

Industrial Air Heaters

HVH

Horizontal or Vertical Discharge Fan Forced Unit Heater

- 2.6 - 50 kW
- 8,900 – 170,600 Btuh
- 208, 240, 277, 480, and 600 volt
- 1 or 3 phase
- Vertical or Horizontal Airflow
- Wall or Ceiling Mounted Configurations
- CSA Certified to US and Canadian Standards
- CE Certified to European Standards

Description

The Chromalox HVH self-contained blower heater provides quiet, reliable, fan-forced heat for all types of commercial and industrial applications. The hallmark of the HVH blower heater is its versatility. It can provide vertical or horizontal airflow and can be mounted on walls or ceilings. Optional wall or ceiling swivel mounting brackets help direct airflow exactly where it is needed. Heavy-duty construction affords long, dependable service, while its two-tone gray polyester powder coat finish makes an attractive appearance.

Applications

- Shipping and Receiving Areas
- Pump Houses
- Power Generating Stations
- Aircraft Hangars
- Factories
- Warehouses
- Garages

Construction

Cabinet – Heavy 20-gauge steel, 2.6 to 15 kW models; 18-gauge steel, 25 to 50 kW models. Phosphate undercoated for corrosion resistance. Finished in a two-tone gray polyester powder coat.

Louvers – Individually adjustable. Direct airflow up or down as needed. Fintube® Heating Elements Corrosion resistant steel fins furnace-brazed to a tubular heating element, assuring long life and superior heat transfer.



Fan Motor – Totally enclosed fan motor is rated for continuous duty with built-in thermal cutout and operates on the same voltage as the heating circuit.

Dynamically Balanced Fan – Ensures smooth, quiet operation. Blade pitch is carefully selected so that the volume of air moved results in the optimum discharge air temperature. Pull-through airflow design draws air across heating elements for more even airflow distribution and cooler element operation.

Features

- **Integral 24V Control Transformer** is standard on 480V models and eliminates the need for an external control source(120V is optional).
- **Heavy Duty Magnetic Contactors** are standard on all models except 2.6 thru 5 kW single phase models, except for 480V models.
- **Linear Thermal Cutouts** open the control circuit and disconnect power to the heating elements if overheating occurs. Automatic Reset allows the control circuit to reclose and restore power when temperature returns to normal.
- **Field Convertible** — Combination 208/240V and 1 or 3 phase operation through 10 kW.

VERSATILE MOUNTING CONFIGURATIONS

Vertical Discharge

Recessed fasteners on the rear of the heater cabinet are internally threaded for suspension of unit in the vertical discharge mode with threaded rods.

Horizontal Discharge Ceiling Bracket – The ceiling bracket allows you mount the heater directly to the ceiling or over-head member, simply and easily. The swivel mounting allows you to readily adjust the direction of warm air flow for maximum comfort up to 180° rotation.

Wall Mounting Bracket – The wall mounting brackets permits the heater to be rotated to face any direction.

Factory Installed or Field Installation Kits

Summer Fan Switch Kit – Field installable for circulating warm, stratified air. Available for all models.

Thermostat Kit – Field installable on all models. Range 40° to 100°F (4° to 38°C).

Disconnect Switch Kits – Field-installable switch enables power to be disconnected while servicing heater. Mounts on the front of the heater.

Outlet Screen – Prevents objects from coming in contact with fan

Factory Installed options

- Pilot Light (recommended)
- Time Delay (heat on and off): Provides delay of fan operation until elements have warmed up. The fan stays on until cool.

Advantages

- Self Contained
- Versatile, Flexible and High Performance
- Easy Installation
- Minimum Maintenance
- Long Life
- Attractive Appearance

Because it has individually adjustable discharge louvers to direct air flow, and can be wall or ceiling (plus swivel) mounted, the HVH heater may be used in a variety of heating applications:

- Primary Heating
- Supplementary Heating
- Dual System Heating
- Spot Heating
- Entryway Air-Curtain Heating

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Horizontal or Vertical Discharge Fan Forced Unit Heater (cont'd.)

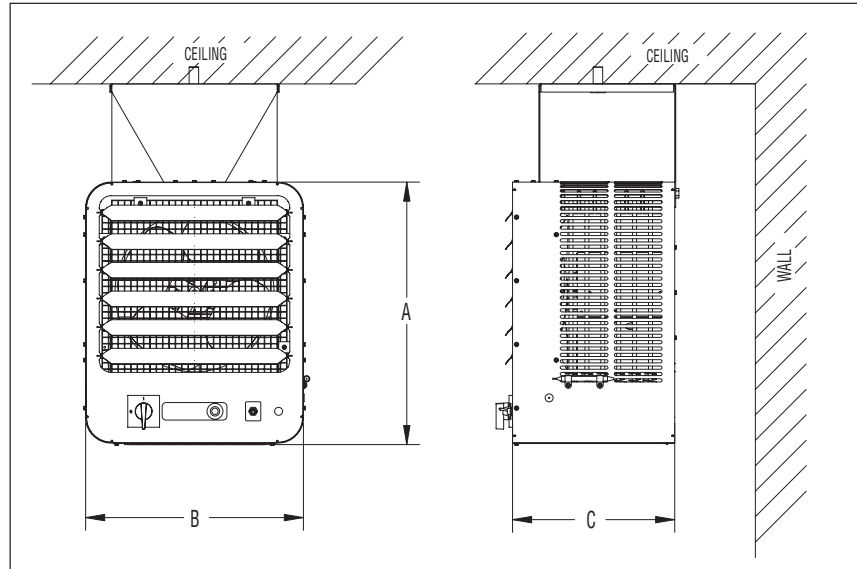
Thermostat Kits (40-90°F)

Model	Rating	PCN	Stock
TK-5	SPST	219475	S

Available Disconnect Switch Kits

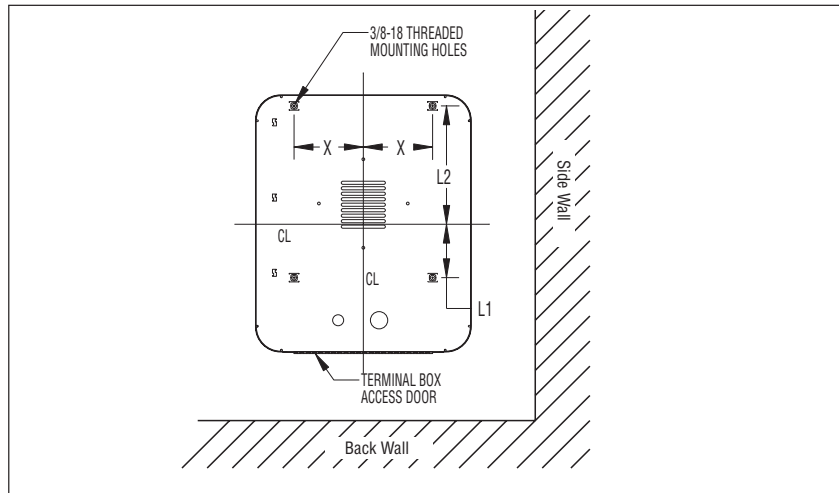
Model	Rating	PCN	Stock
HDS-1	63 Amps	219491	S
HDS-2	80 Amps	219790	NS
HDS-3	100 Amps	219803	NS

Horizontal Discharge



Heater	Dimensions In. (mm)		
	A	B	C
HVH-02 to 05 (Note 1)	16-1/8 (410)	13 (330)	10 (254)
HVH-07 to 15 (Note 1)	20-5/8 (524)	17-1/8 (435)	12-3/4 (324)
HVH-02 to 15 (Note 1) HVH-20 (All Voltages)	20-5/8 (524)	17-1/8 (435)	14-1/16 (103)
HVH-25 to 50 (All Voltages)	29-3/16 (741)	26-1/16 (662)	14-5/8 (371)

Rod Thread Type and Spacing Dimensions for Vertical discharge



Mounting Limitations

Hazardous Atmosphere — Unit heaters should not be used in potentially explosive atmospheres. **Corrosive Atmosphere** — The finish is not intended for direct salt spray exposure in marine applications or the highly corrosive atmospheres of greenhouses, swimming pools, chemical storage bins, etc.

Mounting Height — Do not install unit heaters above recommended maximum mounting height. Obstructions must not block unit heater air inlet or discharge.

Unit	Rod Thread Type	Dimensions In. (mm)		
		L ₁	L ₂	X
2 to 5 kW	3/8 - 16	2-7/8 (73)	7-1/8 (181)	3-3/4 (95)
7-1/2 to 20 kW	3/8 - 16	4-5/16 (110)	9-3/8 (238)	5-1/2 (140)
25 to 50 kW	3/8 - 16	8-5/16 (211)	14 (356)	9-15/16 (252)

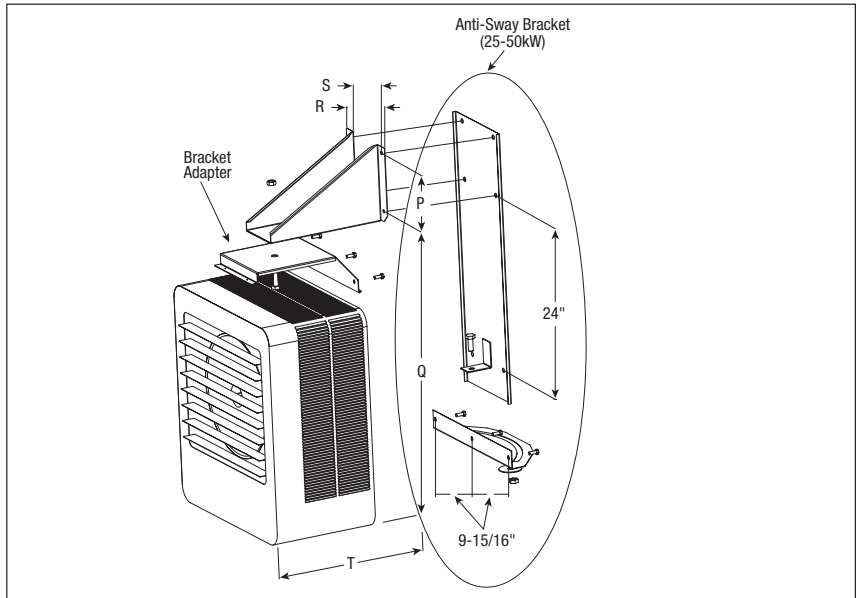
Note 1: Model HVH-02 to 15 Heaters with voltage ratings of 380V, 400V, 415V, and 600V use a larger case size with the same dimensions as model HVH-20

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HVH

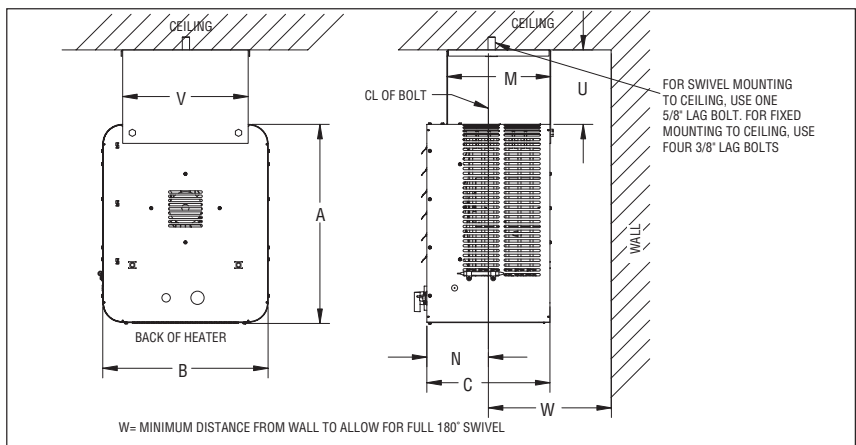
Horizontal or Vertical Discharge Fan Forced Unit Heater *(cont'd.)*

Optional Wall Swivel Mounting Bracket



Bracket Model No.	Dimensions In. (mm)					Bracket Wt. lbs. (kg.)	Use With
	P	Q	R	S	T		
HVW-1	6-1/16 (157)	18-7/8 (479)	7 (178)	5 (127)	17-5/8 (448)	4 (1.8)	HVH-02 to 05
HVW-2	6-1/16 (157)	23-1/4 (591)	7 (178)	5 (127)	18-5/8 (473)	6 (2.7)	HVH-07 to 15
HVW-3	6 (152)	23-7/16 (595)	7 (178)	5 (127)	20-1/16 (510)	6 (2.7)	HVH-02 to 15 (Note 2) HVH-20 (All Voltages)
HVW-4	6 (152)	23-13/16 (605)	10-3/8 (264)	8-1/2 (216)	22-7/16 (570)	27 (12.3)	HVH-25 to 50

Optional Ceiling Swivel Mounting Bracket



Bracket Model No.	Dimensions In. (mm)								Bracket Wt. lbs. (kg.)	Use With
	A	B	C	M	N	U	V	W		
HVC-1	16-1/8 (410)	13 (330)	10 (254)	8-3/8 (213)	5-3/4 (146)	7-3/4 (197)	9-3/4 (248)	12 (305)	4 (1.8)	HVH-02, 04, 05
HVC-2	20-5/8 (524)	17-1/8 (435)	12-3/4 (324)	10-3/4 (273)	6-3/4 (171)	7-3/4 (197)	12 (305)	12 (305)	8 (3.6)	HVH-07, 10, 12, 15
HVC-3	20-5/8 (524)	17-1/8 (435)	14-1/16 (357)	12-1/16 (306)	8-1/16 (205)	7-3/4 (197)	13-5/16 (338)	8 (203)	8 (3.6)	HVH-02 to 15 (Note 2) HVH-20 (All Voltages)
HVC-4	29-13/16 (757)	26-1/16 (662)	14-5/8 (371)	11-3/4 (298)	8-3/16 (208)	7-3/4 (197)	22-5/16 (567)	8-7/16 (214)	17 (7.7)	HVH-25 to 50

Note 2: Bracket used on 380V, 400V, 415V, and 600V heaters rated 2kW to 15kW

Optional Fan Only Kits

Description	Model	PCN	Stock
Fan switch (no relay)	HVF-01	219504	S
Fan switch (24V relay)	HVF-02	219512	NS
Fan switch (120V relay)	HVF-03	219520	NS

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HVH Horizontal or Vertical Discharge Fan Forced Unit Heater *(cont'd.)*

Recommended Control Options

Heater		Field Installed Options															Factory Installed Options			
		Wall Bracket Options				Ceiling Bracket Options				Outlet Screen Options			Thermostat Options	Disconnect Options					Fan Switch Options	
Model No.	PCN	HVV-1 219416	HVV-2 219424	HVV-3 219782	HVV-4 219820	HVC-1 219432	HVC-2 219440	HVC-3 219811	HVC-4 219838	HVS-1 219459	HVS-2 219467	HVS-3 219774	TK-5 219475	HDS-1 219491	HDS-2 219790	HDS-3 219803	HVF-01 219504	HVF-02 219512	HFD-1 ^A	PL-1 ^B
HVH-02-81-00	219096	X				X				X				X						X
HVH-02-21-00	219109	X				X				X				X						X
HVH-02-71-00	219117	X				X				X				X						
HVH-04-81-00	219125	X				X				X				X						X
HVH-04-83-34	219133	X				X				X			X	X			X		X	X
HVH-04-21-00	219141	X				X				X				X						X
HVH-04-23-34	219150	X				X				X			X	X			X		X	X
HVH-04-71-00	219168	X				X				X				X						X
HVH-04-43-30	219176	X				X				X			X	X			X		X	X
HVH-05-81-00	219184	X				X				X				X						X
HVH-05-83-34	219192	X				X				X			X	X			X			X
HVH-05-21-00	219205	X				X				X				X						X
HVH-05-23-34	219213	X				X				X			X	X			X			X
HVH-05-71-00	219221	X				X				X				X						
HVH-05-43-30	219230	X				X				X			X	X			X		X	X
HVH-07-81-34	219248		X				X				X		X	X			X			X
HVH-07-83-34	219256		X				X				X		X	X			X			X
HVH-07-21-34	219264		X				X				X		X	X			X			X
HVH-07-23-34	219272		X				X				X		X	X			X			X
HVH-07-71-30	219280		X				X				X		X	X			X			
HVH-07-43-30	219299		X				X				X		X	X			X	X	X	X
HVH-10-81-34	219301		X				X				X		X	X			X			X
HVH-10-83-34	319310		X				X				X		X	X			X			X
HVH-10-21-34	219328		X				X				X		X	X			X			X
HVH-10-23-34	219336		X				X				X		X	X			X			X
HVH-10-43-30	219344		X				X				X		X	X			X	X	X	X
HVH-12-83-34	219352		X				X				X		X	X			X			X
HVH-12-23-34	219360		X				X				X		X	X			X			X
HVH-12-43-30	219379		X				X				X		X	X			X	X	X	X
HVH-15-83-34	219387		X				X				X		X	X			X			X
HVH-15-23-34	219395		X				X				X		X	X			X			X
HVH-15-43-30	219408		X				X				X		X	X			X	X	X	X
HVH-20-23-30	219563			X				X			X		X	X			X			X
HVH-20-43-30	219571			X				X			X		X	X			X			X
HVH-20-63-30	219580			X				X			X		X	X			X			X
HVH-25-23-30	219598				X				X			X	X		X		X		X	X
HVH-25-43-30	219600				X				X			X	X	X			X		X	X
HVH-25-63-30	219619				X				X			X	X	X			X		X	X
HVH-30-23-30	219627				X				X			X	X		X		X		X	X
HVH-30-43-30	219635				X				X			X	X	X			X		X	X
HVH-30-63-30	219643				X				X			X	X	X			X		X	X
HVH-35-23-30 ^C	219651				X				X			X	X				X		X	X
HVH-35-43-30	219660				X				X			X	X	X			X		X	X
HVH-35-63-30	219678				X				X			X	X	X			X		X	X
HVH-40-23-30 ^C	219686				X				X			X	X				X		X	X
HVH-40-43-30	219694				X				X			X	X	X			X		X	X
HVH-40-63-30	219707				X				X			X	X	X			X		X	X
HVH-45-23-30 ^C	219715				X				X			X	X				X		X	X
HVH-45-43-30	219723				X				X			X	X		X		X		X	X
HVH-45-63-30	219731				X				X			X	X		X		X		X	X
HVH-50-23-30 ^C	219740				X				X			X	X				X		X	X
HVH-50-43-30	219758				X				X			X	X		X		X		X	X
HVH-50-63-30	219766				X				X			X	X		X		X		X	X

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Notes:

- A. HFD-1 is a fan delay on / fan delay off. Fan delay is standard on heaters 20 kW and above
 B. PL-1 is a green pilot indicating power to heater
 C. Factory installed disconnect switch not available
 D. Field installed thermostat kits not available on models with control code 00.

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HVH Horizontal or Vertical Discharge Fan Forced Unit Heater *(cont'd.)*

When ordering HVH heaters, specify the model number and corresponding PCN (Product Code Number). If controls (thermostat, fan switch, transformer, disconnect) or other options are required, designate these options in the model number when ordering, as shown below. Always specify voltage, phase and kW by listing them on the purchase order specifications.

HVH Horizontal or Vertical Discharge Blower Heater	
kW	
02 2.6 kW	20 19.8 kW
04 4.0 kW	25 25.0 kW
05 5.0 kW	30 30.0 kW
07 7.5 kW	35 33.3 kW
10 10.0 kW	40 37.5 kW
12 12.5 kW	45 45.0 kW
15 15.0 kW	50 50.0 kW
Volts	
2 240V	
4 480V	
6 600V	
7 277V	
8 208V	
A 220V	
B 380V	
C 400V	
D 415V	
Phase	
1 1	
3 3	
Control	
00	No Contactor
30	Contactor with 24V Transformer
31	Contactor with 24V Externally Supplied
32	Contactor with 120V Transformer
33	Contactor with 120V Externally Supplied
34	Contactor with 208/240V Internally Supplied
35	Contactor with 277V Internally Supplied
Integral Thermostat	
0	None
TL	40-100°F Range (4° to 38°C)
Disconnect Switch	
0	None
D	Yes
Fan Only Switch	
00	None
FI	Internal (In Heater)
FE	External (On Wall)
Time Delay (Standard on 20kW and above)	
0	None
R	Yes
Pilot Light	
0	None
P	Yes
Outlet Screen	
0	None
S	Yes
HVH 05 2 1 34 TL D FI -0 -0 -0 Typical Model Number	

Note: 20-50 kW models available in 208/240, 480, and 600 V only.
Units with thermostats must include built-in contactor.