

# UNIT HEATERS

High Efficiency Heating Equipment  
Gas, Hydronic & Oil



**STERLING**  
HVAC PRODUCTS





## Condensing Unit Heater

Sterling's **Nexus** brings gas-fired unit heaters to unprecedented levels of efficiency. Nexus carries a +95% Certified Thermal Efficiency rating combined with the latest innovations, including a tri-metal stainless steel heat exchanger and a state-of-the-art proprietary combustion control system.

Efficiency matters...not only is the **Nexus** the most energy efficient unit heater available, it is the most environmentally friendly too. Reduced emissions, low fuel utilization and a reduced carbon footprint give **Nexus** our green stamp of approval!



### State-of-the-Art Control Platform

- 2-Stage, Modulating Outdoor Reset, Modulating Indoor Reset
- 2-10 VDC/4-20 mA Input for BMS Communication
- Modbus Standard
- LED Diagnostic Lights (External)
- Single Thermostat or Outdoor Sensor can Control Multiple Units



### Application Flexibility

- NG/LP Single Orifice Field Conversion
- PVC/CPVC Vent Compatible
- Field Convertible to Separated Combustion
- Multiple Voltage Configurations
- OSHA Fan Guards
- Durable Brushed Stainless Steel Cabinet
- Condensate Float Switch and Trap Standard
- Optional Condensate Pump and Condensate Neutralizer
- Residentially Certified for use as a Utility Heater

### Electronically Air/Fuel Coupled

- Proprietary Design for Optimal Efficiency
- Premix Burner Technology
- 3:1 Full Modulation
- Maximum Efficiency through Precision Modulation
- SafeSense Blocked Inlet and Flue Sensing Technology
- Unit Auto-Adjusts for Altitude Requiring No Field Modifications
- Unit Will Maintain Fuel Air Ratio with Partial Blockage Without Decreasing Performance Until Safety Trip

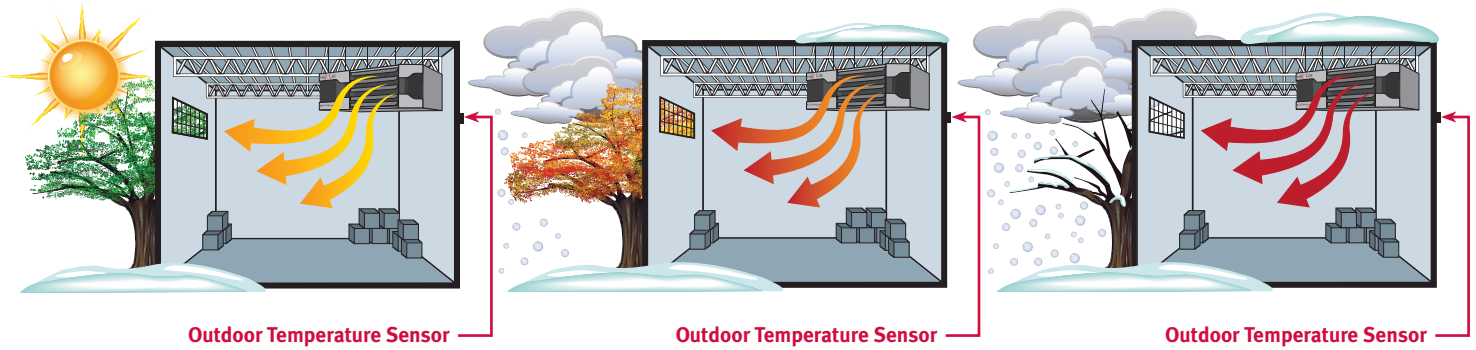
### Tri-Metal Hybrid Heat Exchanger

- Full Condensing Efficiencies at all Firing Rates
- +95% Efficiency at Full Input
- All Stainless Steel Tube for Enhanced Corrosion Protection
- Brass and Aluminum Fins for Improved Thermal Heat Transfer



# Outdoor Air Reset Modulation

Units automatically vary discharge temperatures based on the outside air temperature providing seamless modulation for optimum efficiencies. By running at lower discharge temperatures subject to the outdoor temperatures, units run longer at higher efficiency resulting in less cycling, lower fuel costs, and increased occupancy comfort. As the outdoor temperature drops, discharge temperatures increase and vice versa. Outdoor air reset is optimal in regions with substantial daily temperature swings.



## SPECIFICATIONS

MBH Input	50	100	150	200	300	400
MBH Output	48	96	143	192	285	384
Thermal Efficiency	97%	96%	95%	96%	95%	96%
Air Temp. Rise - °F	57	55	50	55	55	55
Free Air Delivery (CFM)	790	1616	2661	3232	4848	6464
Motor HP (qty)	1/14 (2)	1/2	1/2 (2)	1/2 (2)	1 (2)	1 (2)
Gas Connection Size	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"
Flue Size	2"	2"	2"	3"	4"	4"



## Low Profile Unit Heaters

GG Series gas-fired unit heaters combine the latest tubular heat exchanger technologies with a unique single-orifice burner system for superior durability, reliability and performance. GG Series propeller units are available in sizes from 30 to 120 MBH and offer industry leading operating efficiencies in a compact low-profile design perfect for applications where space is limited. Units are ready for standard or separated combustion all in one unit. Optional combustion air inlet kits available for concentric venting.

### Residential Garage Certified

All GG Series units are covered by a limited 10-year heat exchanger warranty and are ETL certified for residential garage installations. Units come standard with LP gas conversion kits and everything needed for applications in dusty or damp environments.

## STANDARD FEATURES

- +82% Thermal Efficiency
- Residential Certification: For Use as a Garage Utility Heater
- Standard or Separated Combustion All-In-One Units
- Single Orifice Burner System
- Direct Spark Ignition
- 20-Gauge Tubular Heat Exchangers
- 20-Gauge Jacket Panels with Baked Enamel Finish
- Power Vented
- OSHA Fan Guard
- Terminal Strip Low Voltage Wiring
- LP Gas Conversion Kit Included
- Easy Access Control Panel
- 321 Stainless Steel Burner Box
- 10-Year Heat Exchanger Warranty



AXE brings together all of the Sterling HVAC “cross over equipment” under one umbrella. Our GG, XF & XC Series unit heaters now all come separated and standard combustion out of the box. Sterling HVAC is committed to providing superior products combined with outstanding value and convenience to our customers.



## SPECIFICATIONS

MBH Input†	30	45	60	75	90	105	120
MBH Output†	24	37	49	61	73	86	98
Free Air Delivery CFM	370	550	740	920	1,100	1,300	1,475
Motor HP	1/20	1/20	1/12	1/12	1/10	1/10	1/10
<b>Flue Size Diameter</b>							
Standard Combustion	4"	4"	4"	4"	4"	4"	4"
Separated Combustion	4"	4"	4"	4"	5"	5"	5"

†Ratings shown are for unit installations at elevations between 0 and 2,000 ft. (0 to 610m). For installations above 2,000 ft. (610m), the unit input must be derated 4% for each 1,000 ft. (305m) above 2,000 ft. refer to local codes, or refer to the latest edition of the National Fuel Gas Code, ANSI Standard Z223.1 (NFPA No. 54).

See unit installation manual for deration information.



# XF/XC SERIES

## Commercial & Light Commercial Unit Heaters

The Sterling XF (propeller) and XC (blower) series convertible venting type tubular gas-fired unit heaters offer a highly efficient, extremely durable alternative to the traditional clam shell design. These propeller and blower type units combine the latest tubular heat exchanger and in-shot burner technology with the quality and reliability you have come to know from Sterling. Units are available in sizes 100 to 400 MBH and have been certified by ETL as providing 83% thermal (combustion) efficiency.

Notably, the “XF/XC” unit heater is designed so it can be installed in either standard or separated combustion venting configurations without requiring modification to the unit itself. Located on the rear cover panel of each unit, combustion air inlet collars are left open in a standard combustion venting configuration. When set up for separated combustion, combustion air piping is connected to the inlet collars so that the burners, spark ignitor, and flue system are enclosed within the unit, allowing the entire combustion process to remain unaffected by the atmosphere in the space where the heater is located. Separated combustion venting configurations should be used where dusty, dirty or mildly corrosive conditions exist, or where high humidity or slightly negative pressures prevail.

## STANDARD FEATURES

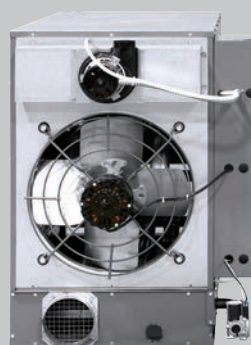
- Standard or Separated Combustion All-in-One Units
- 20-Gauge Aluminized Steel Tubular Heat Exchanger
- 83% Thermal Efficiency
- Power Venter
- 20-Gauge Steel Cabinetry with Baked Enamel Finish
- Direct Spark Ignition System
- Redundant Single Stage Gas Valve
- Rear Burner Access for Ease of Service
- Individually Adjustable and Removable Horizontal Louvers
- 10-Year Heat Exchanger, Flue Collector and Burner Warranty

## OPTIONAL FEATURES

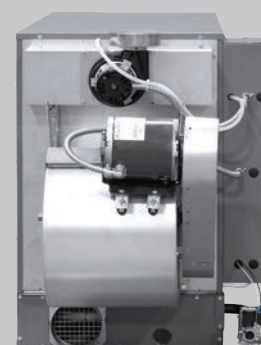
- Stainless Steel Heat Exchanger, Burners, and/or Flue Collector
- Two Stage and Various Electronic Modulation Gas Controls
- Discharge Nozzles (30°, 60° & 90°)
- Combustion Air Inlet Kits (Concentric Vent)
- Supply Voltages: 208 & 230/1/60 and 208, 230, 460, 575/3/60



## MODEL XF



## MODEL XC



## SPECIFICATIONS

MBH Input†	100	125	150	175	200	250	300	350	400
MBH Output†	83	103	124	145	166	207	249	290	332
Free Air Delivery CFM XF	1,600	2,200	2,400	2,850	3,200	3,450	5,000	5,600	5,800
Free Air Delivery CFM XC	1,181	1,476	1,771	2,067	2,362	2,953	3,501	4,134	4,724
Motor HP (Qty) XF	1/10	1/4	1/4	1/3	1/3	1/3	1/4(2)	1/3(2)	1/3(2)
Motor HP (Qty) XC	1/4	1/2	1/2	3/4	3/4	1	1	1-1/2	1-1/2
*Flue Size Diameter	5"	5"	5"	5"	5"	5"	6"	6"	6"

†Ratings shown are for unit installations at elevations between 0 and 2,000 ft. (0 to 610m). For installations above 2,000 ft. (610m), the unit input must be derated 4% for each 1,000 ft. (305m) above 2,000 ft. refer to local codes, or refer to the latest edition of the National Fuel Gas Code, ANSI Standard Z223.1 (NFPA No. 54).

See unit installation manual for deration information.

\*Flue collar is factory supplied with unit; to be field installed per included instructions on 150/400 MBH sizes.



## Greenhouse Specialty - GF Series

Sterling HVAC's Shield propeller units are the perfect gas-fired unit heater for use in corrosive environments such as greenhouses, waste water treatment plants, agricultural and food service industries.

Constructed with the same durability and reliability as the commercial grade XF/XC Series, the Shield adds a corrosive resistant stainless steel tubular heat exchanger and cabinet for maximum protection from the elements. Sizes range from 150 to 400 MBH and carry a limited 5-year heat exchanger warranty.

## STANDARD FEATURES

- Stainless Steel Construction for Maximum Corrosion Resistance
- 150,000 – 400,000 Btu Capacity Range for Any Size Application
- Individually Adjustable and Locking Louvers
- Power Vented
- In-Shot Type Burners
- Single Stage Combination Gas Valve
- Natural or Propane (LP) Gas
- Easy Access Control Panel
- 24 Volt Control Circuit
- 115 Volt Fan Motor with Internal Overload Protection
- 5-Year Heat Exchanger, Flue Collector and Burner Warranty



## SPECIFICATIONS

MBH Input†	150	250	400
MBH Output†	124	207	332
Free Air Delivery CFM	2,400	3,450	5,800
Motor HP (Qty)	1/4	1/3	1/3 (2)
*Flue Size Diameter	5"	5"	6"

†Ratings shown are for unit installations at elevations between 0 and 2,000 ft. (0 to 610m). For installations above 2,000 ft. (610m), the unit input must be derated 4% for each 1,000 ft. (305m) above 2,000 ft. refer to local codes, or refer to the latest edition of the National Fuel Gas Code, ANSI Standard Z223.1 (NFPA No. 54).

See unit installation manual for deration information.

\*Flue collar is factory supplied with unit; to be field installed per included instructions on 150/400 MBH sizes.



# Hydronic Unit Heaters

## HS Series

Sterling HS Series horizontal unit heaters are available in both serpentine and header type units. Serpentine units offer outputs from 8,030 to 35,900 BTUs and are ideal for hot water installations with limited clearances. Header type horizontal units range from 18,000 to 360,000 BTUs and can operate with either hot water or steam. Both units are furnished with totally enclosed motors as standard equipment, explosion proof motors are optional.

## VS Series

Sterling VS Series vertical unit heaters are designed for installations requiring down flow air delivery. Offered in 15 sizes ranging from 41,300 to 705,000 BTU. Low output (increased airflow) units are available for high ceiling applications, steam or hot water operation.

## HS STANDARD FEATURES

- Copper Coils w/Aluminum Fins
- 20-Gauge Cabinetry
- 115/1/60 Volt Motor
- Thermal Over Load Protection
- Adjustable Louvers

## VS STANDARD FEATURES

- Copper Coils w/Aluminum Fins
- Totally Enclosed Motors
- Standard Units are Field Convertible to Low Output by Removing Air Port Knockouts Located on Top of the Unit
- Thermal Over Load Protection
- 4-Point Suspension



**MODEL HS**  
Header Type



**MODEL HS**  
Serpentine Type



**MODEL VS**



## SPECIFICATIONS

Model	Type	Motor H.P. Range	Output Range	CFM Range
HS (Serpentine Coil)	Horizontal	16W-1/20	8,030-35,900	245-850
HS (Header Type Coil)	Horizontal	16W-1/2	18,000-360,000	395-5,500
VS (Standard Unit)	Vertical	1/40-3	41,300-705,000	598-11,000
VS (Low Output Unit)	Vertical	1/40-3	34,800-620,000	668-11,900

# Oil Fired Unit Heaters

## QVOF Series

Sterling's QVOF Series oil-fired unit heater is designed to operate on number 1 & 2 fuel oils. Available in seven sizes ranging from 70 to 560 MBH (.50 to 4.00 GPH) all units are factory assembled and ready to install.

## STANDARD FEATURES

- Heavy Duty 18-Gauge Heat Exchanger
- Energy Efficient Flame Retention Beckett® Burner
- Adjustable Discharge Air Louvers
- Fan/Limit Control
- Four Point Suspension
- CAD Cell Burner Safeguard Control
- 115/1/60

## MODEL QVOF




## SPECIFICATIONS

MBH Input	70	105	126	231	312	375	560
MBH Output	56	84	100	184	250	300	450
Firing Rate #2 Fuel Oil (GPH)	0.5	0.75	0.9	1.65	2.25	2.75	4
Free Air Delivery CFM	1,050	1,750	2,000	3,200	3,400	5,000	6,000
Motor HP (Qty)	1/4	1/4	1/4	1/4	1/2	1/2	1/3 (2)
Flue Size Diameter	7"	7"	7"	8"	9"	9"	10"



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