



# SUBMITTAL SHEET HVH - HORIZONTAL & VERTICAL DISCHARGE UNIT HEATERS

**Capacities**

2.6, to 50 kW

208 to 600 V

1Ø and 3Ø

**See Selection Guide on Last Page**

JOB NAME: \_\_\_\_\_

LOCATION: \_\_\_\_\_

ARCHITECT: \_\_\_\_\_

ENGINEER: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

SUBMITTED BY: \_\_\_\_\_

QUANTITY: \_\_\_\_\_ DATE: \_\_\_\_\_

QTY.	CATALOG NUMBER	TAG	HEATER			AMPS	MOTOR VOLTS	PHASE Ø	MOTOR RPM	AIR FLOW		NO. OF STAGES	BUILT-IN-CONTROLS
			KW	VOLTS	Ø					CFM	°F RISE		

**ACCESSORIES  
AND  
CONTROLS**

QTY.	CAT. NO.	TAG	DESCRIPTION

Electrical (60Hz)					Motor				Air Delivery					Ordering			
kW	Volts	Ckt & Phase	Amps	Control Volts	Volts	Phase	HP	RPM	CFM	FPM	Temp. Rise (°F)	Horiz. Throw (Ft.)	Mtg. Height (Ft.) <sup>5</sup>	Model	Stock	PCN	Wt. (Lbs.)
2.6	208	1-1	13.1	N/A	208	1	1/40	1,650	410	880	12	12	8	HVH-02-81-00	S	219096	32
2/2.6	208/240	1-1	11.42	N/A	240	1	1/40	1,650	410	880	12	12	8	HVH-02-21-00	S	219019	32
2.6	277	1-1	9.6	N/A	277	1	1/30	1,550	360	770	13	12	8	HVH-02-71-00	S	219117	32
4	208	1-1	19.8	N/A	208	1	1/40	1,650	410	880	17	12	8	HVH-04-81-00	S	219125	32
4	208	1-3 <sup>3</sup>	11.7	208/240	208	1	1/40	1,650	410	880	17	12	8	HVH-04-83-34	S	219133	32
3/4	208/240	1-1	17.22	N/A	240	1	1/40	1,650	410	880	17	12	8	HVH-04-21-00	S	219141	32
3/4	208/240	1-3	10.22	208/240	240	1	1/40	1,650	410	880	17	12	8	HVH-04-23-34	S	219150	32
4	277	1-1	14.6	N/A	277	1	1/30	1,550	360	770	19	12	8	HVH-04-71-00	S	219168	32
4	480	1-3	5.1	24	480	1	1/35	1,550	380	815	18	12	8	HVH-04-43-30	S	219176	32
5	208	1-1	24.6	N/A	208	1	1/40	1,650	410	880	22	12	8	HVH-05-81-00	S	219184	32
5	208	1-3 <sup>3</sup>	14.5	208/240	208	1	1/40	1,650	410	880	22	12	8	HVH-05-83-34	S	219192	32
3.75/5	208/240	1-1	21.4	N/A	240	1	1/40	1,650	410	880	22	12	8	HVH-05-21-00	S	219205	32
3.75/5	208/240	1-3 <sup>3</sup>	12.6	208/240	240	1	1/40	1,650	410	880	22	12	8	HVH-05-23-34	S	219213	32
5	277	1-1	18.3	N/A	277	1	1/30	1,550	360	770	24	12	8	HVH-05-71-00	S	219221	32
5	480	1-3	6.3	24	480	1	1/35	1,550	380	815	23	12	8	HVH-05-43-30	S	219230	32
7.5	208	1-1 <sup>3</sup>	36.5	208/240	208	1	1/15	1,725	850	1040	16	27	8	HVH-07-81-34	S	219248	50
7.5	208	1-3	21.3	208/240	208	1	1/15	1,725	850	1040	16	27	8	HVH-07-83-34	S	219256	50
5.6/7.5	208/240	1-1 <sup>3</sup>	31.72	208/240	240	1	1/15	1,725	850	1040	16	27	8	HVH-07-21-34	S	219264	50
5.6/7.5	208/240	1	18.52	208/240	240	1	1/15	1,725	850	1040	16	27	8	HVH-07-23-34	S	219272	50
7.5	277	1-1	27.7	24	277	1	1/15	1,550	750	920	18	27	8	HVH-07-71-30	S	219280	50
7.5	480	1-3	9.9	24	480	3	1/15	1,725	850	1040	16	27	8	HVH-07-43-30	S	219299	50
7.5	600	1-3	7.6	24	575	3	1/3	1,725	850	1040	16	27	8	HVH-07-63-30	NS	—	50
9.7	208	1-1 <sup>3</sup>	47.1	208/240	208	1	1/15	1,725	850	1040	21	27	9	HVH-10-81-34	S	219301	50
9.7	208	1-3	27.4	208/240	208	1	1/15	1,725	850	1040	21	27	9	HVH-10-83-34	S	219310	50
7.5/10	208/240	1-1 <sup>3</sup>	42.12	208/240	240	1	1/15	1,725	850	1040	21	27	9	HVH-10-21-34	S	219328	50
7.5/10	208/240	1-3	24.52	208/240	240	1	1/15	1,725	850	1040	21	27	9	HVH-10-23-34	S	219336	50
10	480	1-3	12.9	24	480	3	1/15	1,725	850	1040	21	27	9	HVH-10-43-30	S	219344	50
10	600	1-3	10.6	24	575	3	1/3	1,725	850	1040	21	27	9	HVH-10-63-30	NS	—	50
12.5	208	1-3	35.2	208/240	208	1	1/15	1,725	850	1040	26	27	9	HVH-12-83-34	S	219352	50
9.3/12.5	208/240	1-3	30.6	208/240	240	1	1/15	1,725	850	1040	26	27	9	HVH-12-23-34	S	219360	50
12.5	480	1-3	15.9	24	480	3	1/15	1,725	850	1040	26	27	9	HVH-12-43-30	S	219379	50
12.5	600	1-3	12.6	24	575	3	1/3	1,725	850	1040	26	27	9	HVH-12-63-30	NS	—	50
15	208	1-3	42.1	208/240	208	1	1/15	1,725	850	1040	31	27	10	HVH-15-83-34	S	219387	50
11.25/15	208/240	1-3	36.62	208/240	240	1	1/15	1,725	850	1040	31	27	10	HVH-15-23-34	S	219395	50
15	480	1-3	19.0	24	480	3	1/15	1,725	850	1040	31	27	10	HVH-15-43-30	S	219408	50
15	600	1-3	15.6	24	575	3	1/3	1,725	850	1040	31	27	10	HVH-15-63-30	NS	—	50
14.7/19.8	208/240	1-3	47.7	24	240	3	1/3	1,725	1500	1750	27	27	13	HVH-20-23-30	NS	219563	65
19.8	480	1-3	23.9	24	480	3	1/3	1,725	1500	1750	27	27	13	HVH-20-43-30	NS	219571	65
19.8	600	1-3	19.4	24	575	3	1/3	1,725	1500	1750	27	27	13	HVH-20-63-30	NS	219580	65
18.7/24.9	208/240	1-3	60.1	24	240	3	1/3	1,725	2500	1650	15	36	13	HVH-25-23-30	NS	219598	90
25.0	480	1-3	30.2	24	480	3	1/3	1,725	2500	1650	15	36	13	HVH-25-43-30	NS	219600	90
25.0	600	1-3	24.3	24	575	3	1/3	1,725	2500	1650	15	36	13	HVH-25-63-30	NS	219619	90
22.4/29.9	208/240	1-3	72	24	240	3	1/3	1,725	2500	1650	19	36	13	HVH-30-23-30	NS	219627	90
30.0	480	1-3	36.2	24	480	3	1/3	1,725	2500	1650	19	36	13	HVH-30-43-30	NS	219635	90
30.0	600	1-3	29	24	575	3	1/3	1,725	2500	1650	19	36	13	HVH-30-63-30	NS	219643	90
25.6/34.0	208/240	1-3	82.1	24	240	3	1/3	1,725	3100	2100	22	36	13	HVH-35-23-30	NS	219651	90
34.0	480	1-3	41.1	24	480	3	1/3	1,725	3100	2100	22	36	13	HVH-35-43-30	NS	219660	90
34.2	600	1-3	33	24	575	3	1/3	1,725	3100	2100	22	36	13	HVH-35-63-30	NS	219678	90
28.1/37.4	208/240	1-3	90.1	24	240	3	1/3	1,725	3100	2100	25	36	16	HVH-40-23-30	NS	219686	100
37.4	480	1-3	45.1	24	480	3	1/3	1,725	3100	2100	25	36	16	HVH-40-43-30	NS	219694	100
37.5	600	1-3	36.2	24	575	3	1/3	1,725	3100	2100	25	36	16	HVH-40-63-30	NS	219707	100
33.7/44.8	208/240	1-3	108	24	240	3	1/3	1,725	3100	2100	28	36	16	HVH-45-23-30	NS	219715	100
44.8	480	1-3	54	24	480	3	1/3	1,725	3100	2100	28	36	16	HVH-45-43-30	NS	219723	100
45.2	600	1-3	43.6	24	575	3	1/3	1,725	3100	2100	28	36	16	HVH-45-63-30	NS	219731	100
38.4/51.1	208/240	1-3	123.1	24	240	3	1/3	1,725	3100	2100	32	36	16	HVH-50-23-30	NS	219740	100
51.1	480	1-3	61.6	24	480	3	1/3	1,725	3100	2100	32	36	16	HVH-50-43-30	NS	219758	100
51.3	600	1-3	49.5	24	575	3	1/3	1,725	3100	2100	32	36	16	HVH-50-63-30	NS	219766	100

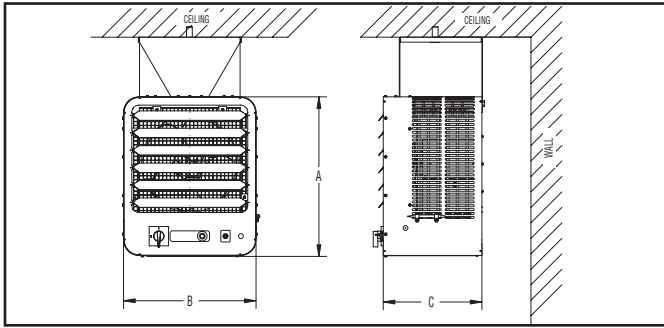
**Stock Status:** S = stock AS = assembly stock NS = non-stock To Order—Specify model, PCN, kW, volts, phase and quantity.

- For motor data, see table.
- 208V amperage is 86% of 240V value.
- Models can be field wired for 1 or 3 phase.
- Includes motor Amps.
- Maximum mounting height for effective heat distribution. Minimum height is 7 feet.

**Other Notes —**

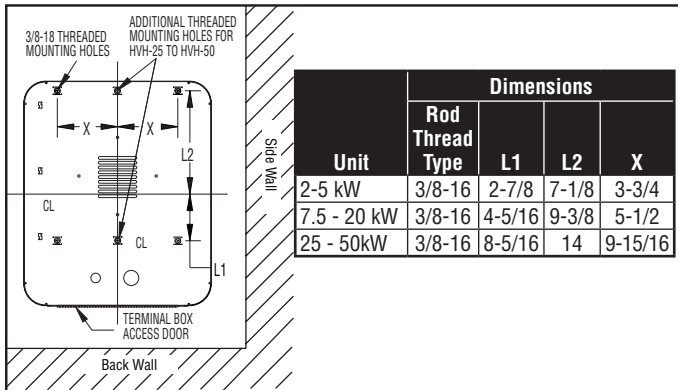
- All heaters have built-in contactors except 2.6kW thru 5 kW single phase models, and stock 480V models have built-in control transformers and contactors with 24V holding coils. Stock 208V and 240V 3 phase models, 4kW through 15kW have 208/240V holding coils while stock 208V and 240V 3 phase models, above 15kW have 24V holding coils. All stock 277V models have 277V holding coils.
- Optional contactors holding coil voltages of 24V or 120V and control voltage transformers, are available as made-to-order models for all heater ratings.

### Ceiling Mounted - Horizontal Discharge



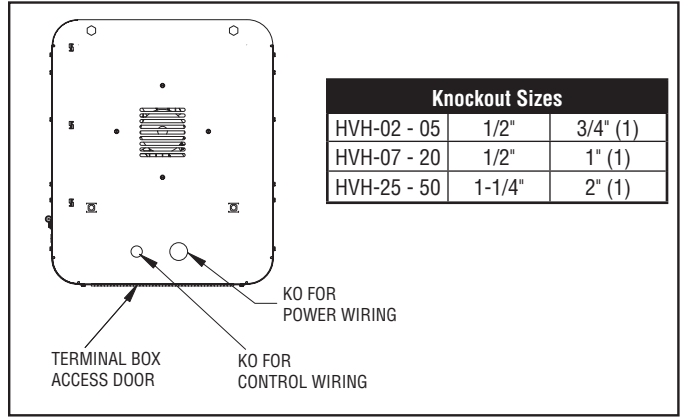
Heater	Dimensions (In.)		
	A	B	C
HVH-02 to 05 (Except 600V)	16-1/8	13	10
HVH-07 to 15 (Except 600V)	20-5/8	17-1/8	12-3/4
HVH-20 (All Voltages)	20-5/8	17-1/8	14-1/16
HVH-25 to HVH-50 (All Voltages)	29-3/16	26-1/16	14-5/8

### Rod Thread Type & Spacing Dimensions for Horizontal Discharge



Unit	Rod Thread Type	Dimensions		
		L1	L2	X
2-5 kW	3/8-16	2-7/8	7-1/8	3-3/4
7.5 - 20 kW	3/8-16	4-5/16	9-3/8	5-1/2
25 - 50kW	3/8-16	8-5/16	14	9-15/16

### Rod Thread Type & Spacing Dimensions for Vertical Discharge



Knockout Sizes		
HVH-02 - 05	1/2"	3/4" (1)
HVH-07 - 20	1/2"	1" (1)
HVH-25 - 50	1-1/4"	2" (1)

### Thermostat Kits

Model	Rating	PCN	Wt. (lbs.)
TK-5	SPST	219475	0.25

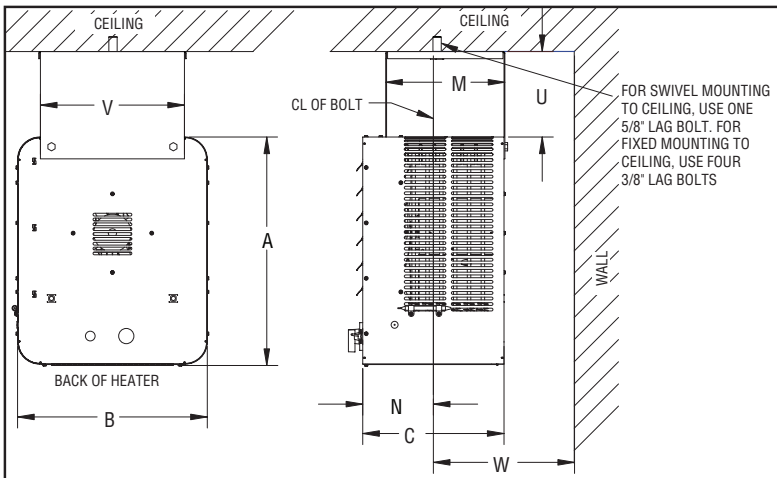
### Power Disconnect Kit (3 Pole 600V)

Model	Rating	PCN	Stock	Wt. (lbs.)
HDS-1	63 Amps	219491	S	0.5
HDS-2	80 Amps	219790	NS	1
HDS-3	100 Amps	219803	NS	2

### Optional Fan Only Kits

Description	Model	PCN	Stock	Wt. (lbs.)
Fan switch (no relay)	HVF-01	219504	S	0.25
Fan switch (24V relay)	HVF-02	219512	NS	0.5
Fan switch (120V relay)	HVF-03	219520	NS	0.5

### Optional Ceiling Swivel Mounting Bracket (Table 5)



FOR SWIVEL MOUNTING TO CEILING, USE ONE 5/8" LAG BOLT. FOR FIXED MOUNTING TO CEILING, USE FOUR 3/8" LAG BOLTS

### Optional Wall Swivel Mounting Bracket (Table 6)

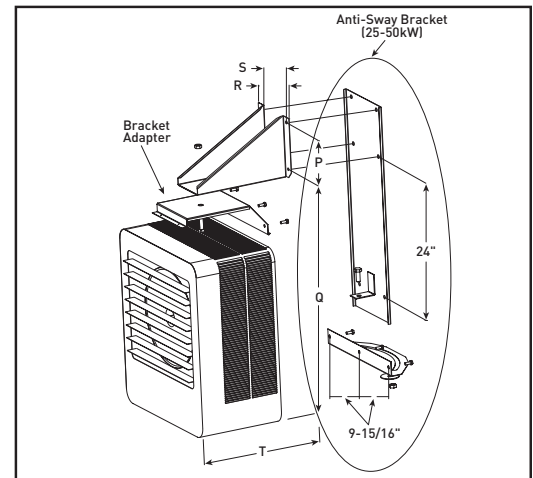


Table 5

Bracket Model No.	Dimensions (In.)									Bracket Wt. (lbs.)	Use With
	A	B	C	M	N	U	V	W			
HVC-1	16-1/8	13	10	8-3/8	5-3/4	7-3/4	9-3/4	12	4	HVH-02, 04, 05	
HVC-2	20-5/8	17-1/8	12-3/4	10-3/4	6-3/4	7-3/4	12	12	8	HVH-07, 10, 12, 15	
HVC-3	20-5/8	17-1/8	14-1/16	12-1/16	8-1/16	7-3/4	13-5/16	8	8.5	HVH-02 to 15 (600V)	
HVC-4	29-13/16	26-1/16	14-5/8	11-3/4	8-3/16	7-3/4	22-5/16	8-7/16	17	HVH-25 to 50	

Table 6

Bracket Model No.	Dimensions (In.)					Bracket Wt. (lbs.)	Use With
	A	B	C	M	N		
HVW-1	6-1/6	18-7/8	7	5	17-5/8	3-3/4	HVH-02 to 05
HVW-2	6-1/6	23-1/4	7	5	18-5/8	6-1/2	HVH-07 to 15
HVW-3	6	23-7/16	7	5	20-1/16	6	HVH-02 to 15 (600V)
HVW-4	8	32-13/16	10-3/8	8-1/2	22-7/16	27	HVH-25 to 50

## ARCHITECT'S & ENGINEER'S SPECIFICATIONS

Furnish and install Chromalox type HVH unit heaters with heating and air delivery capabilities as shown on the heating schedule. Units must be approved for use in the horizontal or vertical air flow position. Mounting brackets designed for either ceiling or wall swivel mounting shall be furnished as shown on the heating schedule. The cabinet shall be 20 gauge die (HVH-02 to HVH-20) or 18 gauge (HVH-25 to HVH-50) formed furniture grade steel with integral adjustable louvers to provide control of discharged air. All metal surfaces of the case shall be phosphate coated to resist corrosion, and finished in attractive two-tone powder coated paint.

The electric heating bank shall be of Chromalox metal sheath Fintube® heating elements with furnace brazed fins for improved heat transfer. Automatic reset thermal overload protection shall be wired for instantaneous de-energizing of built-in control of contactor holding coil in case of thermal overload. All units to include a heater contactor, except 2.6 through 5kW single phase models.

Motors shall be of the totally enclosed continuous fan-duty sleeve bearing type equipped with built-in thermal overload protection. Each unit shall be equipped with a combination motor support resiliently mounted at four points to absorb any motor vibration. Fans shall be aluminum, directly connected to fan motor, dynamically balanced and designed specifically for unit heater application.

Optional control transformers shall be available to internally develop safer low voltage for pilot-duty control circuits. Fan switching devices shall be available to independently operate the fan motor for summer circulation and winter heat recovery.

Individual optional built-in comfort control thermostat is integral or remote fan only switch and disconnect switch shall be available, for all models. All heaters shall be CSA Certified and meet requirements of the National Electrical Code.

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	HVW-1 219416	HVW-2 219424	HVW-3 219782	HVW-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 <sup>a</sup>	PL-1 <sup>b</sup>
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 <sup>c</sup>	219651				X				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 <sup>c</sup>	219686				X				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 <sup>c</sup>	219715				X				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 <sup>c</sup>	219740				X				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

**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. Disconnect Switch not available  
 D. Field installed thermostat kits not available on models with control code 00

## HVH Horizontal or Vertical Discharge Fan Forced Unit Heater Ordering Information

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

Code	kW
2	2.6 kW
4	4.0 kW
5	5.0 kW
7	7.5 kW
10	10.0 kW
12	12.5 kW
15	15.0 kW
20	19.8 kW
25	25.0 kW
30	30.0 kW
35	33.3 kW
40	37.5 kW
45	45.0 kW
50	50.0 kW

Code	Volts
2	240 V
4	480 V
6	600 V
7	277 V
8	208 V
A	220 V
B	380 V
C	400 V
D	415 V

Code	Phase
1	1
3	3

Code	Control
00	No Contactor
30	Contactor with 24 V Transformer
31	Contactor with 24 V Externally Supplied
32	Contactor with 120 V Transformer
33	Contactor with 120 V Externally Supplied
34	Contactor with 208/240 V Internally Supplied
35	Contactor with 277 V Internally Supplied

Code	Integral Thermostat
0	None
TL	40-100°F Range (4° to 38°C)

Code	Disconnect Switch
0	None
D	Yes

Code	Fan Only Switch
0	None
FI	Internal (In Heater)
FE	External (On Wall)

Code	Time Delay (Standard on 20 kW and above)
0	None
R	Yes

Code	Pilot Light
0	None
P	Yes

Code	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.

**Limited Warranty:**

Please refer to the Chromalox limited warranty applicable to this product at <http://www.chromalox.com/customer-service/policies/termsofsale.aspx>.

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