



ADVANCED RADIANT SYSTEMS



Range Overview





ADVANCED RADIANT SYSTEMS

Radiant Heating Experts for Over 25 Years

EXPERIENCED PROFESSIONALS

Advanced Radiant Systems was founded in 1991. Since then we have become leaders in the infrared heating industry. We know the importance of experience and a proven track record. We make sure that from sales to engineering, you can be confident that you are working with experts in their field.



QUALITY PRODUCTS

Our products start with high quality, durable materials that are made to withstand a variety of environments. From our unique parabolic reflectors to our custom accessories you will find premium materials and superb design. Every heater has been tested and approved to CSA standards.

EFFICIENCY EXPERTS

We know that efficiency is crucial when it comes to heating your space. All of our products are not only designed for energy efficiency, but cost effectiveness as well.

CUSTOMER SERVICE

From start, to finish and beyond; we want to provide you with the tools and services you need.

Advanced Radiant Systems offers several services that make getting the job done right simple. These include:

- Initial assessment
- Energy analysis
- Budgeting
- Engineering
- Delivery
- Support

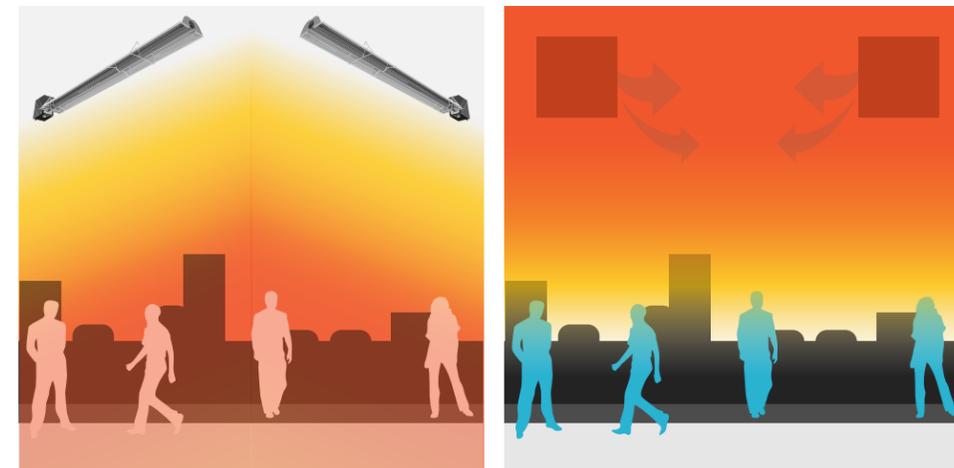
Today Advanced Radiant Systems has more to offer than ever before. Our newest patent pending unit, the APEX range, achieves efficiency beyond any available on the market today. Additional products such as high intensity standard and premium efficiency units, CNG approved units, residential specific products, and modulating individual heaters complete our comprehensive range of products.



RADIANT HEATING

Radiant heat works in the same way as the sun. Using electromagnetic waves, radiant heat warms all solid objects and surfaces on which it falls. Those objects then store and re-emit that energy throughout the space.

Advanced Radiant Systems' infrared heaters are mounted overhead where the heat is emitted by the high temp surface and directed downward to low levels by the reflectors. The radiant energy passes through the air to cooler, solid objects and individuals; creating a more comfortable, draft-free environment.



This illustration demonstrates how heat from our systems (left) is directed downward, heating people and objects. Convection heat (right) is blown into the space only to stratify. This stratification creates large variances in temperatures between floor and roof heights resulting in wasted energy and less comfortable working conditions.

Applications

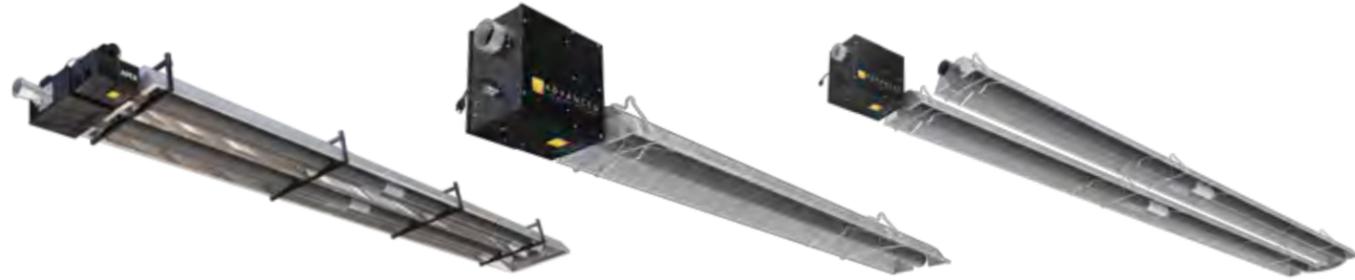
With a variety of options and customizations to choose from, our experts successfully provide solutions for a wide range of applications. Some include:

- Aircraft Hangars
- Manufacturing Plants
- Agriculture
- Auto Service Bays
- Military Facilities
- Factories
- Auto Dealerships
- Maintenance Facilities
- Warehouses
- Train Stations

Benefits

- Keeps people comfortable at lower air temperatures
- Quiet operation
- Rapid heat recovery
- Lower infiltration losses
- Zone control
- Stratification greatly reduced, eliminating the need for downdraft fans
- Fuel savings often in excess of 60%!
- Lower maintenance costs

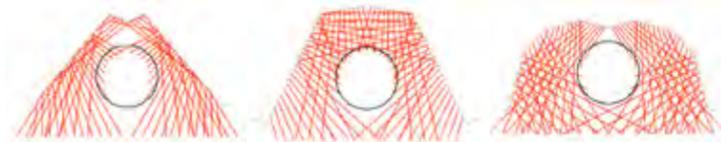
THE 100% DIFFERENCE



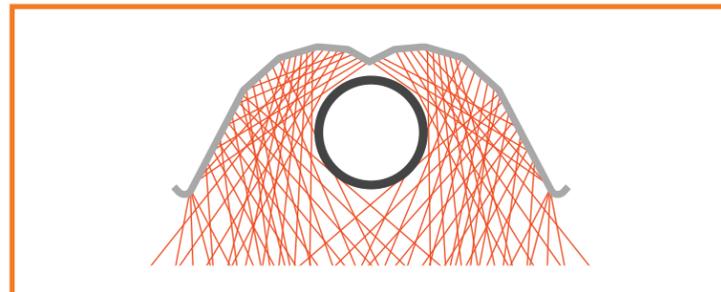
FEATURES

- Thermal efficiencies up to 95%
- Fuel savings exceeding 60%
- Wide range of products to meet your unique requirements
- 100% efficient reflectors available in polished aluminum and stainless steel
- Limit penetrations with system manifolding
- Completed assemblies available
- Zone modulation control capabilities

Our unique parabolic reflector design insures 100% of the radiant energy is directed away from the radiant tube. Other manufacturers' reflectors direct some of the tube's energy back onto the emitter. Our 10-faceted design results in zero impingement on the tube and 100% of the infrared rays being directed to the floor.



Other reflectors allow rays to be impinged by the tube.



100% of rays are reflected to the floor

Product Selection Guide

MODEL	TYPE OF BRACKETS	REFLECTOR MATERIALS	TUBE MATERIALS	VENTING
AX	Box Iron Brackets	Polished Aluminum Aluminized Canopy	Heat Treated Aluminized Steel	4" - 6"
ES/ESH	Wire Form Brackets	Stainless Steel Polished Aluminum Mill Aluminum	Heat Treated Aluminized Steel	4" - 6"
DU/DUH			Aluminized Steel	
VA			Stainless Steel Mild Steel	
SL/SLV	Wire Form Brackets	Stainless Steel Polished Aluminum Mill Aluminum	Heat Treated Aluminized Steel Aluminized Steel Stainless Steel Porcelain Mild Steel	4" - 6"
RS	Box Iron Brackets	Polished Aluminum Mill Aluminum	Heat Treated Aluminized Steel	4" - 6"
HD/HM KMI		Non-Corrosive, Aluminized Steel		Non-Vented

UNITARY INFRARED HEATERS



SINGLE STAGE UNITARY ES/ESH RANGE

Advanced Radiant Systems' Single Stage Unitary Range (ES) offers an entry grade unitary system with the highest radiant outputs available. By utilizing a high efficiency reflector with a dependable and efficient burner, these heaters take on the cost competitive marketplace without sacrificing quality or efficiency.

The Single Stage Unitary Range is also available in a harsh environment model (ESH). The ESH model will tackle those areas where conditions are at their most demanding.

MODEL ES

The standard ES heater is a heavy duty industrial/commercial single stage infrared heater with an enclosed burner.

MODEL ESH

Includes all of the features of the ES Model plus a potted module, sealed burner housing and heat-treated aluminized tube for harsh environments. A stainless Steel housing is available. The ESH is CSA approved for outdoor use.

TWO STAGE UNITARY DU/DUH RANGE

Advanced Radiant Systems' Two Stage Unitary Range (DU/DUH) offers the efficiency benefits of two-stage heating at an economical cost. These units also minimize temperature swings and help avoid system cycling; therefore optimizing fuel consumption.

The two-stage units are offered in both the standard grade, DU model, as well as our harsh environment, DUH model.

MODEL DU

The standard DU heater is a heavy duty, industrial/commercial two stage infrared heater with an enclosed burner.

MODEL DUH

In addition to all the features of the DU, the DUH also includes a potted module, sealed burner housing and a heat-treated aluminized tube for harsh environments. Stainless steel options are available.

The DU/DUH Range gives the system designer the flexibility to meet the changing demands in a given area. Uniform heating and low up front cost make the Two Stage Unitary Range one of our most popular models.

MODEL NUMBER	40	60	80	100	125	150	175	205	220
Nominal Rate (btu/hr)	40,000	60,000	80,000	100,000	125,000	150,000	175,000	205,000	220,000
DU Low Fire Rate (btu/hr)	30,000	45,000	60,000	75,000	95,000	115,000	130,000	160,000	165,000
Min/Max Length (ft)	10 - 20	15 - 30	20 - 40	20 - 50	30 - 50	40 - 60	50 - 60	50 - 70	60 - 70

ULTRA EFFICIENCY



- Radiant efficiency 45% greater than standard heaters
- Thermal efficiencies in excess of 90%
- Polypropylene flue
- Dual stage firing rates
- Energy Recovery Exchanger (ERX)
- Independent 100% reflective insulated reflectors

Minimizing Convective Loss

Designing the most efficient indirect fired radiant heater on the market was achieved by decreasing convective losses and increasing thermal efficiency.

Convective loss is already reduced with our uniquely designed reflectors. However, by the addition of a canopy reflector convective loss is further reduced.



Radiant Efficiency
45% Greater
than standard infrared heaters

AX RANGE

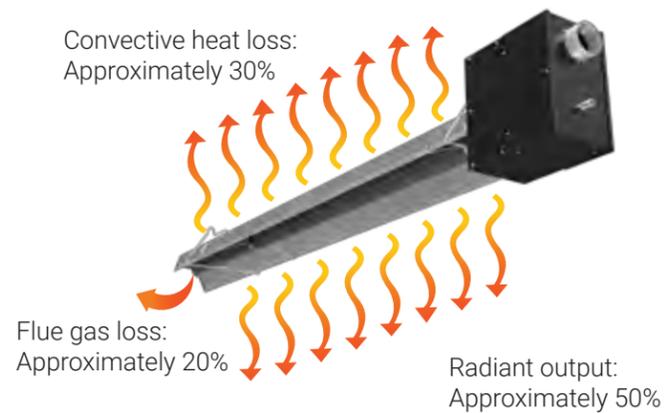
Advanced Radiant Systems is proud to introduce its highest efficiency indirect fired radiant heater. The APEX Range is the pinnacle in infrared heating. It boasts the highest radiant output and thermal efficiency of any radiant tube heater available today. Its pioneering design incorporates dual firing rates to optimize control and comfort while minimizing energy consumption. It is also the first unitary heater with flue temperatures low enough for venting with polypropylene flue material.

Featuring the ERX Module

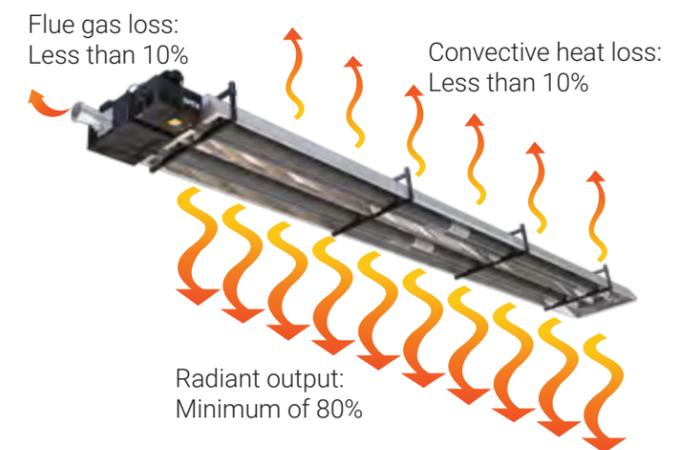
The APEX Range's unique Energy Recovery Exchanger (ERX) is the most efficient method of increasing combustion temperatures while decreasing flue temperature. By transferring energy from outgoing flue products to incoming combustion air the ERX module optimizes radiant output and increases thermal efficiencies in excess of 90%!



Standard Infrared Heater



APEX Infrared Heater



MODEL NUMBER	AX-85N*	AX-140N	AX-200N*
Nominal Rate (btu/hr)	85,000	135,000	200,000
Low Fire Rate (btu/hr)	60,000	85,000	135,000
Length (ft)	14	24	31

*Consult Manufacturer for availability

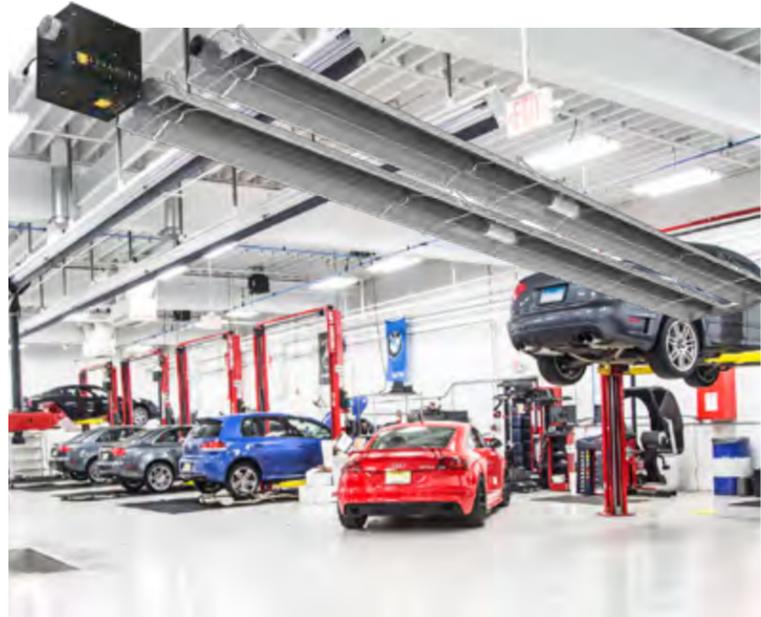
SPECIALTY UNITARY INFRARED HEATERS

MODULATING

VA RANGE

Advanced Radiant Systems' unitary flagship is the Modulating Unitary Range (VA). The VA Range boasts the industry's highest turndown ratio in a unitary heater. The VA Range modulates both fuel and air simultaneously for a true modulation benefit. By meeting building envelope heating demands on an ongoing basis, energy consumption is minimized and occupant comfort enhanced. These units are exceptionally suited for those areas in a facility with inconsistent heating demands.

- Harsh environment options available
- Available in both straight and u tube configurations



MODEL NUMBER	80	115	150	200
Low/High Modulating Rate (btu/hr)	48,000 - 80,000	69,000 - 115,000	90,000 - 150,000	115,000 - 200,000
Min/Max Length (ft)	20 - 30	30 - 40	40 - 50	50 - 60

RESIDENTIAL

RS RANGE

Advanced Radiant Systems' Residential Range (RS) is exactly what it sounds like; a residential grade, unitary infrared heater. The RS is designed to optimize performance as well as aesthetics. The compact, preassembled, unitary design and custom mounting brackets make for a simple and minimally invasive installation. With lower output capacities, comfortable designs are easily maintained at lower hanging heights. For the best results in any residential application the RS Range has no equal.



UNPACK, HANG, CONNECT

- Preassembled construction
- No loose parts
- Simplified installation
- Balanced flue construction
- One exhaust penetration
- Low cost to install

MODEL NUMBER	80	115	150	200
Low/High Modulating Rate (btu/hr)	48,000 - 80,000	69,000 - 115,000	90,000 - 150,000	115,000 - 200,000
Min/Max Length (ft)	20 - 30	30 - 40	40 - 50	50 - 60

CONTINUOUS CONDENSING



SIRIUS LINEAR

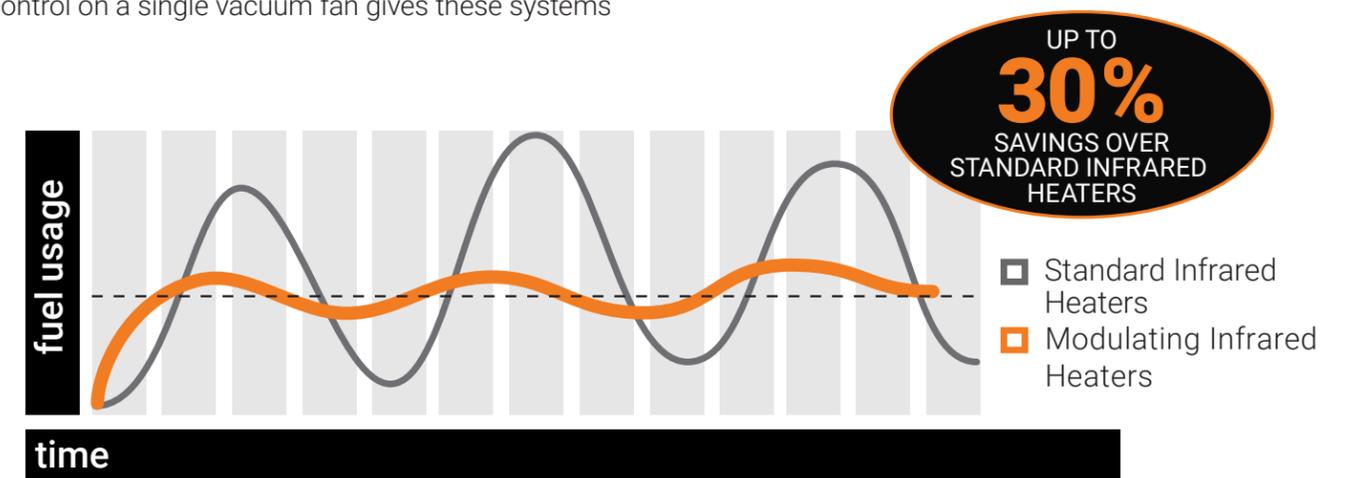
SL/SLV RANGE

Advanced Radiant Systems' continuous condensing SIRIUS Range (SL/SLV) incorporates the flexibility to match any facility's diverse application requirements. Unlike standard, unitary based systems, the SIRIUS Range achieves superior performance by utilizing a series of in-line burners that match the input requirements with the precise coverage demands. The SIRIUS Range systems are available in static as well as modulating outputs. The option of a multi branch control on a single vacuum fan gives these systems

the flexibility and precision required for unsurpassed performance.

ZONE MODULATING

The zone modulation provided by the SIRIUS means that you are providing just the right amount of heat where you need it. You can choose independent zone or complete system modulation as well as having single or multiple burners per zone. This kind of control means maximum comfort and maximum energy efficiency.



SL MODEL NUMBER	02	04	06	08	10	12
Nominal Rate (btu/hr)	20,000	40,000	60,000	80,000	100,000	120,000
Max Burners In Branch	4	4	4	4	4	3
Min/Max Length (ft)	10 - 20	15 - 25	20 - 35	20 - 45	30 - 60	40 - 70

SLV MODEL NUMBER	120	130	150	165	175	200	225	250
Nominal Rate (btu/hr)	120,000	130,000	150,000	165,000	175,000	200,000	225,000	250,000
Max Burners In Branch	3	3	3	3	3	2	1	1
Min/Max Length (ft)	30 - 45	35 - 55	40 - 60	45 - 65	45 - 65	50 - 70	50 - 70	55 - 75

HIGH INTENSITY INFRARED HEATERS

STANDARD EFFICIENCY HD/HM RANGE

Advanced Radiant Systems' Standard Efficiency High Intensity Range (HD/HM) is designed to economically provide top notch performance in a direct fired radiant heater. These durable units are easily mounted in a multitude of applications. They are easy to hang and offer a cost effective solution to many problem spot heating applications. This range is available in the HD 120 volt direct spark model and the HM millivolt ignition model.

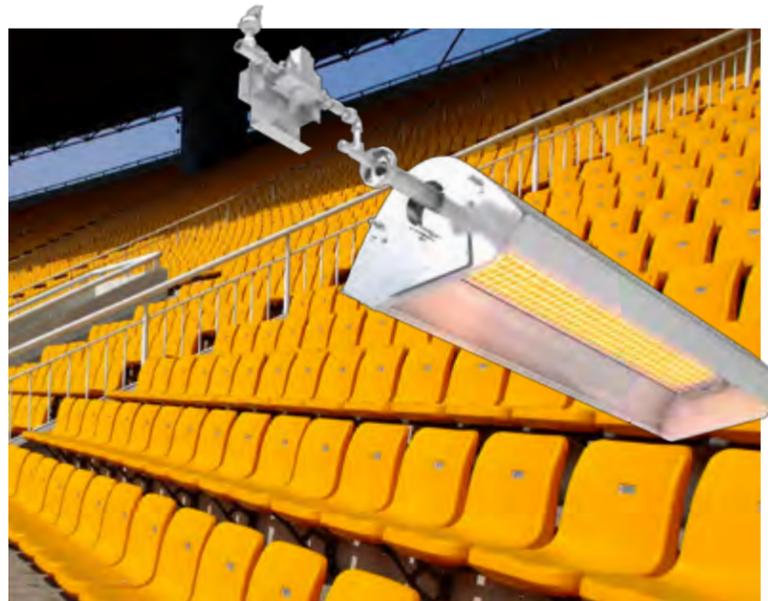


- Directed heat for cold spots
- Rigid heavy duty construction
- Maximized radiant efficiency with high-polished aluminum reflector
- Cost effective

HD/HM MODEL NUMBER	03	06	09	12	16
Nominal Thermal Load (NG btu/hr)	33,000	66,000	99,000	132,000	160,000
Nominal Thermal Load (LPG btu/hr)	30,000	60,000	90,000	120,000	N/A
Heater Lengths (in)	16.3	23.1	30	36.9	36.9

HIGH EFFICIENCY KMI RANGE

Gogas Industries' KMI High Efficiency Range offers premium efficiency in a direct fired infrared heater. The KMI Range is among the most efficient of its kind in the industry with a radiant factor in excess of 81%. For high bay and outdoor applications the KMI Range has no equal. With its 100% insulated reflectors, maximum preheating of the mixture and optimum combustion; the KMI heaters exceed all standards in the direct fired IR market.



KMI MODEL NUMBER	20	40	60	90	120
Nominal Thermal Load (NG btu/hr)	21,000	45,000	65,000	90,000	125,000
Nominal Thermal Load (LPG btu/hr)	23,000	44,000	66,000	90,000	125,000
Heater Lengths (in)	38.47	53	67.52	82.05	111.11

PRODUCT FEATURE COMPARISON

UNITARY INFRARED HEATERS



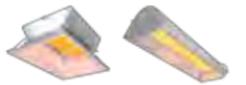
	AX	ES	ESH	DU	DUH	VA	RS
Burner box epoxy painted standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Sealed burner housing option	Optional						
Stainless steel burner housing option	Optional						
Stainless steel tube option	Optional						
Hot rolled tube standard	Optional						
Heat-treated aluminized tube standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
100% parabolic aluminum reflectors	Standard						
Self diagnostic / 3 try spark ignition	Standard						
U or L configurations available	Optional						
Modulating technology	Optional						
Two stage capacity	Optional						
Side reflector/lower shield	Optional						
Removable service covers	Standard						
Outdoor kit available	Optional						
Natural or propane gas fired	Standard						
Separated controls compartment	Optional						
Approved to residential standards	Optional						
CSA approved for indoor use	Standard						
CSA approved for outdoor use	Optional						
Heavy duty couplings	Standard						
Jet stream burner	Standard						
Rates (1,000 btu)	85-135	40-220	40-220	40-220	40-220	40-220	30-45

CONTINUOUS INFRARED HEATERS



	SL	SLV
In-series burner design	Standard	Standard
Whole system modulation	Standard	Standard
Thermal efficiency up to 95%	Standard	Standard
Heavy duty vacuum pump	Standard	Standard
Independent zone population control	Standard	Standard
Dual, easily changed filters	Standard	Standard
Direct spark, multi-try ignition	Standard	Standard
Variable tube length	Standard	Standard
Removable service covers	Standard	Standard
Side reflector/lower shield	Optional	Optional
Fixed burner input rate (1,000 btu)	20-120	Standard
Variable burner input rate (1,000 btu)	Standard	120-250
Total system capacity (million btu/h)	0.6	1.2

HIGH INTENSITY INFRARED HEATERS



	HD/HM	KMI
100% insulated reflectors	Standard	Standard
Modern and innovative injector burner	Standard	Standard
Adjustable reflector panels	Standard	Standard
Stainless steel combustion chamber	Standard	Standard
Up to 200' high output delivery	Standard	Standard
Compact, easy mount reflector hood	Standard	Standard
Natural gas or propane	Standard	Standard
Direct spark or millivolt ignition	Standard	Standard
High-polished aluminum reflectors	Standard	Standard
Unique pattern high output ceramics	Standard	Standard
Non-corrosive aluminized steel	Standard	Standard
Rates (1,000 btu)	30-160	21-125

standard
 optional
 not available



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