

## Specification Guide

# FSA & SEP Series

## Unit Heaters



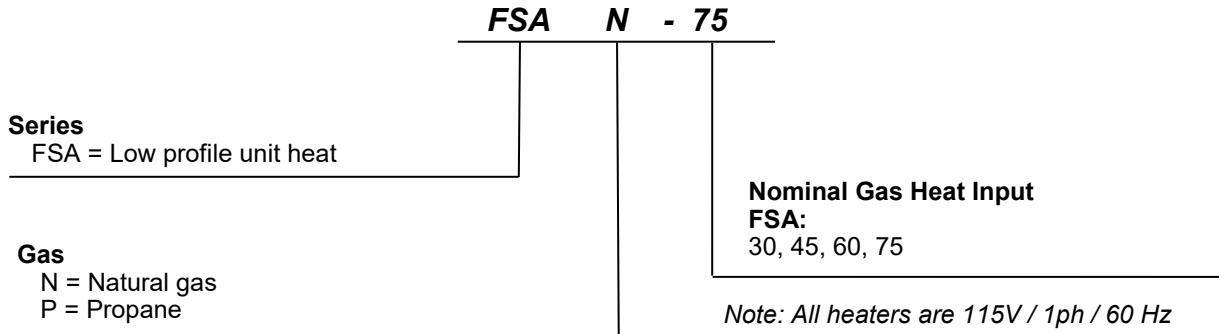
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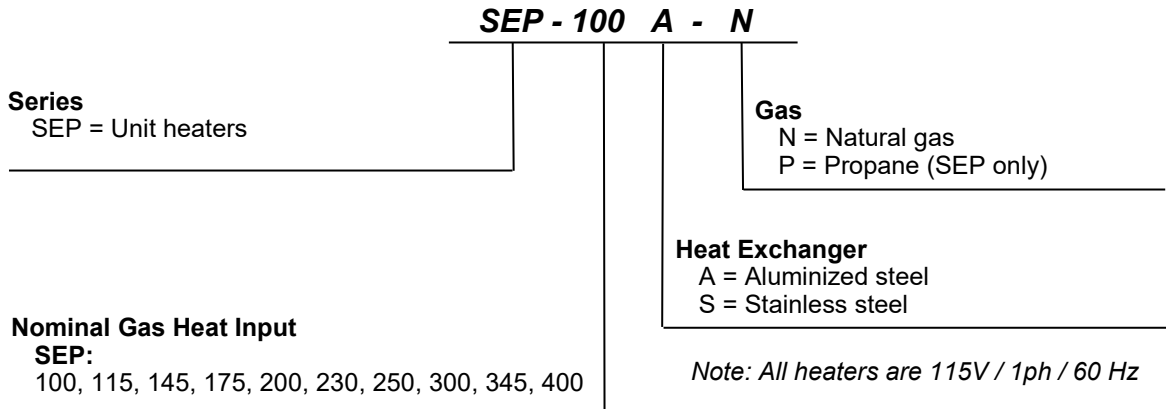
# PRODUCT NOMENCLATURE

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## FSA Nomenclature



## SEP



# PRODUCT FEATURES

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## ***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 the USA in an ISO 9001:2008 facility. The rating plate of each heater carries the mark signifying that the heater is design certified by CSA. In addition, the heater series is listed by the California Energy Commission (CEC).

## ***Warranty***

ADP unit heaters feature a standard 2-year limited warranty. For FOA, FSA, and SEP Series, the warranty provides extended coverage on aluminized heat exchangers for 10 years. For SEP Series, the warranty provides extended coverage on stainless steel heat exchangers for 15 years.

## ***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.

## ***In Shot 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. .

## ***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 heavy gauge painted steel, 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.

**Product Features**

- Residential – low profile units.
- Great for garages & shops.
- Sidewall venting eliminates roof penetrations.
- Wiring junction box is located inside of unit.
- 1” clearance from ceiling for easy installation.
- Heating capacities from 30,000 – 75,000 BTUH.
- Up to 81% thermal efficiency.
- Self-diagnostic board with LED display improves troubleshooting.
- Power exhaust system allows horizontal venting to 25 ft.
- Tubular heat exchangers made of aluminized steel.
- Aluminized steel in shot burners provide efficient trouble free operation.
- Direct drive propeller fans are dynamically balanced for quiet and smooth operation.



**Technical Data**

	Model	FSA* -30 <sup>[1]</sup>	FSA* -45 <sup>[1]</sup>	FSA* -60	FSA* -75
<b>Gas Heating Performance</b>	Heating Capacity Input (BTUH)	30,000	40,000	60,000	75,000
	Heating Output (BTUH)	24,300	32,500	48,000	60,000
	Steady State Efficiency	81.0%	81.0%	80.0%	80.0%
	Temp Rise (deg F)	42	45	55	60
<b>Connections</b>	Flue Size Round (in)	3 <sup>[2]</sup>	3 <sup>[2]</sup>	4 <sup>[3]</sup>	4 <sup>[3]</sup>
	Gas Piping Size (in, NPT)	1/2	1/2	1/2	1/2
<b>Fan Data</b>	Num of Fans	1	1	1	1
	Diameter (in)	10	10	14	14
	Num of Blades	4	4	3	3
	Motor Output (hp)	1/20	1/20	1/10	1/10
	Motor Full Load Amps	1.7	1.7	4.1	4.1
	Motor RPMs	1650	1650	1050	1050
<b>Physical Data</b>	Air Volume (CFM)	535	750	830	950
	Overall Dimensions H x W x D (in)	12 x 25 x 24	12 x 25 x 24	17 x 25 x 25	17 x 25 x 25
	Ship Weight (lbs)	45	50	87	91

\* N = Natural gas; P = LP gas

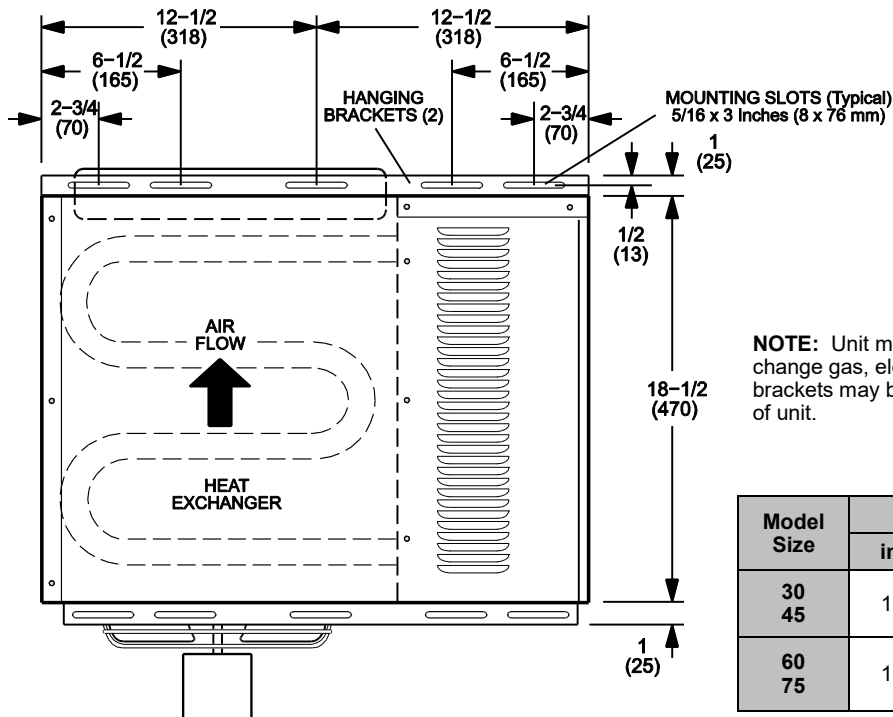
[1] Sold in pallet quantities of four(4) per model. No mix or match of models.

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

[3] 2 x 4 in. (51 x 102 mm) diameter adaptor is furnished with unit for flue connection.

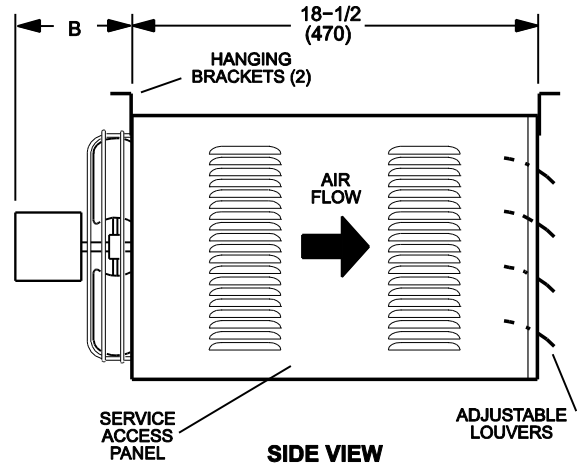
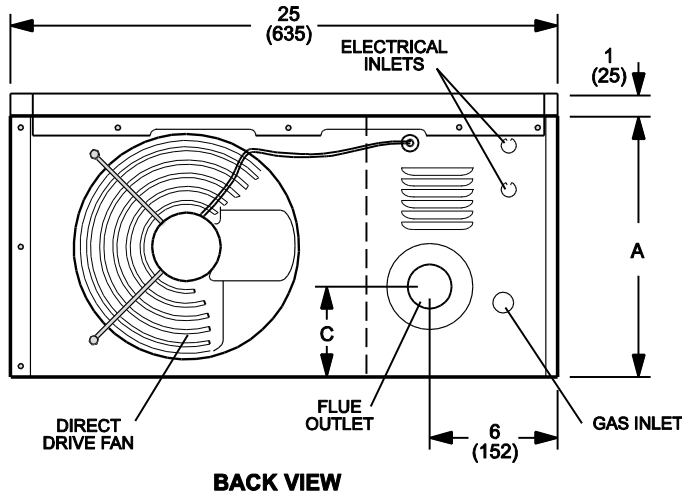
Note: All models have aluminized steel heat exchanger; all models are 115 V, 60 Hz, 1 phase.

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 Size	A		B		C	
	in.	mm	in.	mm	in.	mm
30 45	12	305	5-1/2	140	4-1/4	108
60 75	17	432	6-1/2	165	6-3/4	171



**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.
- Heat exchangers are laboratory life-cycle tested.
- Tubular heat exchangers made of aluminized steel or stainless steel.
- Aluminized steel in shot burners provide efficient trouble free operation.
- Sidewall venting eliminates roof penetrations.
- Wiring junction box is located outside of unit.
- Safe direct spark ignition. No standing pilot light.
- Self-diagnostic board with LED display improves troubleshooting efficiency and accuracy.
- 3/8 x 16 rivet nuts are located on the top of cabinet for suspending unit using threaded rod.
- Power exhaust system with a sealed flue collector allows conventional vertical or horizontal venting to 35 ft (depends on unit size).
- Direct drive propeller fans are dynamically balanced for quiet, smooth operation.



**Technical Data**

	Model	SEP -100#-&	SEP -115#-&	SEP -145#-&	SEP -175#-&	SEP -200#-&	SEP -230#-&	SEP -250#-&	SEP -300#-&	SEP -345#-&	SEP -400#-&
<b>Gas Heating Performance</b>	Heating Capacity Input (BTUH)	100,000	115,000	145,000	172,500	195,000	230,000	250,000	300,000	345,000	390,000
	Output Natural Gas (BTUH)	80,500	92,000	116,000	138,000	156,000	184,000	201,250	241,500	276,000	312,000
	Output LPG/Propane (BTUH)	82,000	92,000	115,000	138,000	156,000	184,000	205,000	246,000	281,200	312,000
	Steady State Efficiency -- Natural Gas	80.5%	80.0%	80.0%	80.0%	80.0%	80.0%	80.5%	80.5%	80.0%	80.0%
	Steady State Efficiency -- LPG / Propane	82.0%	80.0%	80.0%	80.0%	80.0%	80.0%	82.0%	82.0%	81.5%	80.0%
<b>Connections</b>	Flue Size Round (in)	4 <sup>[1]</sup>	4 <sup>[1]</sup>	4 <sup>[1]</sup>	5 <sup>[2]</sup>	5 <sup>[2]</sup>	5 <sup>[2]</sup>	5 <sup>[2]</sup>	5 <sup>[2]</sup>	6 <sup>[3]</sup>	6 <sup>[3]</sup>
	Gas Piping Size (in, NPT)	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4
<b>Fan Data</b>	Number of Fans	1	1	1	1	1	2	2	2	2	2
	Diameter (in)	16	16	16	16	16	16	16	16	16	16
	Number of Blades	4	4	4	4	4	4	4	4	4	5
	Motor Output (hp)	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8
	Motor Full Load Amps	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
	Motor RPMs	1075	1075	1075	1075	1075	1075	1075	1075	1075	1075
Air Volume (CFM)	1900	1900	1900	2200	2200	4400	4400	4400	4400	4400	
<b>Physical Data</b>	Overall Dimensions H x W x D (in)	32-3/16 x 20-3/16 x 39-3/16	32-3/16 x 20-3/16 x 39-3/16	32-3/16 x 20-3/16 x 39-3/16	32-3/16 x 23-1/8 x 39-3/16	32-3/16 x 23-1/8 x 40	32-3/16 x 41-1/8 x 40	32-3/16 x 41-1/8 x 40	32-3/16 x 41-1/8 x 40	32-3/16 x 41-1/8 x 41-1/8	32-3/16 x 41-1/8 x 41-1/8
	Ship Weight (lbs)	150	150	165	185	185	275	275	280	310	315

[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.

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

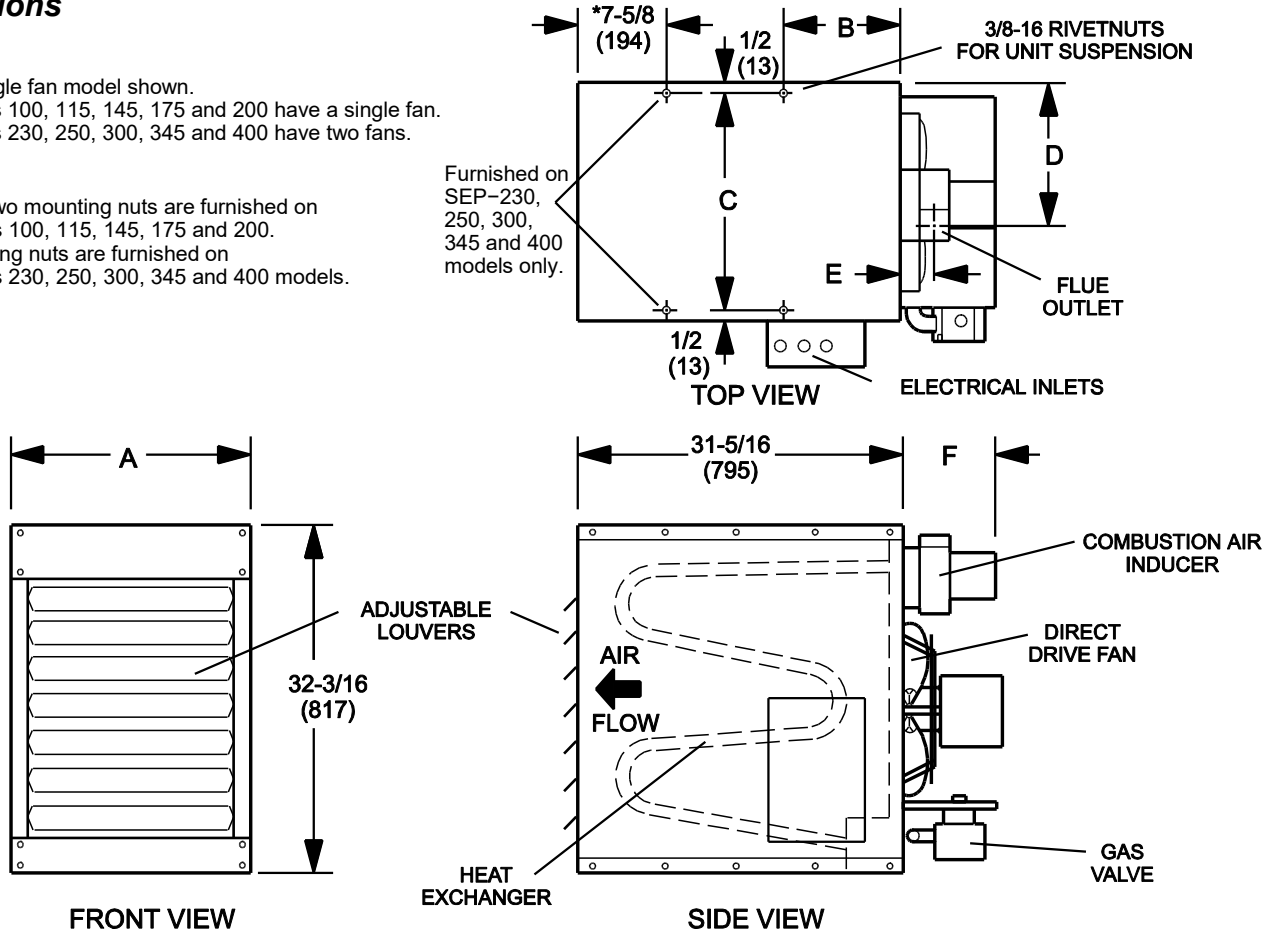
& N = Natural Gas; P = LP Gas

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

**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.



Model Size	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



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