

# UH Series Horizontal Fan Forced Unit Heater

3.3 KW THROUGH 48 KW HORIZONTAL DISCHARGE SUSPENDED FAN FORCED UNIT HEATERS  
AVAILABLE IN 1 OR 3 PHASE FOR ALL STANDARD VOLTAGES FROM 208V TO 480V.



Manufactured in U.S.A.



**NOTE:** Louver assembly is square and mounted with screws. Louver can be removed and repositioned for four (4) directional air flow - left - right - up - down with the heater in the horizontal position.

#### FACTORY INSTALLED OPTIONS:

- 24 Volt transformer on 3 KW to 15KW units to convert from line voltage to low voltage remote thermostat operation.
- Summer fan switch to operate the fan only.
- Fan Delay Switch to purge all residual heat from the unit after the heating element has cycled off.
- Powder coated Epoxy finish for corrosive atmospheres.
- Disconnect switch.

MAXIMUM RECOMMENDED MOUNTING HEIGHT	
3 - 10 KW	9 FT.
12 - 15 KW	10 FT.
20 - 30 KW	13 FT.
40 - 48 KW	16 FT.

#### CONSTRUCTION:

Heavy Gauge welded steel cabinet with powder coated finish and control compartment with a hinged and latched access door, simplifying wiring installation & maintenance.

#### HEATING ELEMENT:

Circular copper clad steel sheath element with continuously brazed steel fins formed to match the air delivery pattern of the fan blade.

#### OVERHEAT PROTECTION:

All units come equipped with automatic resetting type limit controls to de-energize the heater should an over-temperature situation occur.

#### FAN and MOTOR:

Totally enclosed, single phase, permanently lubricated, thermally protected motors with unit bearings on 3 KW - 10 KW models and sleeve bearings on 12.5 KW - 48 KW models - mounted with rubber insulators to minimize vibration and noise. Fan assembly enclosed by a heavy gauge, close spaced, chrome plated wire guard.

#### LOUVER ASSEMBLY:

Louvers are individually adjustable for directional control of air flow and the entire assembly can be repositioned in the field from down flow to up flow or left / right directional air flow.

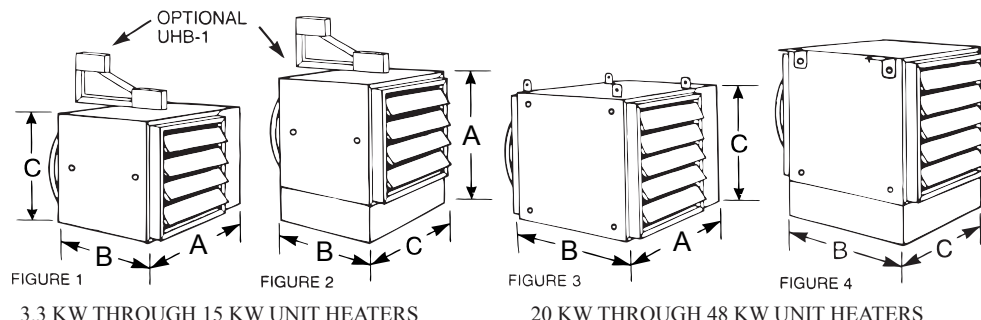
#### TEMPERATURE CONTROLS:

20 KW through 48 KW units and all 480V have built in 24 Volt transformer for low voltage remote thermostat application. 25 KW through 48 KW models available in 2-stage on special order (consult factory).

#### INSTALLATION:

Unit Heaters can be mounted with the motor shaft from horizontal to downward at 45° off horizontal. Pre-drilled holes and installed threaded nuts provided to allow hanging by threaded rods - 1/4" for units up to 15 KW and 5/16" for 20 KW units and larger. Optional wall / ceiling mounting brackets are available for all units.

### Product Dimensions & Model Number Designation



Dimensions	A	B	C
<b>Figure 1:</b> 3.3, 5, 7.5, 10 KW	20"	11"	13"
<b>Figure 2:</b> 12.5, 15 KW	22"	11"	15"
<b>Figure 3:</b> 20, 25, 30 KW	24"	17"	17"
<b>Figure 4:</b> 40, 48 KW	26"	23"	19"

3.3 KW THROUGH 15 KW UNIT HEATERS

20 KW THROUGH 48 KW UNIT HEATERS

Figures 3 & 4 shown with standard mounting tabs for units over 20 KW. Optional UHB-3 and UHB-4 wall brackets are available. 3.3 KW thru 15 KW units can be mounted using 1/4" threaded rod. 20 KW thru 48 KW units can be mounted using 5/16" threaded rod.

#### HOW TO DESIGNATE A MODEL:

H 2 H UH 10 C A 1							
<b>Element Volts</b> F = 208 H = 240 HF = 240/208 G = 277 P = 480	<b>Phase</b> 1 = 1-Phase 2 = 1 or 3-Ph. 3 = 3-Phase	<b>Motor Voltage</b> F = 208 H = 240 B = 240 / 208 G = 277 P = 480	<b>Model Series</b> UH	<b>Element KW</b> 10	<b>Control System</b> O = None C = Contactor R = Relay	<b>Transformer</b> O = None A = Included	<b>Control Volts</b> 1 = 24 2 = 120 3 = Element Voltage 4 = 240

#### Factory Installed Options (use as a suffix on model designation):

S = Summer Fan Switch, F = Fan Delay, D = Disconnect, T = Built-in Thermostat, E = Epoxy Coated

#### Field Installed Options:

Disconnect Switch, Built-in Thermostat, & Wall / Ceiling Bracket

Markel Products Company

# UH Series Horizontal Fan Forced Unit Heater

## Standard Product Models

UPC# 686334	MODEL	KW	BTU'S	VOLTS	PH	AMPS	CONTROL VOLTS	TEMP RISE °F	AIR THROW	CFM	RECOM'D MOUNTING HT.	WT. (LBS.)			
644600	F1FUH03003	3.3	11,200	208	1	16	208	26	26'	400	9'	36			
644662	H1HUH03003			240	1	14	240								
644723	G1GUH03003			277	1	12	277								
711487	H3HUH03C03			240	3	8	240								
711494	F3FUH03C03			208	3	9	208								
711401	P3PUH03CA1			480	3	4	24								
644617	F1FUH05003	5	17,100	208	1	24	208	40	26'	400		9'	36		
644679	H1HUH05003			240	1	21	240								
644730	G1GUH05003			277	1	18	277								
644938	F2FUH05C03			208	1 or 3	24.1/14.0	208						44		
644945	H2HUH05C03			240	1 or 3	20.8/12.1	240								
644884	P3PUH05CA1			480	3	6	24								
644624	F1FUH07CA1	7.5	25,600	208	1	36	24	42	36'	575			9'	40	
688550	H1HUH07CA1			240	1	31	24							41	
644747	G1GUH07CA1			277	1	27	24							41	
644792	F3FUH07C03			208	3	21	208							44	
644952	H2HUH07C03			240	1 or 3	31.3/18.1	240								
644891	P3PUH07CA1			480	3	9	24								
644631	F1FUH10CA1	10	34,100	208	1	48	24	55	36'	575				9'	42
644693	HIHUH10CA1			240	1	42	24								
644754	G1GUH10CA1			277	1	36	24								
644969	F2FUH10C03			208	1 or 3	48.1/27.8	208								45
644976	HF2HUH10C03			10/7.5	34,100	240	1 or 3								
			25,600	208	1 or 3	36.1/20.8	208	42							51
711425	P3PUH10CA1	10	34,100	480	3	12	24	55	49	45'	800				45
644648	F1FUH12C03	12.5	42,600	208	1	60	208								
644709	H1HUH12C03			240	1	52	240								
644815	F3FUH12C03			208	3	35	208								
644860	H3HUH12C03			240	3	30	240								
711432	P3PUH12CA1			480	3	15	24								
644655	F1FUH15C03	15	51,200	208	1	72	208	59	45'	800	10'	54			
644716	H1HUH15C03			240	1	63	240								
644822	F3FUH15C03			208	3	42	208								
644877	H3HUH15C03			240	3	36	240								
711449	P3PUH15CA1			480	3	18	24								
688307	F1FUH20CA1	20	68,300	208	1	96	24	47	56'	1350		13'			55
688420	H1HUH20CA1			240	1	83	24								
688314	F3FUH20CA1			208	3	56	24								
688437	H3HUH20CA1			240	3	48	24								
688321	P3PUH20CA1			480	3	24	24								
688444	F1FUH25CA1	25	85,300	208	1	120	24	58	56'	1350	13'		55		
688338	H1HUH25CA1			240	1	104	24								
688451	F3FUH25CA1			208	3	70	24								
688345	H3HUH25CA1			240	3	60	24								
688468	P3PUH25CA1			480	3	30	24								
688475	H1HUH30CA1	30	102,390	240	1	125	24	70	56'	1350		13'	60		
688369	F3FUH30CA1			208	3	83	24								
688482	H3HUH30CA1			240	3	72	24								
688376	P3PUH30CA1			480	3	36	24								
688406	P3PUH40CA1	40	136,500	480	3	48	24	55	56'	2275	16'		75		
688789	P3PUH48CA1	48	163,800	480	3	58	24	67	56'	2275			78		

## Factory & Field Installed Accessories

FACTORY INSTALLED OPTIONS	
SUFFIX	DESCRIPTION
F	Heat purge fan delay switch for 208 / 240 / 277V units (includes contactor & transformer)
	Heat purge fan delay switch for 480V units (contactor & transformer standard in unit)
S	Summer fan switch
CA1	24V Transformer (3.3 KW - 15 KW units) & Contactor
CA2	120V Transformer (3.3 KW - 15 KW units) & Contactor
E	Epoxy Coating
T	SPST Thermostat
D	Disconnect Switch - 30 Amps
	Disconnect Switch - 40 Amps
	Disconnect Switch - 80 Amps
	Disconnect Switch - 100 Amps

FIELD INSTALLED ACCESSORIES		
UPC# 686334	MODEL	DESCRIPTION
646239	DCS303	30 Amp Disconnect Kit
646246	DCS403	40 Amp Disconnect Kit
646253	DCS803	80 Amp Disconnect Kit
646260	DCS1003	100 Amp Disconnect Kit
687997	TUH1	25 Amp SPST Thermostat Kit
699105	UHB-1	wall / ceiling bracket - 3.3 KW - 15 KW units
699112	UHB-3	wall / ceiling bracket - 20 KW - 30 KW units
699129	UHB-4	wall / ceiling bracket - 35 KW - 48 KW units

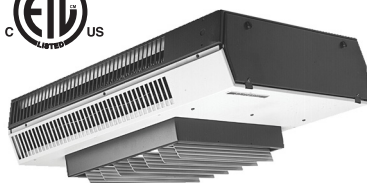
**NOTE:** Factory installed heat purge fan delay option (F) requires unit to have CA1 or CA2 factory installed

# 5100 Series Horizontal or Vertical Mounted Fan Forced Unit Heater

3.3 KW THROUGH 50 KW SUSPENDED FAN FORCED UNIT HEATERS AVAILABLE IN 1 OR 3 PHASE FOR ALL STANDARD VOLTAGES FROM 208V TO 480V THAT CAN BE MOUNTED TO PROVIDE HORIZONTAL OR VERTICAL DISCHARGE.



Horizontal Discharge



Vertical Discharge

Manufactured in U.S.A.

## FIELD INSTALLED OPTIONS:

- In-unit or wall mounted temperature control thermostats low or line voltage.
- Summer fan switch to operate the fan only.
- Power disconnect switch.
- Heat stratification thermostat.

## CONSTRUCTION:

Heavy 18 Gauge welded steel cabinet with powder coated finish and control compartment housing a master terminal board with a hinged and latched access door, simplifying wiring, installation & maintenance.

## HEATING ELEMENT:

Copper clad steel sheath element with continuously brazed steel fins formed to allow side draw through air flow.

## OVERHEAT PROTECTION:

All units come equipped with automatic reset type limit controls to de-energize the heater should an over-temperature situation occur.

## FAN and MOTOR:

Totally enclosed, 1-speed, 1-phase, protected motors with unit bearings on 3 KW - 20 KW models. Totally enclosed, 2-speed, 1-phase, permanently lubricated, thermally protected motors with sleeve bearings on 25 KW - 50 KW models. All motors mounted with rubber insulators to minimize vibration & noise. Fan over-ride purges unit of residual heat at shutdown.

## LOUVER ASSEMBLY:

Louvers are individually adjustable for directional control of air flow up to 15° from straight horizontal. Optional diffusers available for down flow (vertical discharge) applications.

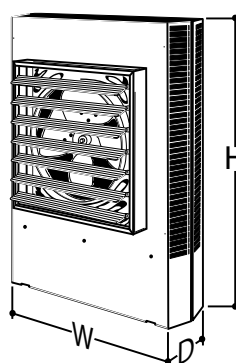
## TEMPERATURE CONTROLS:

Optional low voltage and line voltage thermostats available with an adjustable temperature range of 40°F to 90°F. Units with model numbers ending in CA1 are factory wired for low voltage controls. 25 KW through 50 KW units are designed for two stage heating operation.

## INSTALLATION:

Unit Heaters can be mounted for horizontal or vertical discharge. Applications up to 6000 Ft. See UH Series above 6000 Ft. ABS (American Bureau of Shipping) type approved.

## Taskmaster Dimensions



KW RATING	DIMENSIONS (inches)		
	H	W	D
3.3 - 5.0	17 3/4	14 15/32	6 1/2
7.5 - 10.0	24 5/16	21 1/2	6 1/2
15.0 - 20.0	28 11/16	21 1/2	6 1/2
25.0 - 50.0	34	29 1/4	10 1/16

## Installing the Taskmaster Series

### DETERMINING HEATER REQUIREMENTS

Calculate the heating loads using the NEMA handbook or ASHRAE guide. Then determine the quantity and size of unit heaters to be used. To maintain uniform heat and reduce stratified air, it is recommended that the total CFM of the units turn the air over approximately 3 times per hour. In instances where a large group of people are located and normally in the same area, use a large number of lower KW unit heaters. In warehouse areas or storage rooms where heat distribution and constant temperatures are less important, use fewer heaters of higher capacity.

### HORIZONTAL MOUNT

Small rooms can be heated by one unit heater. Where two walls are exposed, heaters should be mounted as shown in Figure A. In larger rooms, units should be located so their air streams wipe exposed walls without blowing at them. Units should be located so that the air stream of one supports that of another thus setting up a circulatory air movement shown in Figure B. (Distance between units to be approximately 1-1/2 times published air throw.) Units should not be mounted horizontally in areas having ceiling heights in excess of 15-18 ft.

### VERTICAL MOUNT

Units should be mounted vertically in high bay areas, or where heater location would not interfere with plant operation or traffic. Heaters should be situated to provide free air circulation. Size and selection of units should be based on recommended mounting height. Optional diffusers may best be employed to reduce high air velocity and at the same time disperse heated air in a uniform pattern. When unit heaters are used to combat cold air inrush from opened loading dock doors, one or more units should be arranged to blow warm air across opening (Figure C).

### DUAL MOUNTING

Where square footage is large and comfort essential, both horizontal and vertical installations may best serve your requirements as Figure D demonstrates.

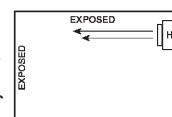


Figure A

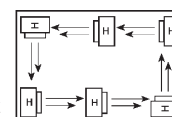


Figure B

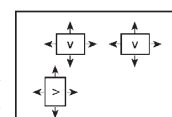


Figure C

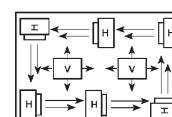
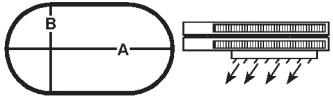


Figure D

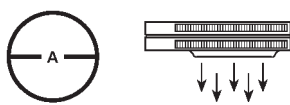
# 5100 Series Horizontal or Vertical Mounted Fan Forced Unit Heater

## Diffuser Options

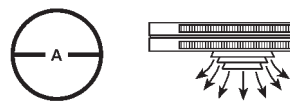
DESCRIPTION		UPC# 686334	MODEL NUMBER	KW USED	MAX MOUNTING HEIGHT (ft.)		DIMENSION A (feet)		DIMENSION B (feet)		WT. (lbs.)
1	Louver Diffuser (Standard). Louvers can be individually adjusted for rectangular coverage over doorways as an air curtain, or to meet rectangular floor pattern heating requirements.	NA	Standard	3.3-5 7.5-10 25-30 40-50	9 12 18 22 24		20 40 52 75 84		10 22 30 42 47	NA	
2	General Distribution (No Diffuser). The 5100 air chute ventura permits general down flow air pattern distribution as required at a higher mounting height.	NA	Not Required	3.3-5 7.5-10 25-30 40-50	9 12 18 22 24		15 30 40 55 64		NA	NA	
3	Anemostat Diffuser (Optional). For applications where draft restriction is required at lower unit mounting heights.	692687	AD5120	3.3-5	10		30		NA	10	
		692687	AD5120	7.5-10	15		38				
		681186	AD5150	25-30	17		50			12	
		681186	AD5150	40-50	20		60				
		722070	AD5175	60-70	31		-			37	
4	Radial Diffuser (Optional). Individually adjustable fins permit increased floor coverage at 45° open. Additional throw is accomplished when fins are 90° vertical. (Please allow for higher mounting heights.)	692663	RD5120	7.5-20	45°	90°	45°	90°	NA	12	
		692663	RD5120	25-50	10	14	36	30			
		692670	RD5150		14	21	42	35			
		692670	RD5150		20	30	62	44			14
		692670	RD5150	60-70	18	28	68	54			
		722087	RD5175		26	36	72	60			39



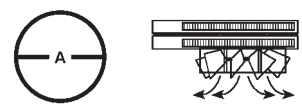
Description 1  
Louver Diffuser



Description 2  
No Diffuser

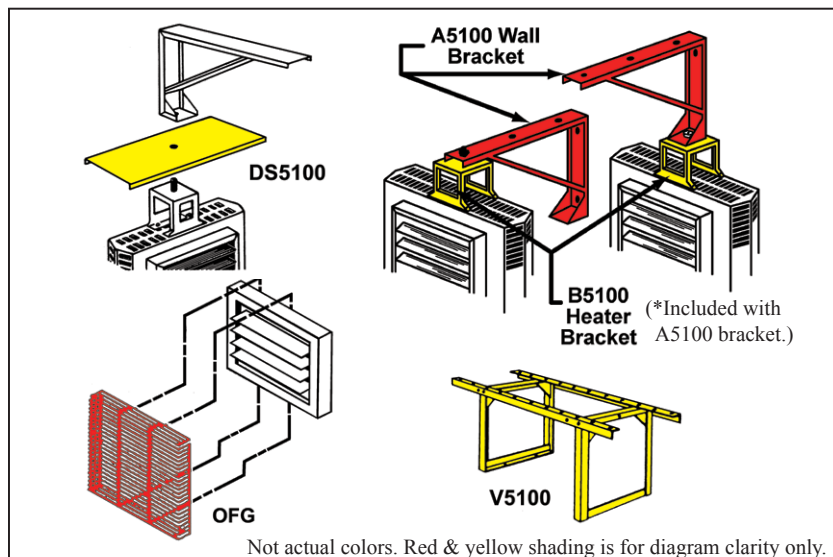


Description 3  
Anemostat Diffuser



Description 4  
Radial Diffuser

## Mounting Brackets & Model Designator



MOUNTING BRACKETS			
UPC# 686334	MODEL	MODEL SIZE	WT.
692694	A5105	3.3 KW TO 5.0 KW	9 lbs.
692700	A5120	7.5 KW TO 20.0 KW	13 lbs.
692717	A5150	25.0 KW TO 50.0 KW	16 lbs.
688628	B5105*	3.3 KW TO 20.0 KW	3 lbs.
688635	B5150*	25.0 KW TO 50.0 KW	8 lbs.
692847	V5105	3.3 KW TO 5.0 KW	9 lbs.
692854	V5120	7.5 KW TO 20.0 KW	13 lbs.
692861	V5150	25.0 KW TO 50.0 KW	16 lbs.
DUST SHIELD			
692878	DS5105	3.3 KW TO 5.0 KW	3 lbs.
692885	DS5120	7.5 KW TO 20.0 KW	4 lbs.
681223	DS5150	25.0 KW TO 50.0 KW	5 lbs.
FAN GUARD			
706544	OFG5101	3.3 KW TO 5.0 KW	3 lbs.
706551	OFG5102	7.5 KW TO 20.0 KW	4 lbs.
706568	OFG5103	25.0 KW TO 50.0 KW	5 lbs.

## HOW TO DESIGNATE A MODEL:

HF 2 B 51 10 C A 1							
<b>Element Volts</b> F = 208 H = 240 HF = 240/208 G = 277 P = 480	<b>Phase</b> 1 = 1-Phase 2 = 1 or 3-Ph. 3 = 3-Phase	<b>Motor Voltage</b> F = 208 H = 240 B = 240 / 208 G = 277 P = 480	<b>Model Series</b> 51	<b>Element KW</b>	<b>Control System</b> Blank = None C = Contactor	<b>Transformer</b> Blank = None A = Included	<b>Control Volts</b> 1 = 24 2 = 120 (with CA option)

\* 600 Volt units 5KW - 50KW available on special order, consult factory for pricing & availability



# 5100 Series Horizontal or Vertical Mounted Fan Forced Unit Heater

## Standard Taskmaster Models & Series Notes

UPC# 686334	MODEL	KW	BTU/H	VOLTS	PH	AMPS	CONTROL VOLTAGE	TEMP RISE	AIR THROW	CFM	RECOMMENDED MOUNTING HT.		WT. (LBS.)						
											Horizontal	Vertical							
645089	F1F5103N	3.3	11.2	208	1	15.9	208	26°F	12'	400	9'	9'	25						
645102	HF1B5103N	3.3/2.5	11.2 / 8.5	240/208	1	13.7 / 11.9	240 / 208												
645683	F2F5103N	3.3	11.2	208	1 / 3	11.9 / 6.9	208												
645706	HF2B5103N	3.3/2.5	11.2 / 8.5	240/208	1 / 3 3	13.7 / 11.9 7.9 / 6.9	240 / 208												
645720	G1G5103N	3.3	11.2	277	1	11.9	277												
645126	P3P5103CA1N			480	3	4.0	24												
645546	F1F5105N	5.0	17.1	208	1	24.1	208	40°F	12'	400	9'	9'	25						
645560	HF1B5105N	5.0/3.7	17.1 / 12.8	240/208	1	20.9 / 18.1	240 / 208												
645140	F2F5105N	5.0	17.1	208	1 / 3 3	24.1 13.9	208												
645164	HF2B5105N	5.0 3.7	17.1 12.8	240 208	1 3	20.8 / 18.1 12.1 / 10.4	240 208												
645843	G1G5105N	5.0	17.1	277	1	18.1	277						27						
645188	P3P5105CA1N	5.0	17.1	480	3	6.1	24												
645201	F2F5107CA1L	7.5	25.6	208	1 / 3	36.1 / 20.8	24							34°F	22'	700	10'	12'	54
645225	HF2B5107CA1L	7.5 5.6	25.6 19.2	240 208	1 / 3 1 / 3	27.1 / 31.3 31.3 / 27.1													
645928	G1G5107CA1L	7.5	25.6	277	1	27.1													
645249	P3P5107CA1N	7.5	25.6	480	3	9.1													
645263	F2F5110CA1L	9.9	33.8	208	1 / 3	47.8 / 27.4		45°F	22'	700	10'	14'	55						
645287	HF2B5110CA1L	10.0 7.5	34.1 25.6	240 208	1 / 3 1 / 3	41.2 / 24.0 36.1 / 20.8													
645645	G1G5110CA1N	10.0	34.1	277	1	36.1													
645300	P3P5110CA1N	10.0	34.1	480	3	12.1													
645324	F3F5115CA1L	15.0	51.2	208	3	41.7		43°F	32'	1100	11'	20'	64						
645348	HF3B5115CA1L	15.0/11.2	51.2 / 38.4	240/208	3	36.1 / 31.3													
645362	P3P5115CA1N	15.0	51.2	480	3	18.1													
645386	HF3B5120CA1L	19.7/14.8	67.2 / 50.5	240/208	3	47.8 / 41.1													
645409	P3P5120CA1N	20.0	68.3	480	3	24.1		57°F	32'	1100	12'	18'	65						
645881	F3F5125CA1L	25.0	85.3	208	3	69.5													
645942	HF3B5125CA1L	25.0/18.7	85.3 / 64.0	240/208	3	60.2 / 52.1													
645980	P3P5125CA1N	25.0	85.3	480	3	30.1													
645423	F3F5130CA1L	30.0	102.4	208	3	83.4	47/53°F	40'	2000/1800	12'	20'	120							
645447	HF3B5130CA1L	30.0/22.5	102.4 / 76.8	240/208	3	72.3 / 62.5													
645461	P3P5130CA1N	30.0	102.4	480	3	36.2													
644044	F3F5140CA1L	40.0	136.5	208	3	111.2													
644068	HF3B5140CA1L	40.0/30.0	136.5/102.4	240/208	3	96.4 / 83.4	40/45°F	55'	3100/2800	15'	24'	120							
644082	P3P5140CA1N	39.0	133.1	480	3	47.0													
645485	F3F5150CA1L	49.6	169.3	208	3	139.0													
645508	HF3B5150CA1L	50.0/37.5	170.6/128.0	240/208	3	120.5/104.3													
645522	P3P5150CA1N	50.0	170.6	480	3	60.3	51/56°F	50'	3100/2800	15'	22'	120							

• For 24V control add "CA1" suffix. • For 120V control add "CA2" suffix. • For other voltages consult factory.

### NOTES:

- 25-50KW models are wired for single or two stage heating and have two speed motors.
- Air delivery and motor data on dual voltage units reflect higher voltage.
- 600 Volt models available in 5 KW through 30 KW. Contact factory for delivery.
- Supply wire on 40 and 50 KW models should have rated insulation of 75°C minimum.
- Use T5122 for two stage control.
- Use TW123 for two stage control.
- Use TFS5102 for two stage control.
- Wall thermostat must be used when built-in stratification thermostat is required.



# 5100 Series Horizontal or Vertical Mounted Fan Forced Unit Heater

## Recommended Control Options, Control Accessory Options, & Control Accessories

MODEL NUMBER	DISCONNECT SWITCH		THERMOSTAT		SUMMER FAN SWITCH		THERMOSTAT & SUMMER FAN SWITCH WALL MOUNTED	STRATIFICATION THERMOSTAT			
	1 Ø	3 Ø	IN-BUILT	WALL MOUNTED	IN-BUILT	WALL MOUNTED		IN-BUILT	WALL MOUNTED		
F1F5103N	DCS 202	NA	T5100	ET5SS	FS5101	FSW5111	NA	TC5103	TC1602		
HF1B5103N											
F2F5103N											
	NA	DCS 403	T5102	TW 1512				TFS5101		TC5102	NA
HF2B5103N	DCS 202	NA	T5100	ET 5SS							
	NA	DCS 403	T5102	TW 1512							
G1G5103N	DCS 202	NA	T5100	ET5SS							
P3P5103CA1N	NA	DCS 403		A6176	FS5102	FSW5112					
F1F5105N	DCS 403	NA		S2025	FS5101	FSW5111	NA	TC5103	TC1602		
HF1B5105N				ET5SS							
				S2025							
F2F5105N			NA	DCS 403						T5102	TW 1512
			DCS 403	NA						T5100	ET5SS
	NA	DCS 403	T5102	TW 1512	TFS5101	TC5102	NA				
G1G5105N	DCS 202	NA	T5100	S2025							
P3P5105CA1N	NA	DCS 403		FS5102				FSW5112			
F2F5107CA1L	DCS 403	NA		FS5101				FSW5111	TC5103	TC1602	
	NA	DCS 403									
HF2B5107CA1L	DCS 403	NA									
	NA	DCS 403									
G1G5107CA1L	DCS 403	NA									
P3P5107CA1L	NA	DCS 403		FS5102	FSW5112						
F2F5110CA1L	DCS 603	NA		FS5101	FSW5111	TFS5101	TC5103	TC1602			
	NA	DCS 403									
HF2B5110CA1L	DCS 603	NA									
	NA	DCS 403									
G1G5110CA1N	DCS 403	NA									
P3P5110CA1N	NA	DCS 403		T5100	A6176 OR TW123	FS5102	FSW5112	TC5103	NA		
F3F5115CA1L		DCS 603				FS5101	FSW5111		TC1602		
HF3B5115CA1L		DCS 403	FS5102			FSW5112	NA				
P3P5115CA1L		DCS 403	FS5101			FSW5111	TC1602				
HF3B5120CA1L		DCS 603	FS5102			FSW5112	NA				
P3P5120CA1N		DCS 403	FS5101			FSW5111	TC1602				
F3F5125CA1L		DCS 1003	FS5102			FSW5112	NA				
HF3B5125CA1L		DCS 403	FS5101			FSW5111	TC1602				
P3P5125CA1N		DCS 1003	FS5102			FSW5112	NA				
F3F5130CA1L		DCS 1003	FS5101			FSW5111	TC1602				
HF3B5130CA1L		DCS 1003	FS5102			FSW5112	NA				
P3P5130CA1N		DCS 403	FS5101			FSW5111	TC1602				
F3F5140CA1L		NA	FS5102			FSW5112	NA				
HF3B5140CA1L		DCS 403	FS5101			FSW5111	TC1602				
P3P5140CA1N		DCS 603	FS5102			FSW5112	NA				
F3F5150CA1L	NA	DCS 1003	T5100	A6176 OR TW123	FS5101	FSW5111	TC5103	TC1602			
HF3B5150CA1L					FS5102	FSW5112		NA			
P3P5150CA1N					FS5101	FSW5111		NA			

CONTROL ACCESSORY OPTIONS - FIELD INSTALLED IN HEATER			CONTROL ACCESSORIES - REMOTE WALL MOUNTED		
UPC#	MODEL	DESCRIPTION	UPC#	MODEL	DESCRIPTION
686334			686334		
<b>POWER DISCONNECT SWITCH</b>			<b>LINE VOLTAGE THERMOSTAT</b>		
717151	DCS202/5100	2 POLE; 20 AMP; 120-277 V.A.C.	691086	**TW1510	SPST; 25 AMP 120-277V 50-90°
717168	DCS403/5100	3 POLE; 40 AMP; 120-600 V.A.C.	691093	*TW1512	DPST; 25 AMP 120-277V 50-90°
717175	DCS603/5100	3 POLE; 60 AMP; 120-600 V.A.C.	<b>LOW VOLTAGE THERMOSTAT (ALL CA1 MODELS)</b>		
717182	DCS1003/5100	3 POLE; 100 AMP; 120-600 V.A.C.	260008	A6176	SPST; (3.3 - 20 KW UNITS) 50-90°
<b>LINE VOLTAGE THERMOSTAT (45 - 90 °F)</b>			691116	TW123	2STAGE; (25 - 50 KW UNITS) 40-90°
692779	T5100	SPST; LINE DUTY 25 AMP 120-277V	<b>STRATIFICATION THERMOSTAT</b>		
692786	T5102	DPST; LINE DUTY 25 AMP 120-277V	691109	TC1602	LINE VOLT 120-277V 70-140°
<b>LOW VOLTAGE THERMOSTAT (ALL CA1 MODELS) (45 - 90 °F)</b>			<b>SUMMER FAN SWITCH</b>		
692779	T5100	SPST; LOW VOLT/PILOT DUTY; 125VA; (3.3-20 KW UNITS)	692625	FSW5111	SPST; LINE VOLT 120-277V
692793	T5122	2-STAGE; LOW VOLT; 125VA; (25-50 KW UNITS)	692632	FSW5112	SPST; LOW VOLT (W/RELAY)
<b>STRATIFICATION THERMOSTAT</b>			<b>LOW VOLTAGE T'STAT &amp; SUMMER FAN SWITCH(W/RELAY) (CA1 MODELS)</b>		
692809	TC5102	SPST; LOW VOLT/PILOT DUTY (W/RELAY) ; 70-130°	692649	TFS5101	SPST; LOW VOLT 50-90°
692816	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°	692502	TFS5102	2 STAGE; LOW VOLT 50-90°
<b>SUMMER FAN SWITCH</b>			** Any SPST thermostat of sufficient amperage may be substituted.		
692823	FS5101	SPST; LINE VOLT ;120-277V	*Use DPST thermostat for 3-phase line voltage control in non "C" models.		
692830	FS5102	SPST; LINE VOLT ; 480-600V			

# 5100 Series 60 KW - 100 KW Suspended Fan Forced Unit Heater



Manufactured in U.S.A.

## Features & Specifications

### CONSTRUCTION:

Heavy Gauge steel cabinet with powder coated finish and control compartment housing a master terminal board. The control compartment allows for access through a hinged and latched door, simplifying wiring, installation, and maintenance.

### HEATING ELEMENT:

The heating element is a copper clad steel sheath element with continuously brazed steel fins formed to allow side draw through air flow.

### OVERHEAT PROTECTION:

All units come equipped with manual reset type limit controls to de-energize the heater should an over-temperature situation occur.

### FAN & MOTOR:

Single speed, single phase permanently lubricated, thermally protected motors with ball bearings. The fan override purges the unit of residual heat at shutdown.

### FIELD INSTALLED OPTIONS:

Summer fan switch to operate the fan only, and a heat stratification thermostat for high bay areas.

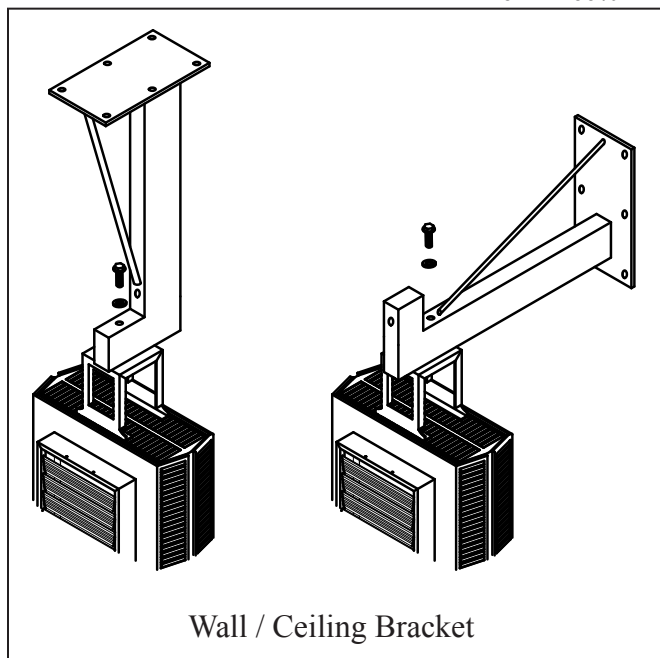
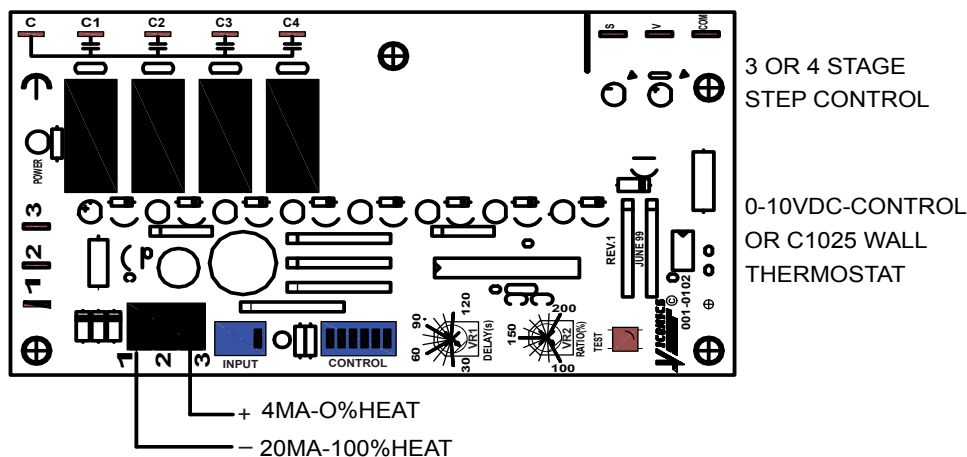
### HEATER STAGING:

60 KW and 70 KW are three stage; 80 KW, 90 KW, & 100 KW are four stage.

### SC5100 FACTORY INSTALLED ELECTRONIC STEP CONTROLLER:

The optional factory installed step controller is a first on last off sequencer that will cycle the unit heater stages through an optional wall thermostat. Additionally, the step controller can be controlled by any building management system with 4 to 20 MA or 0 - 10 VDC field supplied control signal.

## Optional Factory Installed Electronic Step Controller



Wall / Ceiling Bracket

## Dimensions

Dimensions (Inches)				Weight (lbs.)
KW	H	W	D	
60-70	35 1/2	30 1/2	14 1/2	141
80-100	39 1/2	37 5/8	18 1/2	202

## Mounting Brackets and Accessories

Mounting Brackets			
UPC	Model	Heater KW	Description
7220002	A5175	60 To 70	Wall/Ceiling Bracket
7220102	A51100	80 to 100	
7220302	B5175	60 to 70	Heater Bracket
7220402	B51100	80 to 100	
7220202	V51100	60 to 100	Vertical Bracket
7220502	DS5175	60 to 70	Dust Shield
7220602	DS51100	80 to 100	
7220902	OFG 5175	60 to 70	Fan Guard
7221002	OFG 51100	80 to 100	

# 5100 Series 60 KW - 100 KW Suspended Fan Forced Unit Heater

## Electrical Data

UPC# 686334	Catalog Number	KW	BTU/HR (x 1000)	Voltage	Phase	Control Voltage	Amps / Phase	Branch Circuit Protection Size
721349	F3F5160CA1	60	204.7	208	3	24	166.7	225
721356	HF3B5160CA1	60/45	204.7/153.6	240/208			144.6/125	200/175
721363	P3P5160CA1	60	204.7	480			72.3	100
721424	F3F5170CA1	70	238.9	208	3	24	194.4	250
721431	HF3B5170CA1	70/52.5	238.9/179.2	240/208			168.7/145.8	225/200
721448	P3P5170CA1	70	238.9	480			84.3	110
721707	HF3B5180CA1	80/60	273/204.7	240/208	3	24	192.8/166.7	250/225
721714	P3P5180CA1	80	273	480			96.3	125
721769	HF3B5190CA1	90/67.5	307.1/230.4	240/208	3	24	216.9/187.5	300/250
721776	P3P5190CA1	90	307.1	480			108.4	150
721820	HF3B51100CA1	100/75	341.3/256	240/208	3	24	241/208.3	350/300
721837	P3P51100CA1	100	341.3	480			120.4	175

## Air Delivery Data

UPC# 686334	Catalog Number	CFM at Outlet	FPM at Outlet	Temp Rise °F	HP	Motor RPM	Air Throw	Max Mounting	
								Horizontal	Vertical
721349	F3F5160CA1	3400	1485	60	1/3	1100	50'	18'	31'
721356	HF3B5160CA1			60/45					
721363	P3P5160CA1			60					
721424	F3F5170CA1			70					
721431	HF3B5170CA1			70/53					
721448	P3P5170CA1			70					
721707	HF3B5180CA1	5000	1529	55/41	3/4	1100	65'	22'	40'
721714	P3P5180CA1			55					
721769	HF3B5190CA1			61/46					
721776	P3P5190CA1			61					
721820	HF3B51100CA1			68/51					
721837	P3P51100CA1			68					

## Recommended Control Options

UPC# 686334	Catalog Number	Step Controller	Thermostat	Summer Fan Switch		Stratification Thermostat	
				Wall	Built-In	Wall	Built-In
721349	F3F5160CA1	SC5100	C1025	FSW5112	FS5101	TFS5101	TC5102
721356	HF3B5160CA1				FS5101		
721363	P3P5160CA1				FS5102		
721424	F3F5170CA1				FS5101		
721431	HF3B5170CA1				FS5101		
721448	P3P5170CA1				FS5102		
721707	HF3B5180CA1				FS5101		
721714	P3P5180CA1				FS5102		
721769	HF3B5190CA1				FS5101		
721776	P3P5190CA1				FS5102		
721820	HF3B51100CA1				FS5101		
721837	P3P51100CA1				FS5102		



# 2600 Series Downflow Unit Heater

## General Description & Diffuser Information

### CONSTRUCTION:

- 16 Gauge steel cabinet with epoxy powder coated finish and control compartment with a hinged and latched access door.
- OSHA guards standard with all models.

### HEATING ELEMENT:

- Corrosion resistant element with steel sheath and steel spiral fins.

### OVERHEAT PROTECTION:

- All units come equipped with manual reset limit controls to de-energize the heater should an over-temperature situation occur.

### FAN and MOTOR:

- Totally enclosed, 1 speed, 1 phase permanently lubricated, thermally protected motors with unit bearings on 3KW - 20KW models. Totally enclosed, 2 speed, 1 phase permanently lubricated, thermally protected motors with sleeve bearings on 24KW - 50KW models.
- Axial flow fan blade - 1570 RPM max.
- All models equipped with fan purge which allows fan to operate after elements are de-energized to purge residual heat.

### TEMPERATURE CONTROLS:

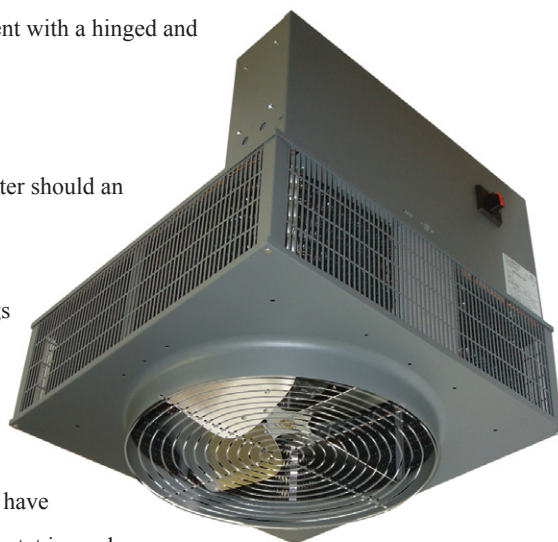
- 208V, 240V, 277V and 480V units have In-Built 24 Volt transformer for low voltage remote thermostat application.
- 600V units have In-Built 240V control on 5-20 KW models, 25-50 KW models have 24V control.
- 25 KW - 50 KW models may operate as 2 stage heaters if 2 stage remote thermostat is used.

### DISCONNECT SWITCH:

- All models equipped with In-Built disconnect except F3F2640, F3F2650 and H3H2650.

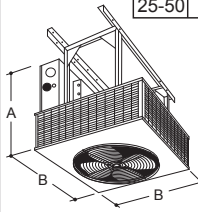
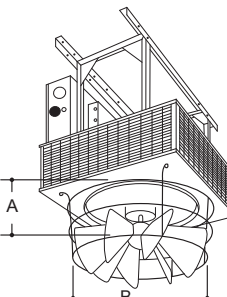
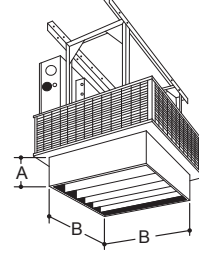
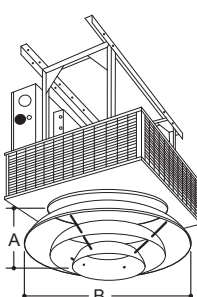
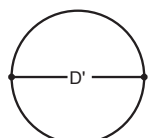
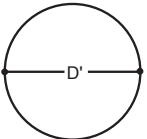
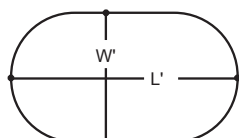
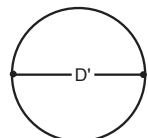
### INSTALLATION:

- Unit can be mounted using optional mounting bracket or field constructed angle iron bracket.
- Not recommended for mounting with threaded rod or chain.



Manufactured in U.S.A.

2600 Series shown with standard wire guard.  
Diffusers are field installed.

Diffuser Descriptions	Standard Heater			Radial Louvered Cone Diffuser			Linear Louvered Diffuser			Anemostat Diffuser											
	<div><div><div>Dimensions**</div><table><tr><th>KW</th><th>B</th><th>A</th></tr><tr><td>5-20</td><td>20 1/2"</td><td>15"</td></tr><tr><td>25-50</td><td>27"</td><td>21 1/2"</td></tr></table></div><div></div></div>			KW	B	A	5-20	20 1/2"	15"	25-50	27"	21 1/2"									
	KW	B	A																		
	5-20	20 1/2"	15"																		
	25-50	27"	21 1/2"																		
	<p>For general distribution. Choice of other diffusers may be added after installation if required.</p> <p>O.S.H.A guard for fan blade D1604 for 2605-2620, &amp; D1614 for 2625-2650 Do not use with other diffusers.</p> <div></div>			<p>With vanes vertical, straightens air for higher mounting. Closed position for broad horizontal coverage. Adjustable for intermediate requirements.</p> <div></div>			<p>Affords more precise directional throw where heaters cannot be mounted directly over area to be heated or for heating long narrow areas.</p> <div></div>			<p>Blends room air with heated air for widespread distribution without excessive drafts.</p> <div></div>											
	VERTICAL		45 DEGREES OPEN																		
	MODEL	MAX MOUNTING HEIGHT*	D (ft.)	MAX MOUNTING HEIGHT	D (ft.)	MAX MOUNTING HEIGHT	D (ft.)	MAX MOUNTING HEIGHT	W (ft.)	L (ft.)	MAX MOUNTING HEIGHT	D (ft.)									
2605	10	25	15	25	8	30	10	10	40	9	25										
2607	10	25	15	25	8	30	10	10	40	9	25										
2610	22	40	26	36	15	44	22	14	54	20	38										
2615	20	44	24	38	14	46	20	14	60	18	40										
2620	18	48	22	40	13	50	18	15	66	16	42										
2625	32	48	38	42	24	70	34	30	80	30	60										
2630	30	60	36	50	22	74	32	34	80	28	64										
2640	26	64	32	50	20	78	30	36	90	26	67										
2650	24	68	28	50	18	82	28	40	100	24	70										

\*Minimum mounting height 6 feet.

\*\*Dimensions are for all heater models without a diffuser option. Adding a diffuser will change the vertical ("A") dimension of heater. All mounting distances are in feet. All diagrams show optional mounting bracket.

# 2600 Series Downflow Unit Heater

## Standard Models

UPC# 686334	MODEL	KW	BTU's	VOLTS	PH	AMPS	CONTROL VOLTS	TEMP RISE °F	CFM	WT (lbs.)
715751	F1F2605CA1	5	17065	208	1	24.03	24	34	490	75
715768	H1H2605CA1			240		20.83				
715775	G1G2605CA1			277		18.05				
715782	F3F2605CA1			208	3	13.89				
715799	H3H2605CA1			240		12.04				
715805	P3P2605CA1			480		6.02				
715812	U3H2605CA4			600		4.81	240			
715829	F1F2607CA1	7.5	25598	208	1	36.05	24	45	560	75
715836	H1H2607CA1			240		31.25				
715843	G1G2607CA1			277		27.07				
715850	F3F2607CA1			208	3	20.84				
715867	H3H2607CA1			240		18.06				
715874	P3P2607CA1			480		9.03				
715881	U3H2607CA4			600		7.22	240			
715898	F1F2610CA1	10	34130	208	1	48.07	24	26	1200	75
715904	H1H2610CA1			240		41.66				
715911	G1G2610CA1			277		36.1				
715928	F3F2610CA1			208	3	27.79				
715935	H3H2610CA1			240		24.08				
715942	P3P2610CA1			480		12.04				
715959	U3H2610CA4			600		9.63	240			
715966	F3F2615CA1	15	51195	208	3	41.68	24	39	1200	75
715973	H3H2615CA1			240		36.12				
715980	P3P2615CA1			480		18.06				
715997	U3H2615CA4			600		14.45	240			
716000	H3H2620CA1	19.4	68260	240		48.16	24	52	1200	75
716017	P3P2620CA1	20		480		24.08				
717502	U3H2620CA4			600		19.26	240			
717519	F3F2625CA1	25	85325	208		69.48	24	24	3300	175
717526	H3H2625CA1			240		60.21				
717533	P3P2625CA1			480		30.1				
717540	U3U2625CA1			600		24.08				
717557	F3F2630CA1	30	102390	208		83.37		29	3300	175
717564	H3H2630CA1			240		72.25				
717571	P3P2630CA1			480		36.12				
717588	U3U2630CA1			600		28.9				
717595	F3F2640CA1	40	136520	208		111.17		38	3300	175
717601	H3H2640CA1			240		96.33				
717618	P3P2640CA1			480		48.16				
717625	U3U2640CA1			600		38.53				
717632	F3F2650CA1	50	170650	208		138.96		48	3300	175
717649	H3H2650CA1			240		120.42				
717656	P3P2650CA1			480		60.21				
717663	U3U2650CA1			600		48.16				

# 2600 Series Downflow Unit Heater

## Field Installed Accessories

UPC# 686334	MODEL	DESCRIPTION	UPC# 686334	MODEL	DESCRIPTION
692632	FSW5112	Summer Fan Switch	717793	D1602	Linear Louvered Diffuser 5-20 KW Models
692809	TC5102	Wall Mounted Stratification Thermostat	717809	D1612	Linear Louvered Diffuser 25-50 KW Models
717755	A1600	Ceiling Mount Bracket 5-20 KW Models	717816	D1600	Radial Louvered Cone Diffuser 5-20 KW Models
717762	A1601	Ceiling Mount Bracket 25-50 KW Models	717823	D1610	Radial Louvered Cone Diffuser 25-50 KW Models
			717830	D1603	Anemostat Diffuser 5-20 KW Models
			717847	D1613	Anemostat Diffuser 25-50 KW Models

## Product Specifications

**SPECIFICATIONS:** The contractor shall furnish and install the 2600 Series electric vertical discharge unit heaters of the size, capacity and voltage specified. Heaters shall be installed according to the manufacturer's recommendations and applicable national and local codes.

**ELEMENTS:** Elements shall consist of Nickel Chromium alloy resistance wire embedded and completely surrounded in Magnesium Oxide, enclosed and swagged into corrosion resistant sheaths. Corrosion resistant steel fins shall be permanently attached to the sheaths to provide maximum heat transfer to the air stream.

**MOTORS:** Motors shall be single phase, resilient mounted, totally enclosed, industrial rated with an automatic reset thermal overload protective device. Motors on heaters up to 20 KW capacity shall be permanently lubricated shaded pole type. Over 20 KW, motors shall be permanent split capacitor type. Motors shall be mounted out of the main air stream in such a manner as to allow ambient air to be drawn over the motor to reduce motor temperature. Motor shall be separately removable from beneath the heater without removing the entire heater from mounting bracket.

**FAN BLADES:** Fan blades shall be heavy-duty individually balanced axial flow type. Fan speed shall not exceed 1570 RPM.

**THERMAL OVERLOAD PROTECTION:** All heaters shall be equipped with a manual reset thermal cutout which disconnects elements and motor in the event normal operating temperatures are exceeded.

**WIRING:** Heaters shall be designed for a single supply circuit with elements, motor and control circuits subdivided and fused to conform with the latest National Electric Code and OSHA requirements. All three phase heaters shall have balanced phases.

**CONTROLS:** Heaters shall be controlled by a low voltage wall mounted thermostat. All heaters 25 KW and larger shall be wired for 2 stage operation. 5 KW through 20 KW units are single stage. All heaters shall be equipped with a fan safety device that causes fan to operate after elements are de-energized to purge unit of residual heat.

# 5600 Series Multiple Wattage Fan Forced Unit Heater

## Product Specifications

**CASING:** Fabricated of die formed, heavy Gauge steel and finished with two tone, brown and beige, durable powder coated paint. Supply air is drawn through the rear heavy duty expanded steel inlet grill. Heated air is discharged through front adjustable louvers, which are spring loaded for individual adjustment.

**ELEMENT:** Heavy-duty block fin element design. The multiple tap electric connection design allows field conversion to eight wattage settings at 208/240-Volt single phase or 240/480 Volt, 3 phase. Units are available on special order with a specific wattage/voltage setting.

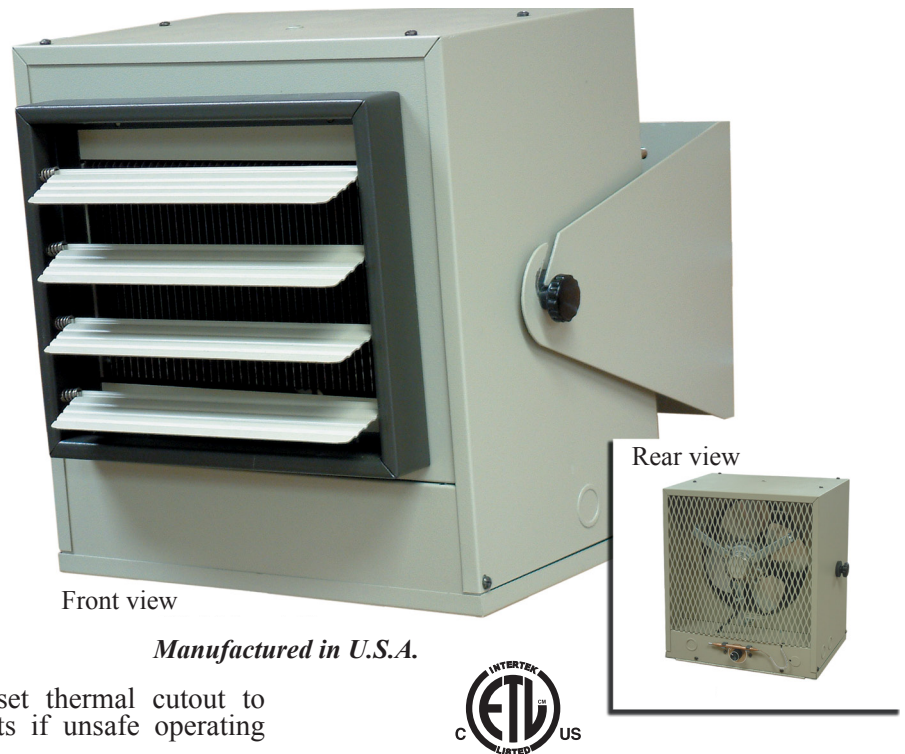
**MOTOR:** Motor shall be totally enclosed, permanently lubricated, all angle industrial rated with thermal overload protection.

**WIRING:** Wiring to terminal block adjacent to incoming knockout in accordance with NEC and local codes.

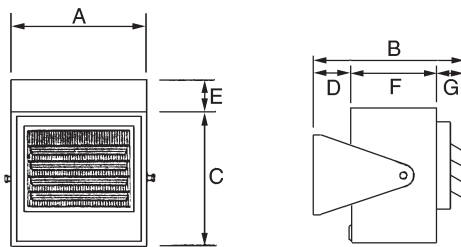
**THERMAL OVERLOAD:** All heaters shall be equipped with an automatic reset thermal cutout to shut down the element and motor circuits if unsafe operating temperatures are exceeded.

**CONTROLS:** The heater shall have a heavy-duty hydraulic thermostat factory installed and wired. All controls and wiring shall be in a large wiring compartment with hinged door for easy access. An optional disconnect switch shall be available for field installation.

**MOUNTING:** Heaters are standard with a three position-mounting bracket for wall, ceiling or workbench. Heaters can be mounted for horizontal or vertical discharge. Note: Minimum mounting height is 6 feet, and minimum distance from side of heater to nearest wall is 6 inches. Note: Approved for residential applications.



## Product Dimensions



A	B	C	D	E	F	G
14"	12-11/16"	14"	1-9/16"	1-9/16"	9"	2-3/4"

## Standard Models

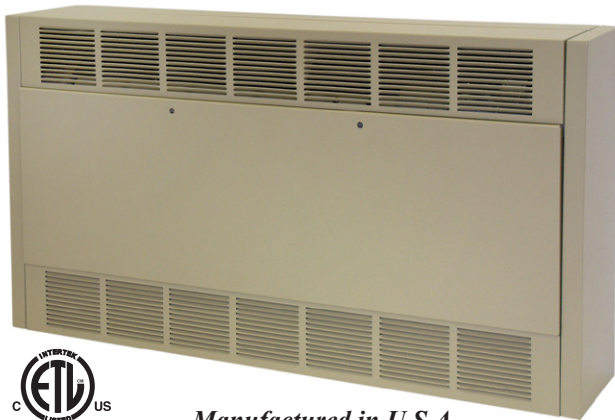
UPC 686334	MODEL	WATTS	BTU's	VOLTS	PHASE	AMPS	TEMP RISE	AIR THROW	CFM	WT. (LBS.)
707282	HF5605T	5000	17065	240	1	21	57 °F	16'	275	32
		4165	14215			17	48 °F			
		3332	11365			14	38 °F			
		2500	8533			10	29 °F			
		3750	12798	208	1	18	43 °F	16'	275	32
		3123	10659			15	36 °F			
		2500	8553			12	29 °F			
		1874	6396			9	21 °F			
707299	H3H5605T	3750	12799	208	3	10.4	57 °F	16'	375	32
		5000	17065	240	3	12	57 °F	16'	275	32
707305	P3P5605T	5000	17065	480	3	6	57 °F	16'	275	32
707367	DCS-MT303	Optional Field Installed Disconnect Switch, 30 Amp @ 600Volts								
For 24V control on single phase models delete "T" suffix										

Markel Products Company



# 6300 Series Multiple Angle Cabinet Unit Heater

## Product Specifications



**Manufactured in U.S.A.**

assembly, filters and all internal components. The grill configuration must be easily field convertible to any air flow configuration (by removal of no more than four fasteners). The cabinet shall have a textured finish of two coats of powder coat epoxy and be suitable for use with optional kick space base.

The electric cabinet unit heater shall be UL listed, designed for mounting in any position, fully recessed, semi-recessed or surface mounted. All capacities, voltages, physical sizes, grille arrangements and options shall be as specified on the plans. All units must be field convertible to the following:

1. For control by a field supplied remote thermostat.
2. Load management control with an external dry switch.  
When closed unit operates under control of either the internal or the external thermostat. When open, unit turns off.
3. Any grille arrangement.

**CABINET:** The cabinet shall be constructed of heavy duty 16 Gauge Zinc coated steel. The heater shall have a removable front door for easy access to the control panel, elements, motor-blower

**HEATING ELEMENTS:** The heating elements shall be warranted for 1 year and shall be non-glowing design consisting of special high temperature resistance wire enclosed in an incoloy sheath to which steel fins are furnace brazed. The heating elements shall be located directly in front of the blower discharge air for uniform heating. They shall be mounted with a single anchor at one end to minimize effects of thermal expansion and contraction.

**SAFETY CUTOUT:** Thermal safety limits shall be built into the system to automatically shut off heater in event of overheating due to any cause. The safety cutouts shall be of two types:

- A. The primary limit shall be an automatic capillary type to sense the heat along the full length of the heating elements. It shall de-energize the heaters by opening the coil circuit on the heating contactors.
- B. The secondary limit shall be a manual reset thermal device to interrupt power to the heating elements.

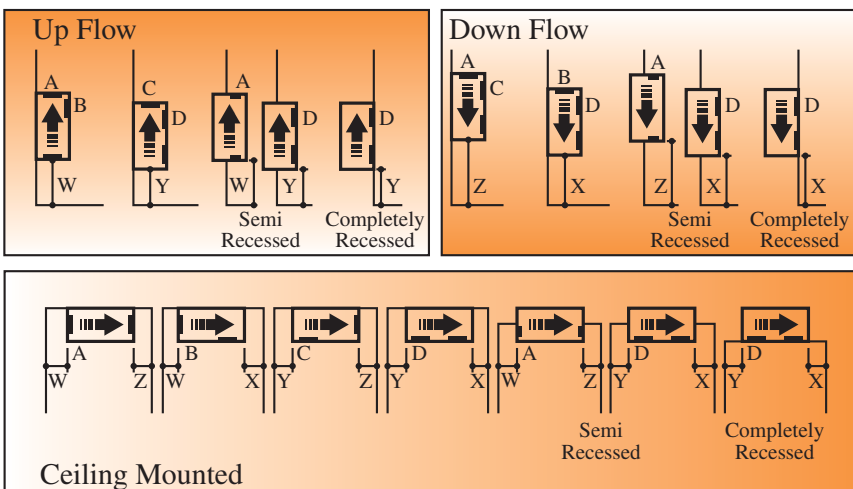
**MOTOR AND BLOWER ASSEMBLY:** The motors and blowers shall be direct drive and resiliently mounted on rigid heavy gauge frame for quiet operation and long life. The motor shall be two-speed, shaded pole type, rated for the voltage (480 to 600 Volts are single speed only). Each shall have built-in automatic reset overload protection and are life time lubricated. The motor shall be vented and mounted in the air stream to provide maximum cooling of the motor.

**HIGH AND LOW HEAT RANGES:** All units will be supplied as standard with a switch for selecting full heat at high fan speed or reduced heat at low fan speed (On 480 & 600 Volt units the switch changes the heat but not the fan speed).

**OVERCURRENT PROTECTION:** Circuit breakers shall be provided for branch circuit protection where required by NEC. Circuit breakers are optional on all other heaters.

**TEMPERATURE CONTROL:** Integral factory installed thermostat shall be tamper resistant, linear capillary type.

## Mounting Configurations



**NOTE:** Semi-recessed units are to be recessed at a maximum of 3 1/2" unless grill configuration is front in and front out.

**MOUNTING CLEARANCES:** Proper clearances are indicated for each mounting configuration on all positions. Minimum clearance from side of unit to the wall is zero inches. Mounting inches are provided in the back of the cabinet, accessible through the blower compartment, if necessary, remove blower deck if additional mounting screws or bolts are desired. Blower deck may be slipped forward by loosening four screws at the front to provide access to mounting holes.

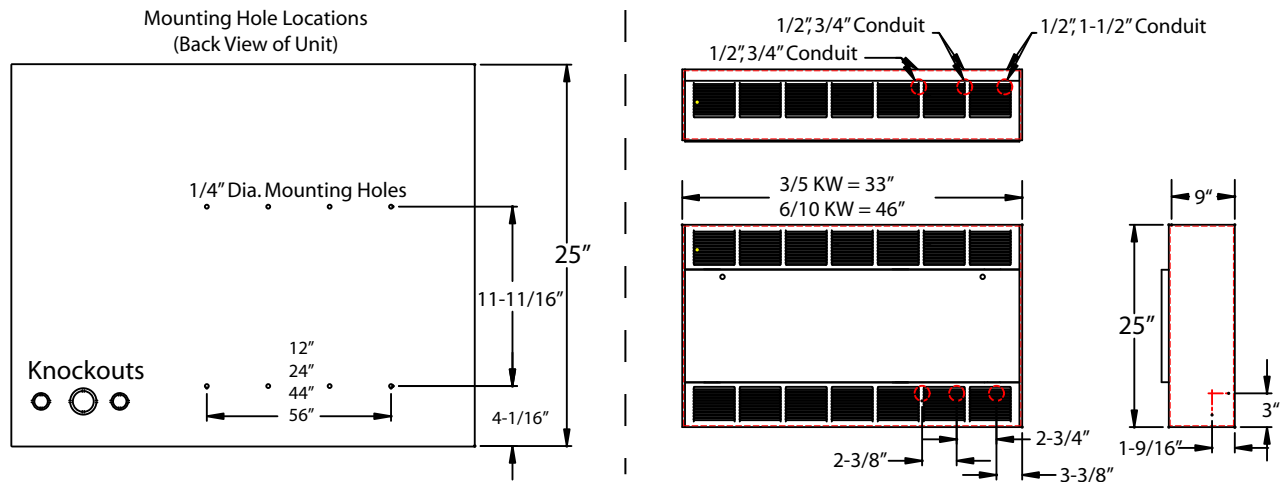
KEY: W = 6" minimum, X = 12" minimum, Y = 0" or greater, Z = 24" minimum

# 6300 Series Multiple Angle Cabinet Unit Heater

## Product Features (2-24 KW; All Voltages)

- For commercial and institutional application such as stores, schools, offices, transportation terminals, churches, entrance ways.
- Wall or ceiling mount; surface, semi-recessed or fully recessed.
- (8) air inlet and outlet configurations.
- Capacities from 2-24 KW with 230 to 1,000 CFM
- Motors are two speed, shaded pole, resilient mounted, direct drive. High/low heat and blower speed offer versatility.
- ETL Listed.
- Beige powder coated finish
- Choice of eight standard control options include unit or wall mounted 120 or 24V thermostats, with or without built-in control transformers.
- Industrial type finned tubular elements.
- Easily removable fan and element decks for simplified maintenance.
- Full length thermal protection.
- Limited warranty-one year.

## Product Dimensions



## Stocked Models & Features

HEATER LENGTH	UPC# 686334	MODEL	HIGH				LOW				VOLTS	PHASE	Wt. (lbs.)
			KW	BTU's	AMPS	CFM	KW	BTU's	AMPS	CFM			
33"	667142	6333D052033B30D0F	5	17065	25.0 / 17.6	250	3	10239	15.4 / 9.2	230	208	1-3*	99
	667159	6333D052433B30D0F			21.8 / 15.4				13.5 / 8.2		240	1-3*	
	667081	6333D054833B30D0F			7.8				4.6		480	3	
46"	667180	6346D102033B30D0F	10	34130	50.0 / 35.1	500	6	20478	30.8 / 18.4	460	208	1-3*	130
	667197	6346D102433B30D0F			43.6 / 30.7				26.9 / 16.2		240	1-3*	
	667203	6346D104833B30D0F			15.4				8.1		480	3	

\*Factory wired for 3-phase, field convertible to 1-phase.

- 1 / 3 phase field convertible with 24 Volt control circuit.
- Disconnect switch, dust filter, & high low operation.
- Built-in thermostat and field convertible for remote thermostat.

## Accessories

UPC 686334	MODEL	SIZE	DESCRIPTION
DUCT COLLAR			
441568	DC-33	33"	The same model is used for the inlet or outlet. If duct collars are required for both inlet & outlet then 2 must be ordered.
441575	DC-46	46"	
441582	DC-66	66"	
441599	DC-79	79"	
RECESSING TRIM FRAMES			
453783	TF-33	33"	Recessing Trim Frames should be ordered to "trim-out" any recessed or semi-recessed installation.
453790	TF-46	46"	
453806	TF-66	66"	
453813	TF-79	79"	

UPC 686334	MODEL	SIZE
<b>Fresh Air Make-Up Intake Flange &amp; Kickbase</b>		
771580	FAM33	33"
771597	FAM46	46"
771603	FAM66	66"
771610	FAM79	79"
<b>Kickbase (Pedestal) ONLY</b>		
771542	KB33	33"
771559	KB46	46"
771566	KB66	66"
771573	KB79	79"

# 6300 Series Multiple Angle Cabinet Unit Heater

## Custom Specified Models

### HOW TO DESIGNATE A MODEL:

63	46	D	08	24	1	2	B3	S	D	O	F
Series Number	Cabinet Size 33=33" 46=46" 66=66" 79=79"	Air Flow Configuration A = Bottom in / Top out B = Bottom in / Front out C = Front in / Top out D = Front in / Front out	Element KW 2KW through 24KW See model chart for length and KW options.	Element Voltage 20 = 208V 24 = 240V 27 = 277V 41 = 415V 48 = 480V 57 = 600V	Phase 1 = Single Phase 3 = Three Phase	Number of Wires in Electrical Service 2 or 3	Control Options B1, B2, B3, B4, B5, B6, B7, B8 (see control options chart)	Summer Fan Switch S = Included O = Not Included	Disconnect Option C = Circuit Breaker D = Disconnect Switch O = None	Motor Fusing Option M = Required O = Not Required	Disposable Filter Option F = Required O = Not Required
Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9	Step 10	Step 11	Step 12

LENGTH	KW		Elements per Heat Deck		CFM		1-PHASE UNITS - AMPS (HIGH)				3-PHASE UNITS - AMPS (HIGH)			
	High	Low	Left	Right	High	Low	208V	240V	277V	600V	208V	240V	480V 3-WIRE	600V
33"	2	1	2		250	230	10.6	9.3	8.12	3.83	9.22	8.13	4.14	3.33
	3	2	3				15.4	13.5	11.7	5.5	9.22	8.13	4.14	3.38
	4	2	4				20.2	16.7	15.3	7.2	13.4	11.8	6	6.22
	5	3	5				25	21.8	19	8	17.6	15.4	7.8	5.5
	6	3	6				29.9	26	22.6	10.5	17.6	15.4	7.8	6.3
46"	4	2	2		500	460	21.1	18.6	16	7.46	18.7	16.2	8.1	6.5
	6	4	3				30.8	26.9	23.1	10.79	18.4	16.2	8.1	6.5
	8	4	4				40.4	35.2	30.5	14.12	26.7	23.4	11.7	9.4
	10	6	5				50	43.6	37.7	17.5	35.1	30.7	15.4	12.3
	12	6	6				59.6	51.9	44.9	20.8	35.1	30.7	15.4	12.3
66"	6	3	2	2	750	690	31.8	27.9	24.1	11.3	27.6	24.3	12.3	9.8
	9	6	3	3			46.2	40.4	35	16.3	27.6	24.3	12.3	9.9
	12	6	4	4			60.6	52.9	45.8	21.3	40.1	35.2	17.7	15.6
	15	9	5	5			75	65.4	56.7	25.5	52.6	46.1	23.1	15.7
	18	9	6	6			89.4	77.9	67.5	31.3	52.6	46.1	23.1	18.5
79"	8	4	2	2	1000	920	42.3	37.1	32	14.9	36.7	32.3	16.2	13
	12	8	3	3			61.5	53.8	46.5	21.6	36.7	32.3	16.2	13
	16	8	4	4			80.7	70.5	61	28.2	53.4	46.8	23.5	18.8
	20	12	5	5			NA	87.1	75.4	34.9	70.1	61.4	30.7	24.6
	24	12	6	6			NA	NA	89.8	41.6	70.1	61.4	30.7	24.6

\*600V, 1-phase, 4 elements. \*\*600V, 1-phase, 6 elements.

NOTE: Heater overcurrent protection (per NEC) is required on all units over 48 Amps.

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# 6300 Series Multiple Angle Cabinet Unit Heater

## Control Option (Step 8 on Model Designator)

SUFFIX	DESCRIPTION
B1*	In-Built 1-Stage Stat and Relays which are operated by a field supplied 120 Volt source.
B2	In-Built 1-Stage Stat and Relays which are operated by a field supplied 24 Volt source.
B3	In-Built 1-Stage Stat and Relays which are operated by an internal 24 Volt source.
B4*	In-Built 1-Stage Stat and Relays which are operated by an internal 120 Volt source.
B5	In-Built 2-Stage Stat & Relays which are operated by an internal 24 Volt source.
B6*	In-Built 2-Stage Stat and Relays which are operated by an internal 120 Volt source.
B7	In-Built 2-Stage Stat and Relays which are operated by a field supplied 24 Volt source.
B8*	In-Built 2-Stage Stat and Relays which are operated by a field supplied 120 Volt source.

\*Motor fusing included for units with 120V internal or external control source.

## Disconnect Option "C" Circuit Breaker (Step 10 on Model Designator)

KW	SINGLE PHASE				THREE PHASE			
	208V	240V	277V	600V	208V	340V	480V	600V
2	available	available	available	available	available	available	available	available
3								
4								
5								
6								
8								
10	required	required	required		required	required	required	required
12								
15								
16								
18								
20	N/A	N/A	N/A		N/A	N/A	N/A	N/A
24								

Circuit breakers shown in shaded areas are required by NEC because unit exceeds 48 Amps, all others listed are optional unless otherwise stated.

## Disconnect Option "D" Disconnect Switch (Step 10 on Model Designator)

KW	SINGLE PHASE				THREE PHASE			
	208V	240V	277V	600V	208V	340V	480V	600V
2	available without circuit breaker option "C"	available without circuit breaker option "C"	available without circuit breaker option "C"	available without circuit breaker option "C"	available without circuit breaker option "C"	available without circuit breaker option "C"	available without circuit breaker option "C"	available without circuit breaker option "C"
3								
4								
5								
6								
8								
10	not available	not available	not available		not available	not available	not available	
12								
15								
16								
18								
20								
24								

Disconnect option is not available on heaters with circuit breaker.

## Fan Switch & Motor Fusing (Step 11 on Model Designator)

SUFFIX	DESCRIPTION
S	Summer Fan Switch
M	Motor Fusing (when not provided by control option)

## Filter Option (Step 12 on Model Designator)

SUFFIX	SIZE	Qty. REQ'D	FILTER TYPE
F	33"	1	Replaceable
	46"	1	
	66"	2	
	79"	2	
W	33"	1	Washable
	46"	1	
	66"	2	
	79"	2	