup>	Size (in.) <sup>3</sup>	Quantity	Minimum Area (sq. in.) <sup>3</sup>	Size (in.) <sup>3</sup>	Quantity
1200	576	16 x 20	2	288	16 x 20	1
1400	672	20 x 20	2	336	20 x 20	1
1600	768	20 x 20	2	384	20 x 20	1
2000	960	20 x 25	2	480	20 x 25	1

1. The Maximum Airflow is the two digits following the "D" in the model number x 100; e.g. "12 x 100 = 1200" is the maximum airflow for G1D93BT067D12.

2. Areas and dimensions shown for permanent (cleanable) 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.

## Accessories

Kit Number	Description	Used with
ALPKT574-3	Propane Conversion Kit	All G1D93 Models
ATWIN579	Twinning Kit	All Single Stage Models
AFILTHA7-2	Side Return Filter Kit for Single Return with 5 tons airflow (double 16 x 20 filter)	All Upflow Capable Models
AFILT524	Upflow Side Return Filter Kit (16 x 25 filter)	All Upflow Capable Models
AFILT525-1	Counterflow Filter Kit	All Counterflow Models
AFILT529-1	Bottom Return Filter Kit	All Upflow Capable Models
ACVK2-1	Concentric Vent Kit*	All High Efficiency Models
ABASE512-1	Combustible Floor Base for 17.5 inch wide units	"B" Cabinet Counterflow Models
ABASE568-1	Combustible Floor Base for 21 inch wide units	"C" Cabinet Counterflow Models
ABASE569-1	Combustible Floor Base for 24.5 inch wide units	"D" Cabinet Counterflow Models

\* Does not comply with ULC S636 Canadian Code  
US applications only

# Blower Performance Data

Direction	Model	Motor Size (hp)	Blower Size	Temp Rise (°F)	Blower Speed	*CFM @ ext. Static Pressure - in. w.c. with Filter(s)							
						.20	.30	.40	.50	.60	.70	.80	.90
Upflow / Horizontal - Upflow	G1D93BU045D12B	1/3	10 x 8	35 - 65	Hi	1,355	1,305	1,255	1,200	1,120	1,060	980	880
	Med/Hi				1,085	1,075	1,045	1,010	965	915	840	750	
	G1D93BT045D12B			40 - 70	Med	865	855	840	815	780	740	680	605
					Low	740	730	720	680	665	620	575	500
	G1D93B(U,T)067D12B	1/3	10 x 8	45 - 75	Hi	1,390	1,335	1,270	1,205	1,140	1,065	950	860
					Med/Hi	1,230	1,175	1,135	1,080	1,010	930	840	720
					Med	1,010	985	955	910	870	805	720	585
					Low	870	845	835	800	760	690	600	495
	G1D93B(U,T)067D16C	3/4	12 x 10	35 - 65	Hi	1,920	1,890	1,830	1,760	1,670	1,625	1,550	1,445
					Med/Hi	1,750	1,720	1,680	1,660	1,625	1,495	1,395	1,325
					Med	1,515	1,490	1,460	1,420	1,395	1,330	1,260	1,185
					Med/Low	1,315	1,300	1,255	1,215	1,190	1,160	1,105	1,015
					Low	1,035	980	960	950	905	850	805	720
	G1D93B(U,T)090D16C	3/4	12 x 10	45 - 75	Hi	1,975	1,925	1,865	1,805	1,745	1,665	1,580	1,495
					Med/Hi	1,705	1,665	1,620	1,585	1,535	1,475	1,400	1,300
					Med	1,480	1,455	1,425	1,395	1,345	1,300	1,240	1,180
					Med/Low	1,260	1,240	1,215	1,185	1,140	1,100	1,045	975
					Low	970	945	910	890	860	790	745	675
	G1D93BU090D20C	.9	12 x 10	40 - 70	Hi	2,135	2,080	2,025	1,930	1,855	1,780	1,680	1,620
					Med/Hi	1,975	1,930	1,900	1,830	1,765	1,670	1,570	1,520
G1D93BT090D20C				45 - 75	Med	1,875	1,845	1,795	1,725	1,685	1,585	1,575	1,435
					Med/Low	1,765	1,740	1,715	1,655	1,580	1,520	1,410	1,340
G1D93BU112D20D	.9	12 x 10	40 - 70	Low	1,635	1,585	1,555	1,505	1,460	1,385	1,310	1,250	
				Hi	2,185	2,120	2,045	1,980	1,890	1,745	1,685	1,625	
				Med/Low	2,035	1,960	1,895	1,845	1,785	1,705	1,610	1,550	
				Med	1,870	1,840	1,800	1,740	1,655	1,615	1,535	1,420	
				Med/Low	1,725	1,685	1,642	1,615	1,565	1,485	1,385	1,340	
G1D93BT112D20C	.9	12 x 10	45 - 75	Low	1,590	1,550	1,530	1,475	1,445	1,365	1,280	1,205	
				Hi	2,135	2,035	1,930	1,840	1,735	1,645	1,545	1,505	
				Med/Hi	2,020	1,950	1,880	1,830	1,725	1,630	1,530	1,440	
				Med	1,930	1,865	1,810	1,720	1,660	1,555	1,480	1,345	
				Med/Low	1,720	1,665	1,575	1,525	1,415	1,315	1,240	1,160	
Low	1,505	1,435	1,335	1,320	1,250	1,185	1,085	995					

\* .50 in W.C. max approved external static pressure

# Blower Performance Data

Direction	Model	Motor Size (hp)	Blower Size	Temp Rise (°F)	Blower Speed	*CFM @ ext. Static Pressure - in. w.c. with Filter(s)							
						.20	.30	.40	.50	.60	.70	.80	.90
Counterflow	G1D93B(C)045D12B	1/3	10 x 8	35-65	Hi	1,340	1,285	1,235	1,170	1,100	1,025	925	820
					Med/Hi	1,085	1,055	1,030	980	930	870	805	710
					Med	865	845	815	800	755	710	645	550
					Low	735	710	685	655	625	570	505	410
	G1D93B(C)067D12B	1/3	10 x 8	45-75	Hi	1,360	1,305	1,230	1,165	1,080	1,005	945	850
					Med/Hi	1,270	1,210	1,155	1,085	1,020	955	900	825
					Med	1,065	1,030	990	945	890	840	770	680
					Low	895	875	845	815	795	740	690	600
	G1D93B(C)067D16C	3/4	12 x 10	35-65	Hi	1,900	1,815	1,750	1,600	1,560	1,530	1,460	1,350
					Med/Hi	1,715	1,695	1,620	1,585	1,495	1,460	1,385	1,305
					Med	1,600	1,570	1,485	1,475	1,435	1,365	1,280	1,220
					Med/Low	1,360	1,320	1,285	1,255	1,210	1,160	1,110	1,025
					Low	1,060	1,035	1,015	975	935	865	800	740
	G1D93B(C)090D16C	3/4	12 x 10	35-65	Hi	2,040	1,965	1,895	1,815	1,735	1,650	1,540	1,450
					Med/Hi	1,800	1,750	1,700	1,625	1,555	1,475	1,395	1,305
					Med	1,605	1,570	1,535	1,460	1,400	1,355	1,285	1,205
					Med/Low	1,335	1,310	1,270	1,220	1,180	1,140	1,095	1,025
					Low	1,045	1,020	985	955	910	870	805	735
	G1D93B(C)090D20C	.9	12 x 10	40-70	Hi	2,115	2,015	1,910	1,820	1,720	1,630	1,530	1,490
					Med/Hi	2,000	1,930	1,860	1,810	1,710	1,615	1,545	1,425
Med					1,910	1,845	1,790	1,705	1,645	1,540	1,465	1,330	
Med/Low					1,705	1,650	1,560	1,510	1,400	1,300	1,230	1,150	
Low					1,490	1,420	1,320	1,305	1,240	1,175	1,075	985	
G1D93B(C)112D20D	.9	12 x 10	40-70	Hi	2,135	2,035	1,930	1,840	1,735	1,645	1,545	1,505	
				Med/Low	2,020	1,950	1,880	1,830	1,725	1,630	1,530	1,440	
				Med	1,930	1,865	1,810	1,720	1,660	1,555	1,480	1,345	
				Med/Low	1,720	1,665	1,575	1,525	1,415	1,315	1,240	1,160	
				Low	1,505	1,435	1,335	1,320	1,250	1,185	1,085	995	

\* .50 in W.C. max approved external static pressure

## Vent Length Specifications - Maximum

Model	Pipe Size (in.)		
	2	2-1/2	3
G1D93B(U,T,C)045	60ft	90ft	90ft
G1D93B(U,T,C)067	60ft	90ft	90ft
G1D93B(U,T,C)090	40ft	60ft	90ft
G1D93B(U,T,C)112	NR	50ft	60ft

One 90° elbow equals 5 ft. of pipe. Preferred fittings are DWV (Drain, Waste, Vent) or long sweep.  
Minimum length 5 ft. and 1 elbow not including the vent and air intake terminals.

\* Available in upflow only

2" not recommended at altitudes above 4,000 ft.

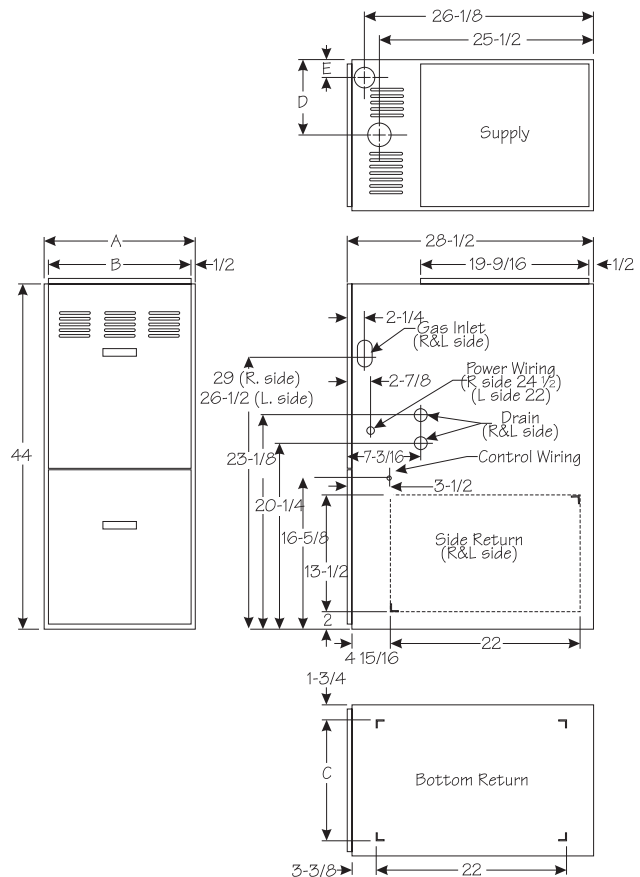
3" diameter recommended for altitudes above 5,000 ft.

## Clearances To Combustibles (in.) Upflow

Model	Top	Right Side	Left Side	Front	Back	Vent
G1D93B(U,T)045D12B	1	0	0	2	0	0
G1D93B(U,T)067D12B						
G1D93B(U,T)067D16C						
G1D93B(U,T)090D16C						
G1D93B(U,T)90D20C						
G1D93BT112D20C						
G1D93BU112D20D						

## Dimensions (in.) Upflow/ Horizontal, Upflow

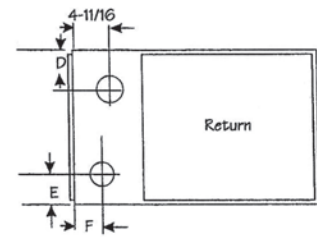
Model	A	B	C	D	E
G1D93B(U,T)045D12B	17-1/2	16-1/2	14	10-1/8	2
G1D93B(U,T)067D14B	17-1/2	16-1/2	14	11-3/4	2
G1D93B(U,T)067D16C	21	20	17-1/2	13-3/8	3-5/8
G1D93B(U,T)90D16C	21	20	17-1/2	15	2
G1D93B(U,T)90D20C					
G1D93BT112D20C	21	20	17-1/2	16-1/2	1-1/2
G1D93BU112D20D	24-1/2	23-1/2	21	18-1/4	2-5/8



## Dimensions (in.)

## Counterflow

Model	A	B	C	D	E	F
G1D93BC045D12B	17-1/2	16-1/2	16-1/4	3-11/16	4-1/2	3
G1D93BC067D12B						
G1D93BC067D16C	21	20	19-3/4	5-11/16	6-1/4	3
G1D93BC090D16C						
G1D93BC090D20C						
G1D93BC112D20D	24-1/2	23-1/2	23-1/4	4-11/16	6-3/8	3-5/16



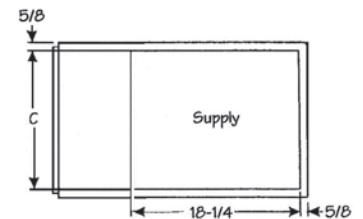
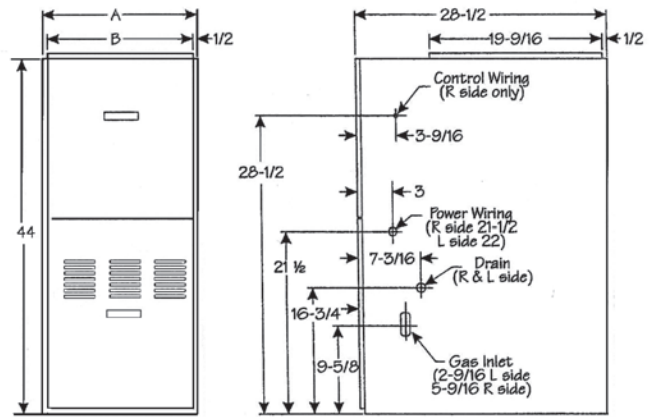
## Clearances To Combustibles (in.)

## Counterflow

Model	Top	Side	Front	Back	Vent
G1D93BC045D12B	1	0	2	0	0
G1D93BC067D12B					
G1D93BC067D16C					
G1D93BC090D16C					
G1D93BC90D20C					
G1D93BC112D20C					

Note:

Counterflows are for installation on non-combustible floors unless used with the appropriate combustible floor base accessory



## Clearances To Combustibles (in.)

## Horizontal

Model	Top	Right Side	Left Side	Front	Back	Vent
G1D93BT045D12B	1	0	0	18	0	0
G1D93BT067D12B						
G1D93BT067D16C						
G1D93BT090D16C						
G1D93BT90D20C						
G1D93BT112D20C						

Note:

Counterflows are for installation on non-combustible floors unless used with the appropriate combustible floor base accessory

**G1D93**

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