

### 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



### 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 installations
- External condensate drain kit factory provided for US horizontal applications, available for Canadian applications

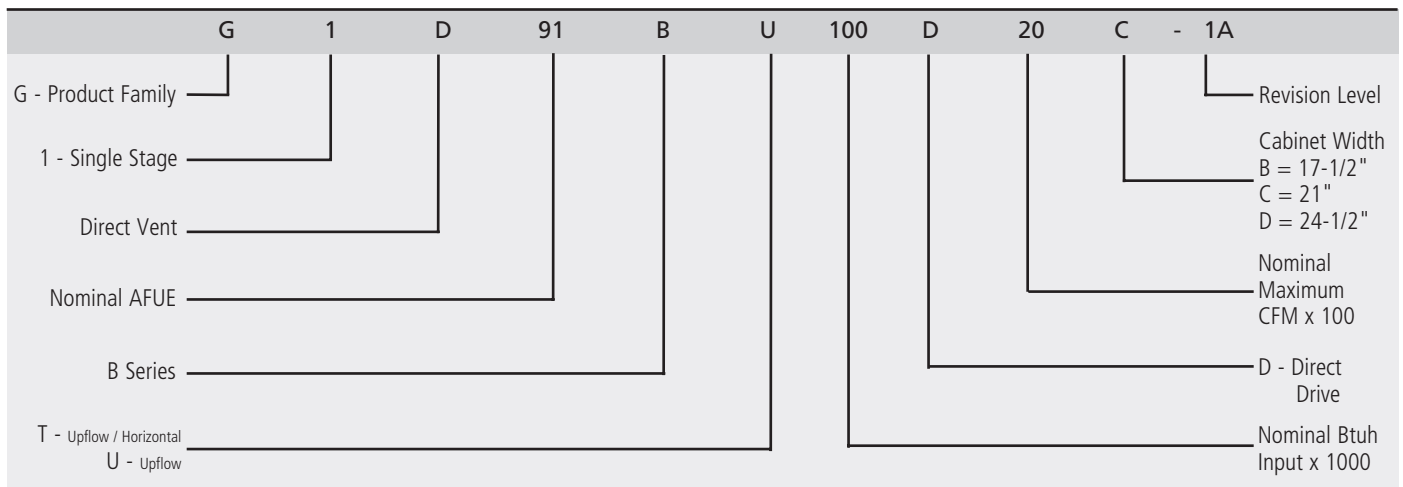
### WARRANTY

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

# AIREASE™

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## Model Number Guide



## Physical and Electrical Data

Model	1st Stage		AFUE (ICUS)	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.)
	Input	Output								
G1D91B(U,T)050D12B	50,000	45,000	91.0%	1.5 - 3.0	1/2	120/60/1	15	5.4	40	160
G1D91B (U,T)075D12B	75,000	68,000	91.0%	1.5 - 3.0	1/2	120/60/1	15	6.1	40	185
G1D91B(U,T)075D16C	75,000	68,000	91.0%	2.5 - 4.0	1/2	120/60/1	15	7.4	40	195
G1D91B(U,T)100D16C	100,000	91,000	91.0%	2.5 - 4.0	1/2	120/60/1	15	7.2	40	195
G1D91B(U,T)100D20C	100,000	91,000	91.0%	3.0 - 5.0	1/2	120/60/1	15	10.4	40	205
G1D91BU100D22D	100,000	91,000	91.0%	3.0 - 5.0	1/2	120/60/1	15	9.6	40	205
G1D91BT125D20C	125,000	113,000	91.0%	3.0 - 5.0	1/2	120/60/1	15	10.4	40	215
G1D91BU125D20D	125,000	113,000	91.0%	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. "16 x 100 = 1600" is the maximum airflow for G1D91BU075D16C

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
ALPKT572-3	Propane Conversion Kit	All single Stage 80-90/91 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 Models
AFILT529-1	Bottom Return Filter Kit	All Upflow/Horizontal Models
AFILT524	Upflow Side Return Filter Kit (16 x 25 Filter)	All Upflow/Horizontal Models
ACVK2-1	Concentric Vent Kit*	All High Efficiency 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 & Upflow / Horizontal	G1D91B(U,T)050D12B	1/3	10 x 8	40-70	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
					Med	865	855	840	815	780	740	680	607
					Low	740	730	720	680	665	620	575	500
	G1D91B(U,T)075D12B	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
	G1D91B(U,T)075D16C	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	1,397	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
	G1D91B(U,T)100D16C	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	1,340	1,300
					Med	1,481	1,455	1,423	1,395	1,347	1,302	1,240	1,182
					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
	G1D91B(U,T)100D20C	.9	12 x 10	45-75	Hi	2,135	2,080	2,025	1,930	1,855	1,780	1,680	1,620
					Med/Hi	1,975	1,932	1,900	1,830	1,765	1,670	1,570	1,520
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	
Low					1,635	1,585	1,555	1,505	1,460	1,385	1,310	1,250	
Upflow	G1D91BU100D22D	.9	12 x 10	45-75	Hi	2,400	2,330	2,260	2,185	2,110	2,025	1,965	1,845
					Med/Low	2,220	2,150	2,095	2,045	1,995	1,895	1,825	1,735
					Med	2,055	1,995	1,965	1,915	1,860	1,800	1,710	1,605
					Med/Low	1,720	1,700	1,660	1,615	1,575	1,525	1,450	1,395
					Low	1,488	1,471	1,449	1,400	1,360	1,320	1,250	1,170
	G1D91BU125D20D	.9	12 x 10	45-75	Hi	2,185	2,120	2,045	1,980	1,890	1,743	1,685	1,625
					Med/Hi	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	1,640	1,615	1,565	1,485	1,385	1,340
					Low	1,590	1,550	1,530	1,475	1,445	1,365	1,280	1,205
Upflow / Horizontal	G1D91BT125D20C	.9	12 x 10	45-75	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	1,730	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 Ext. Static Pressure

## Vent Length Specifications - Maximum

Model	Pipe Size (in.)		
	2	2-1/2	3
G1D91B(U,T)050	60 ft	90 ft	90 ft
G1D91B(U,T)075	60 ft	90 ft	90 ft
G1D91B(U,T)100	40 ft	60ft	90 ft
G1D91B(U,T)125	NR	50 ft	60 ft

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

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.

2" diameter not recommended for altitudes above 4000 ft.

3" diameter required for altitudes above 5000 ft.

## Clearances To Combustibles (in.)

## Upflow

Model	Top	Right Side	Left Side	Front	Back	Vent
G1D91B(U,T)050D12B	1	0	0	2	0	0
G1D91B(U,T)075D12B						
G1D91B(U,T)075D16C						
G1D91B(U,T)100D16C						
G1D91B(U,T)100D20C						
G1D91BU100D22D						
G1D91BT125D20C						
G1D91BU125D20D						

## Clearances To Combustibles (in.)

## Horizontal

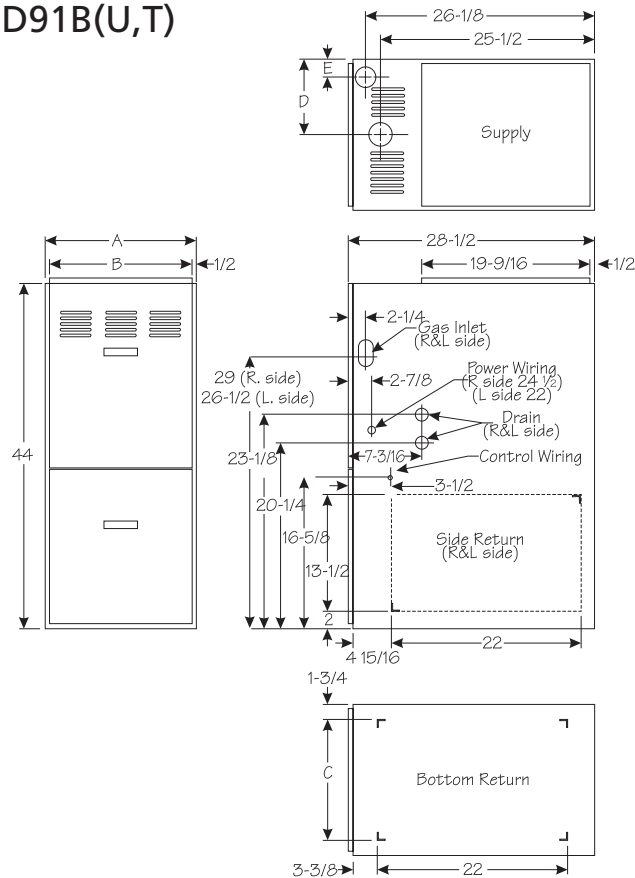
Model	Top	Right Side	Left Side	Front	Back	Vent
G1D91BT050D12B	0	0	0	18	0	0
G1D91BT075D12B						
G1D91BT075D16C						
G1D91BT100D16C						
G1D91BT100D20C						
G1D91BT125D20C						

Dimensions (in.)

Upflow  
Upflow/ Horizontal

Model	A	B	C	D	E
G1D91B(U,T)050D12B	17-1/2	16-1/2	14	10-1/8	2
G1D91B(U,T)075D12B	17-1/2	16-1/2	14	11-3/4	2
G1D91B(U,T)075D16C	21	20	17-1/2	13-3/8	3-5/8
G1D91B(U,T)100D16C	21	20	17-1/2	15	2
G1D91B(U,T)100D20C					
G1D91BT125D20C	21	20	17-1/2	16-1/2	1-1/2
G1D91BU100D22D	24-1/2	23-1/2	21	16-5/8	3-11/16
G1D91BU125D20D				18-1/4	2-5/8

G1D91B(U,T)





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