

CONDENSING COMMERCIAL GAS WATER HEATERS



EIGHT MODELS FROM
125,000 TO 500,000 BTU/HR

NO EFFICIENCY LOSS FROM LIME SCALE

VIRTUALLY SILENT OPERATION

ADVANCED SMART CONTROL™

VENTING UP TO 100 FEET



96% THERMAL EFFICIENCY



Lochinvar.com



SHIELD – EVEN BETTER

Lochinvar has done it again! The Shield™ commercial water heating product line has been upgraded, refined and expanded to give you more reasons to choose Shield. The Shield is now available in eight models. Offering you more sizes in ASME construction and a new 125,000 Btu/hr-65 gallon model. We have added a large LCD display and a new control with more features. All utility connections are now out the top of the unit to reduce equipment room footprint and improve installation flexibility. Additionally, a large removable pump access panel has been added and the control has been moved to the front of the cabinet, improving the serviceability. These design improvements and more make the new Shield better than ever.

96% EFFICIENCY – LIME SCALE FREE FOR LIFE

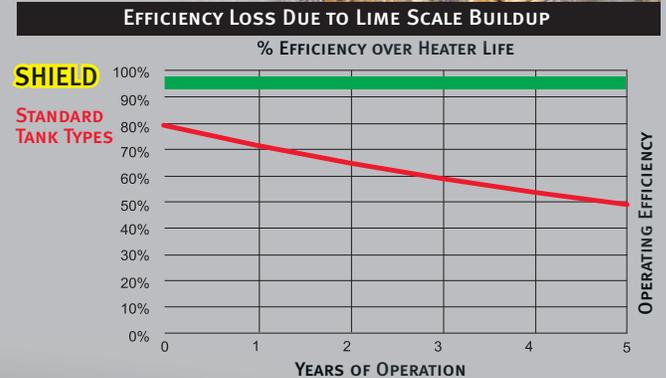
The Shield water heater operates at 96% thermal efficiency and provides 100% effective defense against a water heater’s worst enemy – lime scale buildup on the tank and heating surfaces.

Tank type water heaters suffer from one thing the Shield does not, lime scale buildup. Lime scale insulates the water from the heat source, decreasing thermal efficiency and increasing operating costs. Just a 1/4” of lime scale will increase fuel consumption and raise operating costs as much as 25%.

Shield has no flue tubes inside the tank. The water is heated in a separate stainless steel heat exchanger mounted above the tank. By controlling and creating high water velocity through the heat exchanger, the heat surface areas are kept clean so thermal efficiency remains high, for life.

The chart below illustrates Shield’s sustained long life efficiency compared to standard, tank type water heaters.

“In-tank” flue tubes and heat exchangers suffer from lime scale buildup beginning from the first hours of operation.



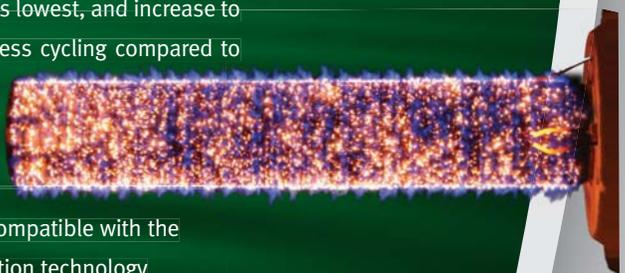
NOTE: The chart is based on limescale build-up of 1/16 inch per year which reduces operating efficiency approximately 8-10% per year.

FULLY MODULATING BURNER WITH 5:1 TURNDOWN

SHIELD can fire as low as 20% of maximum input when water heating demand is lowest, and increase to 100% for peak-demand periods. This results in better overall efficiency and less cycling compared to “on-off” tank-type units that can only fire at 100%.

‘NEG/REG’ SEALED COMBUSTION TECHNOLOGY

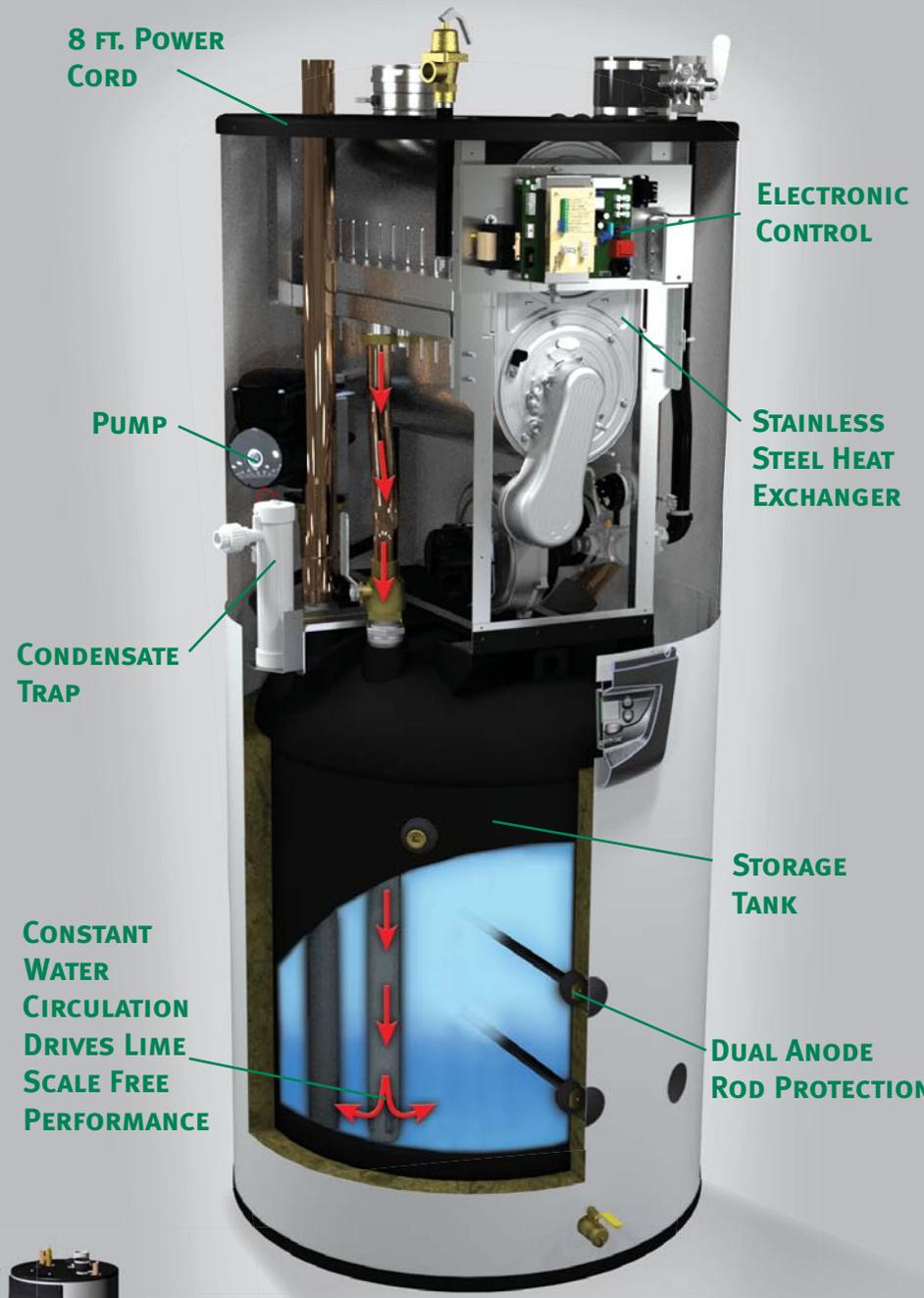
SHIELD utilizes an advanced combustion system which provides NOx ratings compatible with the most stringent air quality standards. Additionally, the NEG/REG sealed combustion technology allows the unit to operate with inlet gas pressure as low as 4 inches water column.



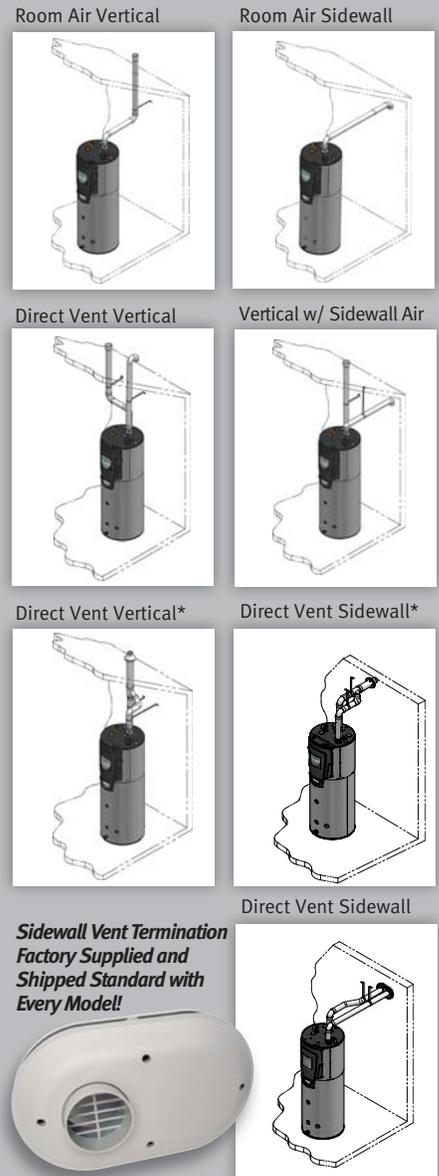
ADVANCED ELECTRONIC CONTROL

SHIELD features the ultimate water heater control which makes system setup, service and operation a breeze. A backlit LCD display gives readouts of setup, system status and diagnostic information. SMART CONTROL™ also includes:

- › Night Setback
- › Time Clock
- › Alarm Contacts
- › Runtime Contacts
- › Enable/Disable Contacts
- › Last 10 Lock-Outs
- › Security Protection
- › Adjustable Pump Delay
- › Contacts for Louvers



7 VENTING OPTIONS!



*Optional Concentric Vent Kit Sold Separately



INSTALLATION FLEXIBILITY

As always, multiple SHIELD water heaters can be manifolded together to meet large demands. Now, with new optional Side Tappings, a SHIELD can be connected to an additional heat source, such as a Lochinvar/TiSun Solar Array or a ARMOR water heater.





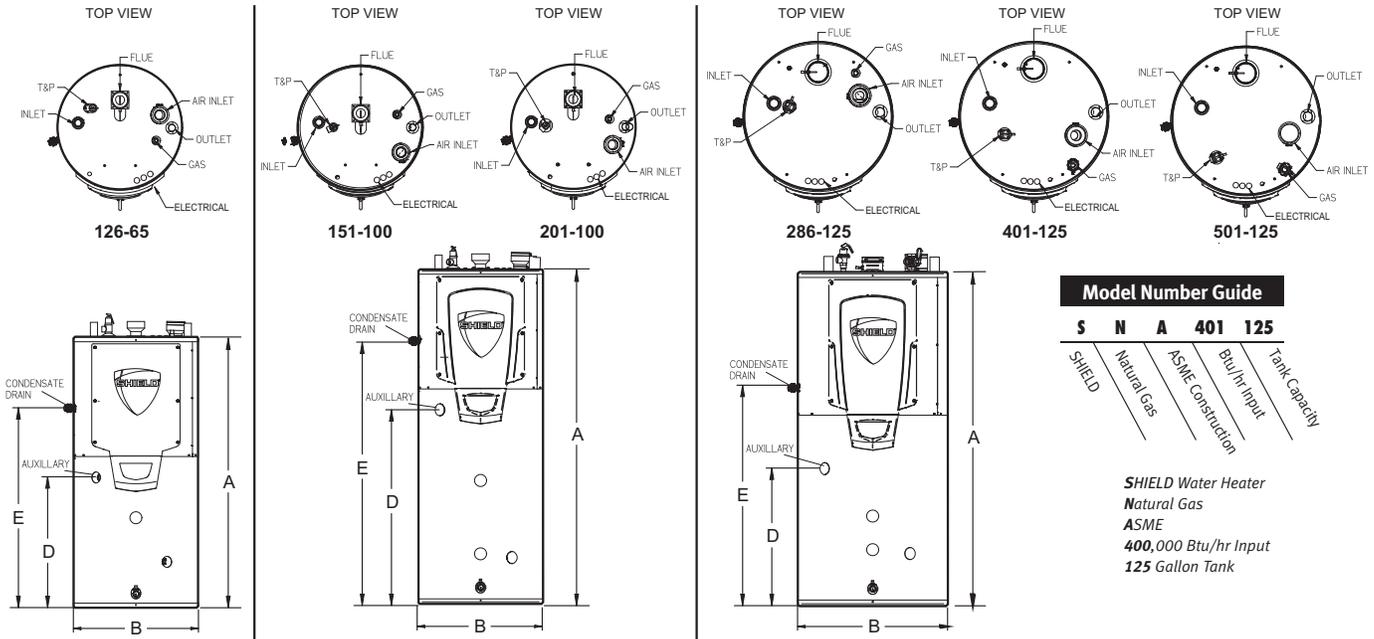
SHIELD™ PAYBACK CALCULATOR

SHIELD™ innovation makes the difference! The following estimated comparisons show the effects of lime scale buildup on thermal efficiency and yearly operating cost for the 96% efficient SHIELD and a standard 80% efficient tank-type commercial water heater. Comparison is based on 200,000 Btu/hr units delivering 2,000 gallons of hot water per day, 365 days per year, at an 80°F temperature rise, with a natural gas rate of \$1.22 per therm. (Based on DOE Energy Guide price per therm).

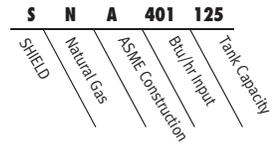
Bottom line, these numbers show that because of its 96% efficiency and lime scale free performance, SHIELD will pay back the initial cost difference in energy savings alone in less than 1.5 years!

	SHIELD WATER HEATER		STANDARD 80% EFFICIENT UNIT		OPERATING COST DIFFERENCE	
	Efficiency	Operating Cost	Efficiency	Operating Cost	Yearly	Cumulative
Year 1	96%	\$6,123	72%	\$8,164	\$2,041	\$2,041
Year 2	96%	\$6,123	65%	\$9,043	\$2,920	\$4,961
Year 3	96%	\$6,123	58%	\$10,134	\$4,011	\$8,972
Year 4	96%	\$6,123	52%	\$11,304	\$5,181	\$14,153
Year 5	96%	\$6,123	47%	\$12,506	\$6,383	\$20,536

SHIELD™ WATER HEATER DIMENSIONS AND SPECIFICATIONS



Model Number Guide



SHIELD Water Heater
Natural Gas
ASME
400,000 Btu/hr Input
125 Gallon Tank

Model Number	Btu/hr Input	Capacity (Gal)	GPH @ 100° Rise	First Hour	A	B	D	E	Gas Conn.	Water Conn.	Air Inlet	Vent Size	Shipping Wt. (lbs.)
SNR126-065	125,000	65	145	197	60-1/4"	28"	29-1/2"	45-1/4"	1/2"	1-1/2"	3"	3"	377
SNR151-100	150,000	90	175	247	75-1/2"	28"	44"	59-1/2"	1/2"	1-1/2"	3"	3"	700
SNR201-100	199,999	90	233	305	75-1/2"	28"	44"	59-1/2"	1/2"	1-1/2"	3"	3"	725
SNA151-100*	150,000	90	175	247	75-1/2"	28"	44"	59-1/2"	1/2"	1-1/2"	3"	3"	700
SNA201-100*	199,999	90	233	305	75-1/2"	28"	44"	59-1/2"	1/2"	1-1/2"	3"	3"	725
SNA286-125*	285,000	120	332	428	75-1/2"	34"	31"	49"	3/4"	2"	4"	4"	800
SNA401-125*	399,999	120	465	561	75-1/2"	34"	31"	49"	1"	2"	4"	4"	850
SNA501-125*	500,000	120	582	678	75-1/2"	34"	31"	49"	1"	2"	4"	4"	875

Change N to L for LP gas. Field convertible to LP Gas *A = ASME Construction Electrical Requirements: 120 VAC/60Hz/Phase All Information is subject to change.

STANDARD FEATURES

- ▶ 96% Thermal Efficiency (AHRI Certified)
- ▶ Modulating Burner with 5:1 Turndown
- ▶ Operates at Temperatures up to 180°F for Sanitizing Applications
- ▶ Stainless Steel Heat Exchanger
- ▶ Glass-Lined Steel Tank
- ▶ Magnesium Anode Rods
- ▶ 150 PSI Working Pressure
- ▶ ASME Construction (SNA151-501)
- ▶ ASME Temperature and Pressure Relief Valve
- ▶ Zero Clearances to Combustible Material
- ▶ Certified for Installation on Combustible Floors
- ▶ PVC, CPVC, Polypropylene and Stainless Steel Venting up to 100 Equivalent Feet

- ▶ Direct-Vent Sealed Combustion
- ▶ Rooftop and Sidewall Venting
- ▶ Sidewall Vent Termination
- ▶ Advanced SMART CONTROL, with:
 - ▶ LCD Display
 - ▶ Time Clock
 - ▶ Night Setback
 - ▶ Alarm Contacts
 - ▶ Runtime Contacts
 - ▶ Manual Reset High Limit
 - ▶ 3 Water Temperature Sensors
 - ▶ Flue Temperature Sensor
 - ▶ Contacts for Louvers
 - ▶ Adjustable Pump Delay
 - ▶ Security Protection

- ▶ Enable/Disable Contacts
- ▶ Low-NOx Operation, meets SCAQMD Rule 1146.2
- ▶ Low Gas Pressure Operation
- ▶ Direct-Spark Ignition
- ▶ Full Port Brass Drain Valve
- ▶ 8-Foot Power Cord
- ▶ 3-Year Limited Warranty
- ▶ 1-Year Parts Warranty

OPTIONAL EQUIPMENT

- ▶ Alarm Bell
- ▶ Concentric Vent Kit
- ▶ Condensate Neutralization Kit
- ▶ Low Water Cutoff
- ▶ Tank Side Tappings for Alternate Heat Source



Lochinvar, LLC
300 Maddox Simpson Parkway
Lebanon, Tennessee 37090
P: 615-889-8900 / F: 615-547-1000
www.Lochinvar.com

