

Specification Guide

FSA, FOA, SEP, & HED Series

Unit Heaters and Duct Furnaces



Contents	Page
Nomenclature.....	2
Product Features	3
FSA Series	4
FOA Series	6
SEP Series	8
HED Series	10



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Product Nomenclature

FOA / FSA Nomenclature

FOA N - 75	
Series FSA = Cayenne unit heaters FOA = Separated combustion unit heaters	Nominal Gas Heat Input FSA: 30, 45, 60, 75 FOA: 45, 60, 75, 100, 125, 150, 200, 250, 300
Gas N = Natural gas P = Propane	

Note: All heaters are 115V / 1ph / 60 Hz

SEP / HED Nomenclature

SEP - 100 A - N	
Series SEP = Unit heaters HED = Duct furnaces	Gas N = Natural gas P = Propane * <i>* Note: Not available for HED</i>
Nominal Gas Heat Input SEP: 100, 115, 145, 175, 200, 230, 250, 300, 345, 400 HED: 75, 100, 125, 150, 200, 250, 300	Heat Exchanger A = Aluminized steel S = Stainless steel

Note: All heaters are 115V / 1ph / 60 Hz

Product Features

EFFICIENCY – ADP gas-fired unit heaters and duct furnaces deliver between 80% and 82% thermal efficiency. This excellent efficiency sets a new standard when using gas-fired unit heaters and duct furnaces.

RELIABILITY – ADP heater designs have proven superior for over a decade and during hundreds of thousands of hours in the toughest winter climates of North America and under extreme conditions in laboratory life cycle testing. ADP unit heaters and duct furnaces have been designed to provide a long, trouble free service life.

QUALITY – Every heater undergoes continuous quality checks at all stages of manufacturing. After assembly, each heater is test fired and functionally tested to provide final assurance that it is performing in accordance with ADP's rigorous quality standards.

APPROVALS – All ADP heaters are built in an ISO 9001:2008 facility. The rating plate of each heater carries the mark signifying that the heater is designed certified by CSA. In addition, the heater series is listed by the California Energy Commission (CEC).

POWER EXHAUST – All heaters have a sealed flue collector and a power exhaust system which enable conventional vertical venting or horizontal venting. Power exhaust, when used with horizontal venting, lowers operating cost because it reduces stack losses. It also allows the option of not penetrating the roof, or multiple floors. The versatile power exhaust (on some models) reduces installation cost further by allowing the exhaust to be directed upward, left or right, just by rotating the exhaust assembly.

INSHOT BURNERS – These lightweight aluminized steel burners are maintenance-free and never require adjustment. The burner venturi mixes air and gas in the correct proportion for efficient combustion. The entire burner assembly is removable as one piece for ease of service.

TUBULAR HEAT EXCHANGERS – Constructed of aluminized steel for superior resistance to corrosion and oxidation; for additional protection, some models have an optional stainless steel heat exchanger. The curving design provides for complete exposure of the heating surface to the supply air stream. Rounded surfaces minimize air resistance and permit air to surround all heat transfer surfaces for excellent heat transfer. Tubular design means lighter weight and significantly longer service life due to lower thermal-induced stresses. .

WARRANTY – ADP heaters feature a standard 2-year limited warranty.

For FOA, FSA, and SEP Series unit heaters, the warranty provides extended coverage on aluminized heat exchangers for 10 years and stainless steel heat exchangers for 15 years (Note: Stainless steel heat exchangers are not available for FOA and FSA).

DIRECT SPARK IGNITION – In combination with the 24-volt main gas valve with 100% shutoff for safety, the direct spark ignition control provides positive, reliable and safe main burner ignition. This eliminates the need for a pilot light, improving system efficiency and reliability. A separate flame sensor provides proof of main burner ignition. If loss of main burner flame should occur, the control will reinitiate ignition three times before locking out, thus reducing nuisance service calls. The unit will reinitiate ignition after the one hour lockout. The prepurge operation safety removes all gas and flue products from the system prior to ignition.

CABINET – Constructed on 18- to 22-gauge cold-rolled steel, each cabinet has a baked-on powder paint finish for superior resistance to corrosive elements. Each cabinet has a two-point suspension system for easy installation (larger and two-fan models have four-point suspensions). Generous use of inside cabinet insulation keeps the outer surface temperature low. The wiring junction box is conveniently located on the side of the cabinet (SEP & HED only) for easy access and adequate protection.

FSA Series

Low Profile Unit Heaters

Product Features

- Residential – low profile units.
- Great for garages & shops.
- Power exhaust system allows vertical venting to 25 ft. or horizontal venting to 40 ft.
- Sidewall venting eliminates roof penetrations.
- Wiring junction box is located inside of unit.
- Self-diagnostic board with LED display improves troubleshooting.
- 1" clearance from ceiling for easy installation.
- Heating capacities from 30,000 – 75,000 BTUH.
- Up to 81% thermal efficiency.
- Easy to clean tubular heat exchangers, made of aluminized steel, provide resistance to corrosion and oxidation.
- Direct drive propeller fans are dynamically balanced for quiet and smooth operation
- Self-diagnostic board with LED display improves troubleshooting efficiency and accuracy.



Technical Data

Model	Gas Heating Performance				Connections	
	Heating Capacity Input (BTUH)	Heating Output (BTUH)	Steady State Efficiency	Temp Rise (deg F)	Flue Size Round (in)	Gas Piping Size (in, NPT)
# FSA* -30	30,000	24,300	81.0%	42	3 ^[1]	1/2
# FSA* -45	45,000	36,500	81.0%	45	3 ^[1]	1/2
FSA* -60	60,000	48,000	80.0%	55	4 ^[2]	1/2
FSA* -75	75,000	60,000	80.0%	60	4 ^[2]	1/2

[1] 2-1/8 x 3 in. (54 x 76 mm) diameter adaptor is furnished with unit for flue connection.

[2] 2 x 4 in. (51 x 102 mm) diameter adaptor is furnished with unit for flue connection.

Model	Fan Data							Physical Data		
	Num of Fans	Diameter (in)	Num of Blades	Motor Output (hp)	Motor Full Load Amps	Motor RPMs	Air Volume (CFM)	Air throw at 8 ft. mount height (ft)	Dimensions H x W x L (in)	Ship Weight (lbs)
# FSA* -30	1	10	4	1/20	1.7	1650	535	25	13 x 25 x 24	45
# FSA* -45	1	10	4	1/20	1.7	1650	750	25	13 x 25 x 24	50
FSA* -60	1	14	3	1/10	4.1	1050	830	40	18 x 25 x 25	87
FSA* -75	1	14	3	1/10	4.1	1050	950	40	18 x 25 x 25	91

* N = Natural Gas; P = LP Gas

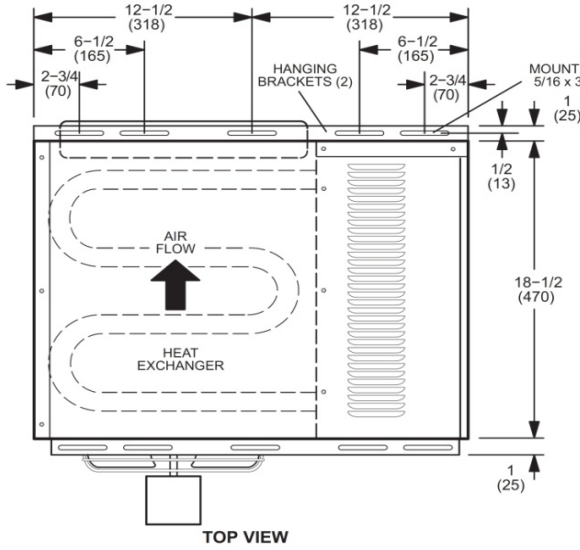
Sold in pallet quantities of four (4) per model. No mix or match of models.

All models have aluminized steel heat exchanger. All models are 115 volts, 60 Hz, 1 phase.

FSA Series

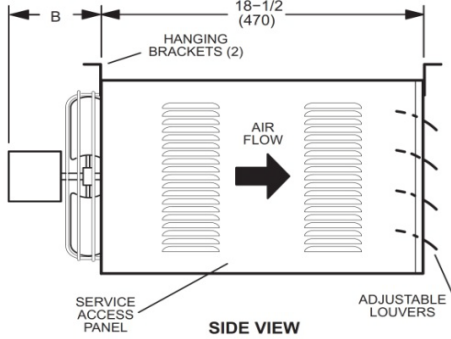
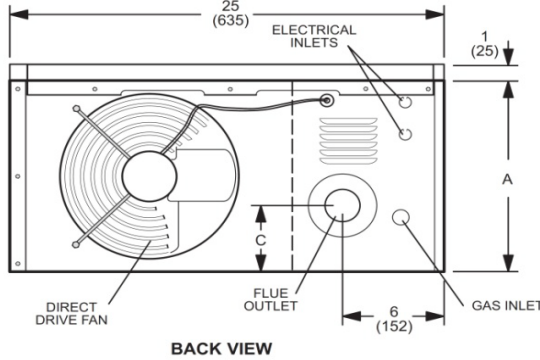
Low Profile Unit Heaters

Dimensions



NOTE - Unit may be rotated 180° top for bottom to change gas, electrical and flue positions. Hanging brackets may be installed on either top or bottom of unit.

Model No.	A		B		C	
	in.	mm	in.	mm	in.	mm
30	12	305	5-1/2	140	4-1/4	108
45	12	305	5-1/2	140	4-1/4	108
60	17	432	6-1/2	165	6-3/4	171
75	17	432	6-1/2	165	6-3/4	171



FOA Series

Separated Combustion Unit Heaters

Product Features

- Perfect for light commercial and greenhouse applications.
- Introduces clean combustible outside air when required.
- Wiring junction box is located outside of unit.
- Ideal for hard-to-heat applications where excessive dust, dirt, humidity, or negative pressure is a concern.
- Heating capacities from 45,000 – 300,000 BTUH.
- Up to 82% thermal efficiency.
- Compact cabinet design on 45,000 – 75,000 BTUH models.
- Hinged door allows easy access to components.
- Sidewall venting eliminates roof penetrations.
- Self-diagnostic board with LED display improves troubleshooting efficiency and accuracy.
- Easy to clean tubular heat exchangers, made of aluminized steel, provide resistance to corrosion and oxidation.
- Power exhaust system allows vertical venting to 25 ft. or horizontal venting to 40 ft.
- Direct drive propeller fans are dynamically balanced for quiet and smooth operation.



Technical Data

Model	Gas Heating Performance						Connections		
	Heating Capacity Input (BTUH)	Output Natural Gas (BTUH)	Output LPG / Propane (BTUH)	Thermal Efficiency Natural Gas	Thermal Efficiency LPG / Propane	Temp Rise (deg F)	Flue Size Round (in)	Combustion Air Size Round (in)	Gas Piping Size (in, NPT)
FOA* -45	45,000	36,200	36,200	81.0%	81.0%	45	3	3	1/2
FOA* -60	60,000	48,300	48,300	81.0%	81.0%	54	4	4	1/2
FOA* -75	75,000	59,200	59,200	80.0%	80.0%	60	4	4	1/2
FOA* -100	100,000	81,000	70,700	81.0%	81.0%	31	5	4	1/2
FOA* -125	125,000	101,500	101,500	81.0%	81.0%	39	5	4	1/2
FOA* -150 ^[1]	150,000	120,000	121,500	80.0%	81.0%	38	5	4	1/2
FOA* -200 ^[1]	200,000	164,000	160,000	82.0%	80.0%	51	5	4	1/2
FOA* -250 ^[1]	240,000	194,400	196,800	81.0%	82.0%	35	5	4	3/4
FOA* -300 ^[1]	300,000	240,000	243,000	80.0%	81.0%	43	6	4	3/4

Model	Fan Data **								Physical Data	
	Number of Fans	Diameter (in)	Number of Blades	Motor Output (hp)	Motor Full Load Amps	Motor RPMs	Air Vol. (CFM)	Air Throw at 8 ft. mount height (ft)	Dimensions H x W x L (in)	Ship Weight (lbs)
FOA* -45	1	10	5	1/20	1.7	1650	750	20	13 x 26 x 24	84
FOA* -60	1	14	3	1/10	4.1	1050	830	40	17 x 29 x 25	100
FOA* -75	1	14	3	1/10	4.1	1050	950	40	17 x 29 x 25	104
FOA* -100	1	16	4	1/8	2.7	1075	2435	50	21 x 36-1/2 x 39-5/8	188
FOA* -125	1	16	4	1/8	2.7	1075	2435	50	21 x 36-1/2 x 39-5/8	204
FOA* -150 ^[1]	1	18	4	1/8	2.7	1075	2955	80	27 x 36-1/2 x 39-5/8	261
FOA* -200 ^[1]	1	20	4	1/2	5.4	1075	2955	80	27 x 36-1/2 x 39-5/8	266
FOA* -250 ^[1]	2	16	4	1/8	2.7	1075	5215	100	39 x 36-1/2 x 39-5/8	307
FOA* -300 ^[1]	2	16	4	1/8	2.7	1075	5215	100	39 x 36-1/2 x 39-5/8	323

* N = Natural Gas; P = LP Gas

** Fan motor type: SP for models 45, 60, 75; PSC for models 100, 125, 150, 200, 250, 300.

[1] Models not approved for residential applications.

All models are 115 volts, 60 Hz, 1 phase.

FOA Series

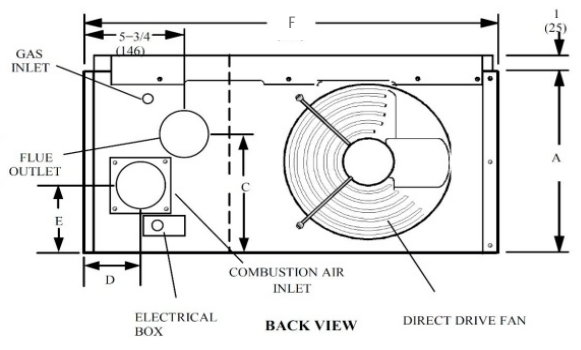
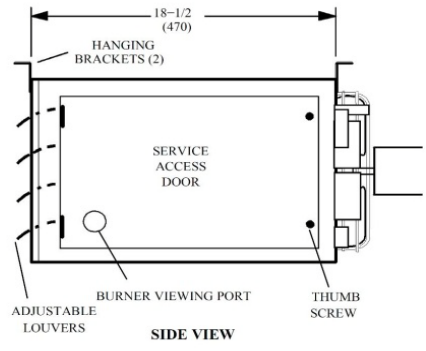
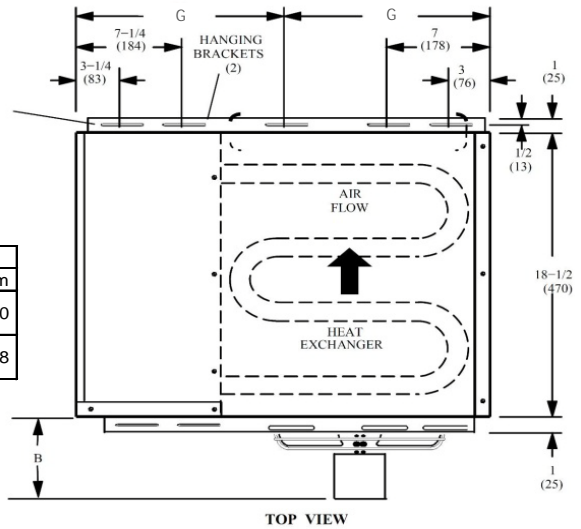
Separated Combustion Unit Heaters

Dimensions

045 / 060 / 075 MODELS

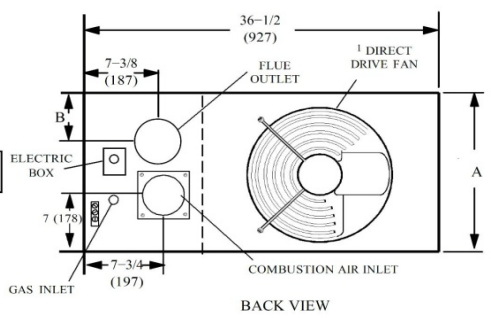
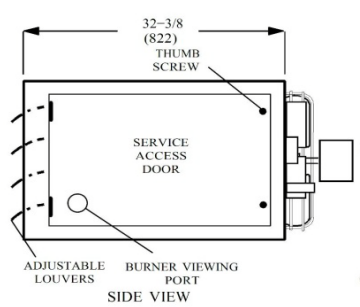
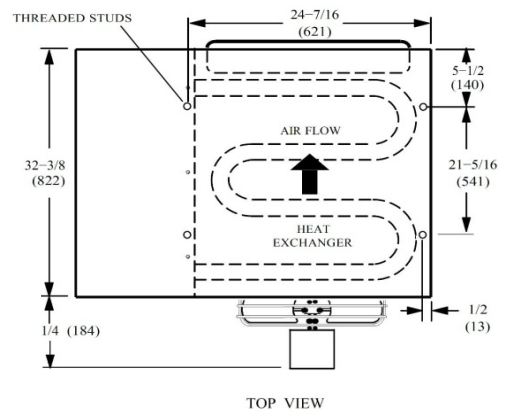
MOUNTING SLOTS (Typical)
5/16 x 3 Inches (8 x 76 mm)

Model No.	A		B		C		D		E		F		G	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
045	12	305	5-1/2	140	7-3/4	197	1-3/4	44	5-1/4	133	26	660	13	330
060 075	17	432	6-1/2	165	10-1/4	260	3-1/4	83	5-3/4	146	29	737	14-1/2	368



100 / 125 / 150 / 200 / 250 / 300 MODELS

Model No.	A		B	
	in.	mm	in.	mm
100 125	21	533	8-1/2	216
150 200	27	686	8-5/8	219
250 300	39	991	22-1/2	572



¹ FOA250 and FOA300 models have two fans.

SEP Series

Commercial Unit Heaters

Product Features

- Heating capacities from 100,000 – 400,000 BTUH.
- Up to 80.5% thermal efficiency.
- Stainless steel heat exchanger is available for longer product life.
- Power exhaust system with a sealed flue collector allows conventional vertical or horizontal venting to 35 ft.
- Sidewall venting eliminates roof penetrations.
- Wiring junction box is located outside of unit.
- Self-diagnostic board with LED display improves troubleshooting efficiency and accuracy.
- Integrated spot nuts for easy installation using threaded rod.
- Easy to clean tubular heat exchangers made of aluminized steel or stainless steel, providing resistance to corrosion and oxidation.
- Heat exchangers are laboratory life-cycle tested.
- Easy to clean in-shot burners.
- Direct drive propeller fans are dynamically balanced for quiet, smooth operation.
- Safe direct spark ignition. No standing pilot light.



Model	Gas Heating Performance					Connections	
	Heating Capacity Input (BTUH)	Output Natural Gas (BTUH)	Output LPG / Propane (BTUH)	Steady State Efficiency -- Natural Gas	Steady State Efficiency -- LPG / Propane	Flue Size Round (in)	Gas Piping Size (in, NPT)
SEP-100#-&	100,000	80,500	82,000	80.5%	82.0%	4 ^[1]	1/2
SEP-115#-&	115,000	92,000	92,000	80.0%	80.0%	4 ^[1]	1/2
SEP-145#-&	145,000	116,000	115,000	80.0%	80.0%	4 ^[1]	1/2
SEP-175#-&	172,500	138,000	138,000	80.0%	80.0%	5 ^[2]	1/2
SEP-200#-&	195,000	156,000	156,000	80.0%	80.0%	5 ^[2]	1/2
SEP-230#-&	230,000	184,000	184,000	80.0%	80.0%	5 ^[2]	3/4
SEP-250#-&	250,000	201,250	205,000	80.5%	82.0%	5 ^[2]	3/4
SEP-300#-&	300,000	241,500	246,000	80.5%	82.0%	5 ^[2]	3/4
SEP-345#-&	345,000	276,000	281,200	80.0%	81.5%	6 ^[3]	3/4
SEP-400#-&	390,000	312,000	312,000	80.0%	80.0%	6 ^[3]	3/4

[1] 2-1/8 x 4 in. (54 x 102 mm) diameter adaptor is furnished with unit for flue connection.

[2] 2-1/4 x 2-3/4 in. (57 x 70 mm) rectangular to 5 in. (127 mm) round adaptor is furnished with unit for flue connection.

[3] 2-1/4 x 2-3/4 in. (57 x 70 mm) rectangular to 6 in. (152 mm) round adaptor is furnished with unit for flue connection.

Model	Fan Data							Physical Data	
	Number of Fans	Diameter (in)	Number of Blades	Motor Output (hp)	Motor Full Load Amps	Motor RPMs	Air Volume (CFM)	Dimensions H x W x L (in)	Ship Weight (lbs)
SEP-100#-&	1	16	4	1/8	2.1	1075	1900	32-3/16 x 20-3/16 x 39-3/16	150
SEP-115#-&	1	16	4	1/8	2.1	1075	1900	32-3/16 x 20-3/16 x 39-3/16	150
SEP-145#-&	1	16	4	1/8	2.1	1075	1900	32-3/16 x 20-3/16 x 39-3/16	165
SEP-175#-&	1	16	4	1/8	2.1	1075	2200	32-3/16 x 23-1/8 x 39-3/16	185
SEP-200#-&	1	16	4	1/8	2.1	1075	2200	32-3/16 x 41-1/8 x 40	185
SEP-230#-&	2	16	4	1/8	2.1	1075	4400	32-3/16 x 41-1/8 x 40	275
SEP-250#-&	2	16	4	1/8	2.1	1075	4400	32-3/16 x 41-1/8 x 40	275
SEP-300#-&	2	16	4	1/8	2.1	1075	4400	32-3/16 x 41-1/8 x 40	280
SEP-345#-&	2	16	4	1/8	2.1	1075	4400	32-3/16 x 41-1/8 x 41-1/8	310
SEP-400#-&	2	16	5	1/8	2.1	1075	4400	32-3/16 x 41-1/8 x 41-1/8	315

A = Aluminized steel heat exchanger; S = Stainless steel heat exchanger; All models are 115 volts, 60 Hz, 1 phase.

& N = Natural Gas; P = LP Gas

Note: SEP unit heaters are not approved for residential applications.

SEP Series

Commercial Unit Heaters

Air Throw Data

Model Size	Air Volume (CFM)	Air Throw (ft) ^[1]	Recommended Mounting Height (ft) ^[2]
100, 115	1900	60	16
145	1900	60	20
175, 200	2200	65	20
230, 250, 300, 345, 400	4400	80	30

[1] Throw terminates where velocity reaches 50 ft. per minute.

[2] Recommended max mounting height from floor to bottom of unit.

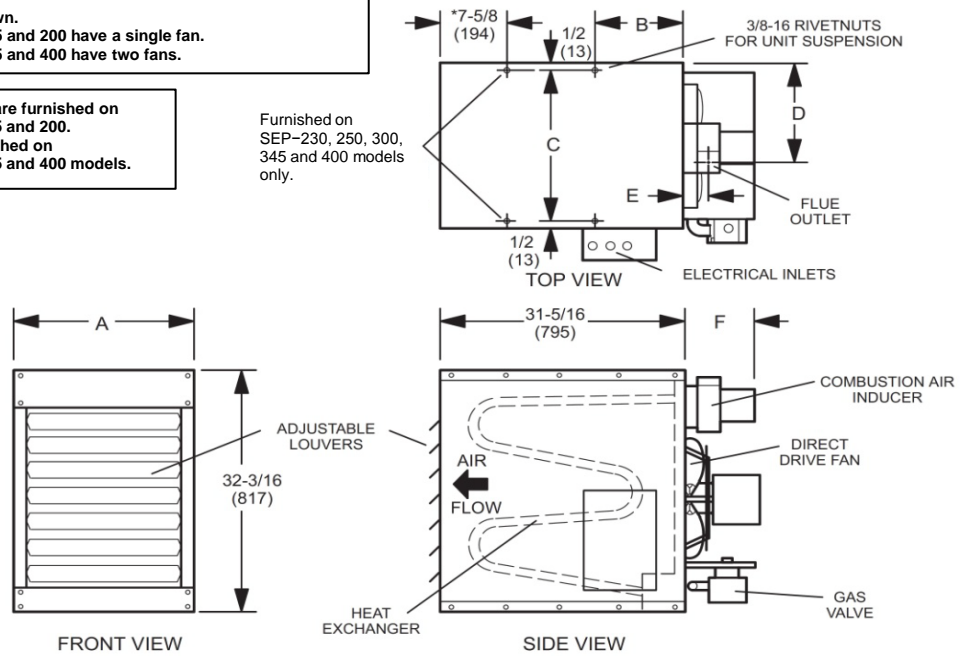
[2] At heights greater than shown, air throw distance and air temperature at floor level is affected.

Dimensions

NOTE: Single fan model shown.
SEP models 100, 115, 145, 175 and 200 have a single fan.
SEP models 230, 250, 300, 345 and 400 have two fans.

*** NOTE:** Two mounting nuts are furnished on SEP models 100, 115, 145, 175 and 200.
Four mounting nuts are furnished on SEP models 230, 250, 300, 345 and 400 models.

Furnished on SEP-230, 250, 300, 345 and 400 models only.



Model No.	A		B		C		D		E		F	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
100 115 145	20-3/16	512	11-1/2	292	19-1/16	484	11-3/4	298	3-1/4	83	7-7/8	200
175 200	23-1/8	588	11-1/2	292	22-1/16	560	8-1/2	337	3-1/4	83	8-11/16	220
230 250 300	41-1/8	1045	3-11/16	97	40	1016	17-3/4	451	3-1/2	89	8-11/16	220
345 400	41-1/8	1045	3-11/16	97	40	1016	17-1/2	445	3-1/2	89	9-13/16	248

HED Series

Duct Furnaces

Product Features

- Specially designed for applications requiring duct systems.
- Heating capacities from 75,000 – 300,000 BTUH.
- Up to 80% thermal efficiency.
- Compact, lightweight cabinet with suspension points for easy overhead installation.
- Stainless steel heat exchanger is available for longer product life.
- Sidewall venting eliminates roof penetrations.
- Wiring junction box is located outside of unit.
- Self-diagnostic board with LED display improves troubleshooting efficiency and accuracy.
- Integrated spot nuts for easy installation using threaded rod.
- Heat exchangers are laboratory life-cycle tested.
- Easy to clean in-shot burners.
- Power exhaust system with a sealed flue collector allows conventional vertical or horizontal venting to 35 ft.
- Direct drive propeller fans are dynamically balanced for quiet, smooth operation.
- Safe direct spark ignition. No standing pilot light.
- Easy to clean tubular heat exchangers made of aluminized steel or stainless steel, providing resistance to corrosion and oxidation.



Technical Data

Model	Gas Heating Performance				Connections			Fan Data **	Physical Data	
	Heating Capacity Input (BTUH)	Heating Output (BTUH)	Steady State Efficiency	Temp Rise (deg F)	Flue Size Round (in)	Gas Piping Size (in, NPT)	Cond. Drain Size (in)	Air Volume Throughput (CFM)	Dimensions H x W x L (in)	Ship Weight (lbs)
HED-75#	75,000	60,000	80.0%	21 - 71	4 ^[1]	1/2	1/4	780- 2700	28-5/16 x 19-1/2 x 34-11/16	115
HED-100#	100,000	80,000	80.0%	20 - 85	4 ^[1]	1/2	1/4	870 - 3700	32-3/16 x 20-3/16 x 40	140
HED-125#	125,000	100,000	80.0%	20 - 91	4 ^[1]	1/2	1/4	1020 - 4700	32-3/16 x 20-3/16 x 40	150
HED-150#	150,000	120,000	80.0%	20 - 84	4 ^[1]	1/2	1/4	1320 - 5600	32-3/16 x 23-1/8 x 40	165
HED-200#	200,000	160,000	80.0%	35 - 100	5 ^[2]	3/4	1/4	1480 - 4230	32-3/16 x 41-1/8 x 40	270
HED-250#	250,000	200,000	80.0%	35 - 100	5 ^[2]	3/4	1/4	1850 - 5290	32-3/16 x 41-1/8 x 40	285
HED-300#	300,000	240,000	80.0%	36 - 100	5 ^[2]	3/4	1/4	2220 - 6200	32-3/16 x 41-1/8 x 40	305

A = Aluminized steel heat exchanger; S = Stainless steel heat exchanger; All models are 115 volts, 60 Hz, 1 phase.

[1] 2-1/4 x 4 in. (57 x 102 mm) round flue adaptor is furnished with unit for flue connection.

[2] 2-1/4 x 2-3/4 in. (57 x 70 mm) rectangular to 5 in. (127 mm) round adaptor is furnished with unit for flue connection.

Note: HED duct furnaces are not approved for residential applications.

HED Series

Duct Furnaces

Performance Ratings

HED Model Size	Air Volume (CFM)	Total Resistance (inches W.C)	Temp Rise (deg F)
75	780	0.01	71
	1000	0.02	56
	1300	0.05	43
	1600	0.07	35
	1900	0.10	29
	2200	0.12	25
	2500	0.17	22
	2700	0.20	21
	100	870	0.02
900		0.02	82
1300		0.03	57
1700		0.06	44
2100		0.09	35
2500		0.12	30
2900		0.15	26
3300		0.18	22
3700		0.23	20

HED Model Size	Air Volume (CFM)	Total Resistance (inches W.C)	Temp Rise (deg F)	
125	1020	0.03	91	
	1100	0.03	84	
	1600	0.06	58	
	2100	0.11	44	
	2600	0.16	36	
	3100	0.21	30	
	3600	0.26	26	
	4100	0.31	23	
	4600	0.36	20	
	4700	0.37	20	
	150	1320	0.02	84
		1400	0.03	79
2000		0.07	56	
2600		0.12	43	
3200		0.20	35	
3800		0.28	29	
4400		0.37	25	
5000		0.45	22	
5600		0.55	20	

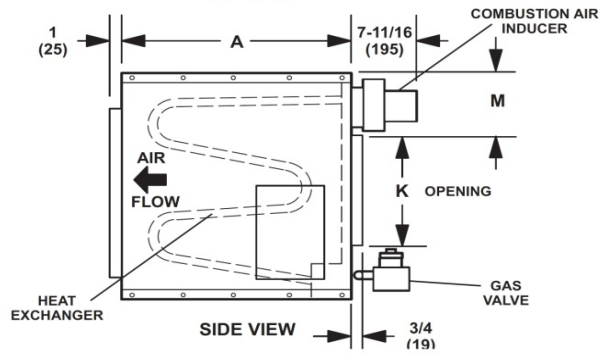
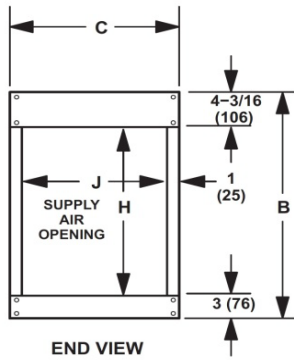
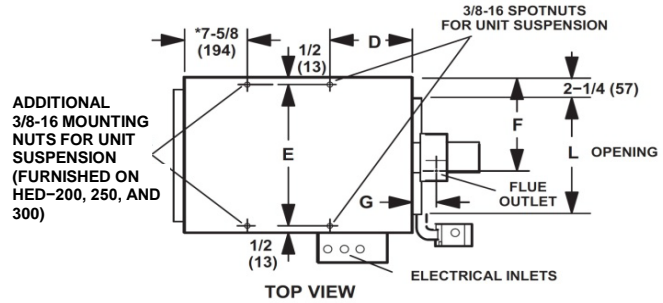
HED Model Size	Air Volume (CFM)	Total Resistance (inches W.C)	Temp Rise (deg F)	
200	1480	0.03	100	
	1500	0.03	99	
	2000	0.04	74	
	2500	0.07	59	
	3000	0.09	49	
	3500	0.13	42	
	4000	0.15	37	
	4230	0.16	35	
	250	1850	0.04	100
		2000	0.05	93
2500		0.08	74	
3000		0.11	62	
3500		0.13	53	
4000		0.17	46	
4500		0.19	41	
5000		0.23	37	
300	5290	0.25	35	
	2220	0.07	100	
	2800	0.11	79	
	3400	0.14	65	
	4000	0.18	56	
	4600	0.23	48	
	5200	0.26	43	
	5800	0.31	38	
	6190	0.33	36	
	6200	0.33	36	

HED Series

Duct Furnaces

Dimensions

*NOTE Two mounting nuts are furnished on HED-75, 100, 125, and 150. Four mounting nuts are furnished on HED-200, 250, and 300.



Model No.		A	B	C	D	E	F	G	H	J	K	L	M
75	in.	26	28-5/16	19-1/2	8-1/2	18-1/2	11-3/4	2-1/2	21-1/8	17-1/2	13-3/8	15	7-5/16
	mm	660	719	495	216	469	298	64	537	445	340	381	186
100 125	in.	31-5/16	32-3/16	20-1/8	10-1/2	19-1/16	11-3/4	3-1/4	25	18-1/8	15-3/8	15-5/8	9-5/16
	mm	795	818	511	267	484	298	83	635	460	391	397	237
150	in.	31-5/16	32-3/16	23-1/8	11-3/8	23-1/16	8-1/2	3-1/4	25	21-1/8	15-3/8	17-1/8	8-15/16
	mm	795	818	587	289	586	216	83	635	537	391	435	227
200 250 300	in.	31-5/16	32-3/16	41-1/8	3-11/16	40	17-1/2	3-1/4	25	39-1/8	15-3/8	35-1/16	9
	mm	795	818	1045	97	1016	445	83	635	994	391	891	229