



101 Reasons You'll Love the S-Series Furnace

Reference	Feature	Benefit	Deeper Dive
1	It's Good for Your Business	Efficient, quiet comfort in an attractive package homeowners love	It's designed to meet your real-world, on-the-job, rigorous standards.
2	34" height	Fits into tight spaces with large coils	34" furnace plus 30" 5 ton Hi-E coil only 64" height
3	34" height	Easier to move transport, carry and install	Lighter weight design; a B80 weighs 127 pounds, including carton! That's 25% lighter! (legacy is 168 pounds)
4	34" height	Simplifies replacement of an existing short furnace	Fits in where taller furnaces cannot
5	3 way poise, plus dedicated downflow models.	Easier to specify	One model for up, left, or right applications
6	Single piece door with two view windows	See the burners and IFC digital readout without opening furnace	Two smoked acrylic windows, one is placed directly in front of the burners, the other directly in front of the Digital Display
7	Door lips, seals, and latches designed for easy on/ easy off in any orientation	Full functionality regardless of poise	On the floor of a basement or horizontal in a tight attic, the door is easy to remove and replace.

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8	Open Vestibule design	Provides a full 34" high x (furnace width) open vestibule	Huge compartment provides room for hands and tools
9	Open Vestibule design	Increases stiffness and ruggedness of cabinet	Durable and reliable cabinet
10	Open Vestibule design	Prevents racking in horizontal positions	No racking or twisting of the cabinet, even in horizontal installs
11	Open Vestibule design	Eliminates need for specialized downflow internal venting	You can vent out the side of the cabinet easily, and not block access to the blower.
12	Open Vestibule design	Improves sealing of airside compartment	Bottom vestibule panel is airtight seal between combustion and return air.
13	Open Vestibule design	wire harnesses do not go through blower deck, eliminating sealing and pinch point	Wire harnesses are not choked or pinched and no additional air sealing is required
14	1/4" hex head screws used throughout (except J-box and pressure switches)	Minimizes the number of tools needed	Common screw sizes simplifies service
15	Easily accessible burners	Simplifies inspection and service	Burners can be removed without removing the manifold
16	Simplifies service	Easily accessible orifices	When burners are removed for cleaning, the orifices can be removed as well...without pulling the manifold
17	Easily accessible flame sensor	Simplifies inspection and service	Forward facing screw
18	Easily accessible igniter	Simplifies inspection and service	Forward facing screw
19	Easily accessible roll out switches	Simplifies inspection and service	Not forward facing screws, but still easily accessible
20	Easily accessible high-	Simplifies inspection	Forward facing screw

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	limit switch	and service	
21	Easily accessible pressure switches	Simplifies inspection and service	Forward facing screw
22	Easily accessible cold header / condensate collection box	Simplifies inspection and service	Forward facing screw
23	Easily accessible condensate trap	Simplifies inspection and service	Forward facing screw
24	Easily accessible integrated furnace control and wire harnesses	Simplifies inspection and service	Forward facing screw
25	Easily accessible blower assembly: rails	Simplifies inspection and service	Rails extend to front of deck, making it easier to get the blower back into place, regardless of poise.
26	Easily accessible blower assembly: motor mount	Simplifies inspection and service	Single-piece motor mount assembly
27	Easily accessible heat exchanger assembly	Simplifies inspection and service	Primary and secondary heat exchanger assembly is on rails and can be slid out of the cabinet without moving the installed furnace or removing coil or plenum
28	J-Box can be installed on either side of the cabinet	Application friendly design simplifies installation	electrical entry from either side of the cabinet
29	Gas can enter either side of the cabinet	Application friendly design simplifies installation	gas connections always made with straight pipe and coupling...not elbows or nipples inside the cabinet

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30	Condensate system can exit either side of the cabinet in Upflow orientation	Application friendly design simplifies installation	drain left or right with the same formed hose.
31	Condensate system connections are ¾"	Simplifies installation by using more common sizes of pipe	Compatible with most local codes
32	Easier to set up and install	Condensate system uses (1) pre-formed hose; not two	Can often be installed without cutting the hose at all.
33	Tested to the extreme	Meets or exceeds all environmental and regulatory requirements	
34	Condensate system does not require CPVC pipe in downflow models	Application friendly design simplifies installation	Always use the preformed hose provided
35	Condensate system trap is fully internal in Upflow and downflow positions	Application friendly design simplifies installation	space saver
36	Condensate Management System: Barbed fittings on trap at hose connection and on cabinet transition for hose has barbed fitting and clamps at both ends	leak resistance	Barbs AND clamps - like wearing a belt and suspenders!
37	Trap is attached directly to the cold header	eliminates a potential leak source	one less hose means one less opportunity for leaks.
38	Multiple venting options: Every model, every size will offer at least (2) options for venting direction	Application friendly design simplifies installation	If preference or application requirements mean you need to vent out the side of the cabinet instead of the top, you now have that flexibility

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39	Long vent lengths; 2" pipe can be used up to 100K	Application friendly design simplifies installation and reduces installation costs.	2" PVC vent pipe is now approved for all 40K, 60K, 80K and 100K models
40	Inducer has locating tabs to make rotation for venting options easier	Rotation for venting options easier	Rotating the inducer for alternate venting options or for poise changes is easier with hard stops that ensure the inducer is mounted correctly.
41	New Integrated Furnace Control with digital configuration, status, and fault codes	state-of-the-art intelligence for easiest configuration and diagnostics	Industry first digital display and interface for set up, service, and diagnosis
42	2S-3D™ (Status-Setup-Diagnostic-Digital-Display)	Digital readout provides improved diagnostics	No more counting flashes. Easy to read alpha-numeric codes provide more specific information to the technician.
43	IFC is more robust to grounding issues	Improved performance reliability	More durable circuitry
44	IFC is less susceptible to RFI issues	Improved performance reliability	Less interference with other electronic equipment.
45	IFC: No dipswitches	push button setup is easier to see and set than tiny dipswitches	Set up all delays, airflows, and outdoor sizes with alpha numeric characters, not dipswitches
46	IFC: Improved diagnostic codes	More specific information provided means improved diagnostic capability	As an example, different codes for pressure switch 1 and 2, and for pressure open and pressure switch shorted. Currently the code is a simple 3-flash. Another example is different fault codes for serial communications motor error and serial communications board error
47	IFC: Multiple airflow settings available for a given outdoor size	System configurations can be optimized for maximum efficiency	More airflow options available

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48	IFC: Dry contact EAC and HUM connections	Accessory connections only energized when proper call is received.	capable of matching with 24v or 120v accessories
49	IFC: Adjustable blower off delay for heating and cooling	Customizable for maximum comfort and efficiency	extract the maximum amount of heat or most amount of latent removal with adjustable blower off delays
50	IFC: Last six fault codes are stored (even with power loss)	Improved diagnostics even with loss of electrical.	last six faults are stored until deleted by the technician, even of there is a power loss to the unit.
51	IFC: Solder pads for flame sense check	Easier diagnosis	Flame sense can be checked on the IFC
52	Rain shield over IFC	keeps condensate off the control	designed to channel any condensate away from the IFC in any poise position
53	Rain shield attached to blower door with screws	easy to take off and put back on; no plastic clips to break	More durable design than plastic standoffs
54	Rain shield over IFC	protects the board during service; the IFC does not need to be handled directly	The rain sheild housing can be removed with three screws, and protects the board while being serviced
55	Cabinet has no knockouts - rubber and plastic plugs provided	easier to install	No more difficult to remove knockouts.
56	Flange for coil connection is flat; bend up for Upflow, or down for downflow	simplifies installation for both downflow and horizontal right coil connections	Flange is perforated for easy bending
57	Flange for coil connection is flat; bend up for Upflow, or down for downflow	reduces risk of shipping damage	Flanges won't be subject to the abuse they get when shipped bent up.
58	Up to 1600 CFM can be supplied through a	Simplified duct	Most systems can be installaed with a single side or bottom

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	single side return opening	connections	return
59	Compatible with existing ductwork	no need to transition	Easy drop-in replacement
60	Square vacuum tubes	square hoses reduce or eliminate kinking	helps to reduce or eliminate nuisance pressure switch errors
61	Rigid structural steel cabinet	maintains structural integrity in all four poise positions.	Structural steel is a stronger, tougher, more rigid material than cold rolled steel used by others.
62	Top and bottom caps wrap around the outside of the cabinet	Adds rigidity	Caps act as braces, keeping the overall furnace cabinet aligned
63	Picture frame and inner door design	provides additional column of rigidity	Structural and functional design keeps cabinet from racking, bowing or twisting.
64	Stainless steel secondary AND primary heat exchanger tubes	Durable, long-lasting, corrosion resistant	We've upgraded our primary heat exchangers from aluminized steel to stainless steel, which is more durable.
65	Stainless steel secondary AND primary heat exchanger tubes	Less affected by heat and large temperature swings	Stainless steel can withstand higher temperatures for a longer period of time than aluminized steel.
66	Stainless steel primary heat exchanger tubes	Reduces or eliminates the need for baffles in the heat exchanger compartment, improving blower efficiency	Baffles in the heat exchanger compartment can be eliminated if the tubes are stainless steel. This decreases the watts/CFM of the furnace and can improve overall system efficiency
67	Longer wire harnesses	have drip-loop to keep condensate off the control.	Condensate can drip onto wire harnesses, and may reach the IFC if the harness is too short.
68	Longer wire harnesses	Allows the inner blower door to be removed without	Long enough to be able to remove the inner blower door and set it aside without

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		disconnecting harnesses	fumbling with disconnecting multiple harnesses.
69	120v Silicone Nitride igniter	More durable	All S-Series furnaces will have 120v Silicone Nitride igniters for improved reliability
70	Basaloid-style carton design	ease of handling	Cartons can be
71	Blower deck rails extend all the way to the front of the deck	Easier to slide blower in and out	
72	Foil faced insulation is captured by cabinet, rails and side supports	holds insulation in place better than glue alone	
73	Attractive, appliance-like styling	Appeals to homeowners	Formed steel door with metallic look bezel, surrounding two smoked acrylic view windows. Industrial design influenced by modern appliances such as washers and dryers that are frequently installed near the furnace.
74	Rotatable badge	Brand is properly presented regardless of poise installed	
75	Extremely quiet sound levels	Comfort for homeowner	
76	The most electrically efficient furnace we've ever made...the best CFM/watt ratio in it's class	Lowers utility bills and contributes to overall system efficiency	

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77	Comfort R® variable speed airflow for maximum comfort in cooling and dual fuel heating.	Gradual blower speed changes enhance comfort	Slower speeds are quieter and lower humidity better.
78	One of the most gas efficient furnaces in its class: AFUE of 96%	Lowers utility bills	
79	Filter box will be installed outside the furnace	no need for homeowner to get inside the furnace	
80	Compatible with one or two stage outdoor units	System design flexibility	
81	IFC: Low voltage connections labeled on top and front	Easy to see labels regardless of poise and location	
82	Hemmed edges on cabinet	Safer for installers and technicians	
83	Tooled entry - front latches require a tool to open	No door switch is required. Unit can continue to operate with door removed.	There is no reason for the consumer to open the furnace door
84	Door is symmetrical	Cannot be installed "upside down"	
85	All condensate and pressure switch hoses will be marked with a part number	simplifies and improves accuracy of ordering replacement parts	
86	IFC - all harnesses for standard setup are Molex plugs, not spade connectors	Easier to set up and install	
87	Venting elbows have band clamp connections to vent	no gluing or RTV inside cabinet	

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	pipe.		
88	Outlet adaptor has band clamp connection to vent pipe	Easier to remove vent pipe for service	
89	Venting elbows have band clamp connections to vent pipe.	Compatible with multiple vent pipe materials (i.e. PVC, CPVC, polypropelene, etc..)	
90	Shipping Top Cap	Protects heat exchangers and strengthens cabinet, reducing risk of handling and freight damage	
91	Carton has "Cut Here" line on box	Clearly shows how to open the carton to prevent damage	
92	Carton has "Cut Here" line on box	allows carton to be used as trash container.	
93	No screws on the top or bottom of the cabinet	No screws to damage floors.	
94	Blunt screws used wherever possible	reduces installer risk	
95	Wire management clip	Dresses wires for neatness	
96	Transformer spade connections front facing	Easier to access	
97	U-pipe for left side gas entry	allows installer to run gas straight in for left side entry, or remove the u-pipe and run straight in for right side gas entry. No nipples or	

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		elbows required.	
98	Inner Blower door separates the controls from the airside compartment	IFC is protected from coil drain pan overflows	
99	All field installable screws have locating dimples feature for replacement	The cabinet has features that simplify locating and installing screws	
100	Locating triangles for side return cut outs	simplify and improve accuracy of cutting cabinet for side returns.	
101	No door switch	Power is not lost when the front door is removed	Easier to check system operations.