HLV SERIES

MULTIPLE-BURNER LOW INTENSITY ENGINEERED VACUUM SYSTEM

Designed for applications where reduced penetrations are desired while covering a greater area with heat.

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. An engineered vacuum system emits low intensity infrared heat just like any other type of tubular heater. What makes these systems unique is the method in which they operate as well as their expanded operational boundaries.

PRODUCT FEATURES

- 1 to 6 burner design options
- Two-stage operation
- 40,000 to 750,000 total system BTU/h
- Tandem burner design for independent combustion air
- Self-diagnostic indicator light operation

BENEFITS OF HEATING WITH INFRARED

- Superior Comfort
- Indoor Air Quality
- Reduced Energy Consumption
- Flexibility
- Durability
- Radiant Efficiency

- Slip-fit tube exchangers with bolted tube clamps
- Mini hot surface ignition
- Pre-wired vacuum pump with thermal overload
- Heavy-duty balancing damper
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.

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.
HLV SERIES
MULTIPLE-BURNER ENGINEERED VACUUM INFRARED HEATING SYSTEM

COMMON APPLICATIONS OF VACUUM SYSTEMS

Aircraft Hangars  Distribution Facilities/Warehouses  Vehicle Storage  Fire Station Apparatus Bays

SAMPLE VACUUM SYSTEM APPLICATION

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.

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

Graphic Legend:
Tee Fitting:  Damper:  Burner Assembly:
90° Elbow:  Cross Fitting:  Vacuum Pump:
HLV SERIES
MULTIPLE-BURNER ENGINEERED VACUUM INFRARED HEATING SYSTEM

PRODUCT SPECIFICATIONS

Input Range:
40,000 to 200,000 BTU/h (1-6 burners)

Lengths:
Engineered to fit the needs of the space

Gas Type:
Natural (3.5" W.C.) or Propane (10.0" W.C.)

Combustion Chamber:
4" Titanium Stabilized Aluminized Steel

Radiant Tubes:
.95 Emissive Black Coated Aluminized Steel

Certification:
CSA, Commercial/Industrial, Indoor

Limited Warranty:
3 (Components) - 5 (Tubes) - 10 (Burner) - 1 (Pump)

Electrical:
120V, 60 Hz. 24V Control
Amps per burner 0.7 starting, 0.2 running

AVAILABLE HLV MODELS & CLEARANCES

<table>
<thead>
<tr>
<th>MODEL #</th>
<th>GAS</th>
<th>BTU/h HIGH FIRE</th>
<th>BTU/h LOW FIRE</th>
<th>MOUNTING HEIGHTS</th>
<th>MOUNTING ANGLE</th>
<th>SIDE</th>
<th>TOP</th>
<th>BELOW</th>
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<tbody>
<tr>
<td>HLV-40</td>
<td>Nat or Prop</td>
<td>40,000</td>
<td>N/A</td>
<td>9' to 14'</td>
<td>0°</td>
<td>9</td>
<td>4</td>
<td>47</td>
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<td>HLV-50</td>
<td>Nat or Prop</td>
<td>50,000</td>
<td>N/A</td>
<td>9' to 14'</td>
<td>0°</td>
<td>9</td>
<td>4</td>
<td>47</td>
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<td>HLV-60</td>
<td>Nat or Prop</td>
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<td>50,000</td>
<td>10' to 15'</td>
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<td>9</td>
<td>4</td>
<td>48</td>
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<td>HLV-75</td>
<td>Nat or Prop</td>
<td>75,000</td>
<td>60,000</td>
<td>11' to 18'</td>
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<td>11</td>
<td>4</td>
<td>48</td>
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<tr>
<td>HLV-80</td>
<td>Nat or Prop</td>
<td>80,000</td>
<td>64,000</td>
<td>11' to 18'</td>
<td>0°</td>
<td>11</td>
<td>4</td>
<td>48</td>
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<td>HLV-90</td>
<td>Nat or Prop</td>
<td>90,000</td>
<td>72,000</td>
<td>12' to 20'</td>
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<td>12</td>
<td>4</td>
<td>54</td>
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<td>HLV-100</td>
<td>Nat or Prop</td>
<td>100,000</td>
<td>80,000</td>
<td>12' to 20'</td>
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<td>14</td>
<td>4</td>
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<td>Nat or Prop</td>
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<td>N/A</td>
<td>13' to 23'</td>
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<td>18</td>
<td>4</td>
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<tr>
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<td>96,000</td>
<td>13' to 23'</td>
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<td>4</td>
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<td>HLV-125</td>
<td>Nat or Prop</td>
<td>125,000</td>
<td>100,000</td>
<td>14' to 27'</td>
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<td>HLV-140</td>
<td>Nat or Prop</td>
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<td>112,000</td>
<td>15' to 30'</td>
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<td>24</td>
<td>6</td>
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<td>HLV-150</td>
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<td>HLV-170</td>
<td>Nat or Prop</td>
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<td>136,000</td>
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<td>19' to 50'</td>
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<td>6</td>
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CLEARANCES TO COMBUSTIBLES (INCHES)

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<thead>
<tr>
<th>0° Mounting Angle</th>
<th>45° Mounting Angle</th>
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<tbody>
<tr>
<td>TOP</td>
<td>TOP</td>
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<tr>
<td>SIDE</td>
<td>FRONT</td>
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<tr>
<td>SIDE</td>
<td>BEHIND</td>
</tr>
<tr>
<td>BELOW</td>
<td>BELOW</td>
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</tbody>
</table>

1 The HLV-40 and HLV-50 do not have a reduction for low fire.
2 Specify natural (Nat) or propane (Prop) gas.
3 Recommended mounting heights are provided as a guideline. Actual conditions may dictate variations from the above data.

Always maintain the published clearances to combustibles. Not for residential use. Clearances published in HLV Series manual and on warning label supersede data shown on this brochure.

* 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.

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