



DETROIT RADIANT PRODUCTS COMPANY

## GAS-FIRED INFRARED HEATING



## HLV Series

Multiple-Burner Low Intensity Engineered Vacuum System

**Energy Efficient  
Heating Solutions**

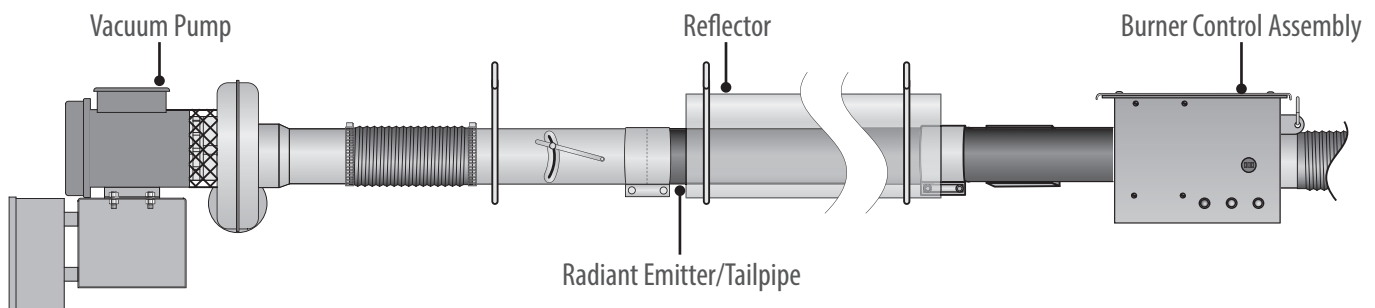
# HLV SERIES MULTIPLE-BURNER ENGINEERED VACUUM INFRARED HEATING SYSTEM

The HLV Series engineered vacuum system emits low intensity infrared heat like other types of tubular heaters. What makes a vacuum system unique is the method in which it operates as well as its expanded performance capabilities.

## KEY FEATURES AND BENEFITS

- Two-stage operation maximizes comfort levels and reduces equipment cycling, resulting in significant fuel savings.
- Systems can be designed with 1 to 6 burners ranging from 40,000 to 750,000 total BTU's with a single vent penetration.
- Tandem burner design allows independent combustion air for each burner.
- Slip-fit tube exchangers with bolted tube clamps.
- Hot surface ignition system.
- Spark resistant cast aluminum vacuum pump.
- Pre-wired vacuum pump with thermal overload.
- Self-diagnostic circuitry and operation indicator lights.
- Heavy-duty balancing damper.

## KEY SYSTEM COMPONENTS



### Burner Control Assembly:

Tandem designed HLV Series burners range from 40,000 to 200,000 BTU/h and do not require the use of combustion air filters, since each burner draws its own fresh air for combustion.

### Emitter Pipe:

4-inch O.D. 16 gauge titanium-stabilized and aluminized steel tubes treated with a highly emissive black coating offer superior longevity and protection.

A swaged, interlocking tube design provides a tube-on-tube overlap that helps to ensure structural integrity, ensures a tight seal, and is easier to install.

Condensing systems are fitted with corrosion resistant 304 stainless steel tailpipe insuring years of reliability.

### Vacuum Pump:

Pre-wired, spark resistant, heavy-duty cast aluminum 1/2-hp, 3/4-hp or 1-hp pumps allow for multiple high BTU burners per system.

### Reflectors:

Multi-faceted highly polished reflectors maximize the amount of infrared energy that is directed to the floor level - where heat is needed most.

### Controls:

State-of-the-art pre-programmed building management control panels are available for use as a stand-alone or overall building management system.

The HLV Series infrared vacuum heating system is engineered specifically for the design parameters of the building it is required to heat. More commonly found in larger commercial and industrial applications, these systems offer potential operating benefits that are not easily obtainable with traditional infrared tube heaters.

## COMMON APPLICATIONS OF VACUUM SYSTEMS



Aircraft Hangars



Distribution Facilities/Warehouses

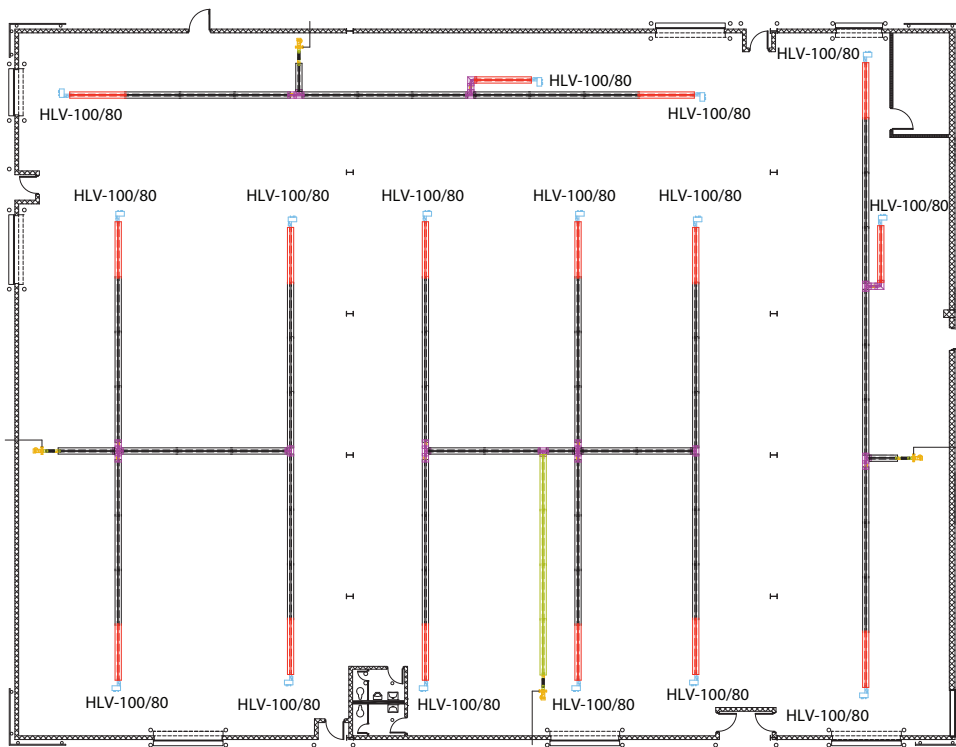


Vehicle Storage



Fire Station Apparatus Bays







## SAMPLE VACUUM SYSTEM APPLICATION



### Color Legend:

- Blue:** Burner Box
- Red:** Combustion Tube
- Black:** Radiant Exchangers
- Green:** Stainless Steel Tailpipe
- Orange:** Vacuum Pump
- Purple:** Heater Accessories

### Graphic Legend:

- |                                                                                                            |                                                                                                              |                                                                                                                 |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Tee Fitting:</b><br> | <b>Damper:</b><br>        | <b>Burner Assembly:</b><br> |
| <b>90° Elbow:</b><br>   | <b>Cross Fitting:</b><br> | <b>Vacuum Pump:</b><br>     |

## BENEFITS OF HEATING WITH INFRARED

**Reduce Energy Consumption:** Fuel savings from 20 to 50% when compared to a warm air system.

**Low Harmful Emissions:** Infrared heaters burn clean thus putting off low harmful emissions.

**Indoor Air Quality:** Infrared heaters do not rely on air currents to transfer heat - minimizing circulation of airborne pollutants.

**Flexibility:** Infrared heaters can be directed where heat is needed.

**Modular Design:** Individual zone controls increase personal comfort for all building occupants.

**Thermal Comfort:** Heat the floor zone; not the ceiling. Heat energy stored within ambient objects improves comfort levels in the space.

# HLV SERIES MULTIPLE-BURNER ENGINEERED VACUUM SYSTEM

## HLV SERIES SPECIFICATIONS

### ELECTRICAL

- 120VAC, 60Hz GRD, 1Ph., 3-prong.
- 0.7A starting & 0.2A running per burner.
- See installation manual for pump data.

### CONTROLS

- Two-stage operation standard.
- 100% safety shut-off.
- 24VAC thermostat control.
- Self-diagnostic circuitry.

### TUBE CONSTRUCTION

- Black-coated titanium-stabilized steel combustion chamber.
- Black-coated aluminized or optional uncoated hot-rolled steel tube exchangers.
- 304 Series stainless steel condensing tube.
- 4 in. dia. x 10 ft., 16 ga. construction.
- Interlocking swaged tube design.
- Turbulator baffles.

### REFLECTORS

- Highly polished aluminum.
- Continuous overlap design.
- Reflector end caps.
- Rotatable 0° to 45°.
- Anti-rattle tension springs.

### VACUUM PUMP

- 1/2-hp, 3/4-hp or 1-hp pumps.
- Operates between 60-63 sound decibels.
- Spark resistant cast aluminum housing.
- Includes primary damper.
- TEFC style motor with heat slinger for cool operation and wheel with taper lock hub.

### IGNITION/SENSE

- Hot surface ignition.
- Flame rod sense.
- Self-diagnostic LED.

### GAS CONNECTION

- Natural or LP gas.
- 1/2 in. NPT ball valve/inlet tap included.
- 24 in. stainless steel flexible connector.

### INLET GAS PRESSURE

- Man: 3.5 Inches Nat. Gas; 10.0 Inches LP.
- Min: 5.0 Inches Nat. Gas; 11.0 Inches LP.
- Max: 14.0 Inches Nat. Gas; 14.0 Inches LP.

### COMBUSTION AIR AND VENTING

- Preset 4 in. air inlet collar.
- Sidewall or roof venting options.
- Single wall flue pipe.
- B-vent required through combustibles.

### OPTIONAL EQUIPMENT/UPGRADES

- U or L-shaped configurations.
- Stainless steel upgrades.
- Protective guards/side shields.
- Single-stage operation.

### CERTIFICATIONS/APPROVALS

- CSA Design Certified.
- ANSI Z83.20b.
- Commercial/Industrial approval.
- Indoor approval.

### LIMITED WARRANTY

- Full, non-prorated.
- 1 year: Control box & exhauster components.
- 3 years: Hot-rolled and stainless steel tubes.
- 5 years: Titanium-stabilized and aluminized steel tubes.
- 10 years: Internal burner.
- Extended warranty available.

### WWW.REVERBERRY.COM

- Product literature.
- Aftermarket parts support.
- Distributor locator.
- C.A.D. & Revit Design library.



## AVAILABLE HLVBURNER MODELS

MODEL NO.	GAS TYPES	BTU/h INPUT (HIGH FIRE)	BTU/h INPUT (LOW FIRE)	RECOMMENDED MOUNTING HEIGHTS <sup>‡</sup>	CLEARANCE TO COMBUSTIBLES* [SIDES, TOP, BELOW]
HLV-40 <sup>†</sup>	Nat. or LP	40,000	40,000	9 to 14 ft.	[9", 4", 47"]
HLV-50 <sup>†</sup>	Nat. or LP	50,000	50,000	9 to 14 ft.	[9", 4", 47"]
HLV-60	Nat. or LP	60,000	50,000	10 to 15 ft.	[9", 4", 48"]
HLV-75	Nat. or LP	75,000	60,000	11 to 18 ft.	[9", 4", 48"]
HLV-80	Nat. or LP	80,000	64,000	11 to 18 ft.	[11", 4", 48"]
HLV-90	Nat. or LP	90,000	72,000	12 to 20 ft.	[12", 4", 54"]
HLV-100	Nat. or LP	100,000	80,000	12 to 20 ft.	[14", 4", 66"]
HLV-110	Nat. or LP	110,000	88,000	13 to 23 ft.	[18", 4", 72"]
HLV-120	Nat. or LP	120,000	96,000	13 to 25 ft.	[18", 4", 72"]
HLV-125	Nat. or LP	125,000	100,000	14 to 27 ft.	[18", 4", 72"]
HLV-140	Nat. or LP	140,000	112,000	15 to 30 ft.	[24", 6", 81"]
HLV-150	Nat. or LP	150,000	120,000	15 to 30 ft.	[24", 6", 81"]
HLV-170	Nat. or LP	170,000	136,000	16 to 40 ft.	[34", 6", 92"]
HLV-175	Nat. or LP	175,000	140,000	17 to 42 ft.	[34", 6", 92"]
HLV-180	Nat. or LP	180,000	144,000	18 to 47 ft.	[41", 6", 94"]
HLV-200	Nat. or LP	200,000	160,000	19 to 50 ft.	[41", 6", 94"]

\* Clearances posted above reflect those of a system with reflectors installed without add-on options at a 0° angle from horizontal. System lengths and clearances to combustibles vary based on the system design and configuration. Reference the HLV Series Manual and Design Guide for additional data. Clearances published in HLV Series manual and on warning label supersede data shown on this brochure. <sup>†</sup>The HLV-40 and HLV-50 do not have a reduction for low fire. <sup>‡</sup>Recommended mounting heights are provided as a guideline. Actual conditions may dictate variations from the above data.

## DETROIT RADIANT PRODUCTS CO.



21400 Hoover Rd.  
Warren, MI 48089-3162

Phone: (586) 756-0950  
Toll Free: 1-800-222-1100

Fax: (586) 756-2626

Email: sales@drp-co.com

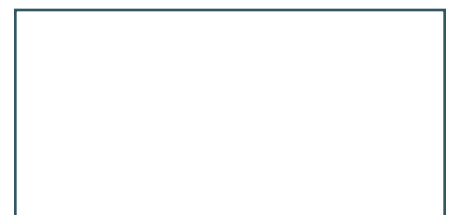
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