

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



WARNING: This product can expose you to chemicals including nickel which is known to the State of California to cause cancer, and chromium, which is known to the State of California to cause birth defects and/or reproductive harm. For more information go to www.P65Warnings.ca.gov.



Vertical Discharge

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, permanently lubricated, thermally 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 110°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.

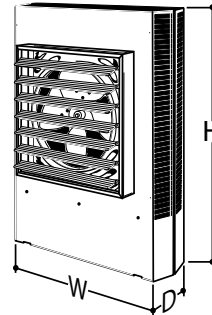
FEATURES:

- Made 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.

Taskmaster Dimensions



KW RATING	DIMENSIONS (inches)		
	H	W	D
3.3 - 5.0	17 ¾	14 1/2	6 ½
7.5 - 10.0	24 5/16	21 ½	6 ½
15.0 - 20.0	28 1/16	21 ½	6 ½
25.0 - 50.0	34	29 ¼	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.

Note: Products in this section with factory installed controls are subject to 100% cancellation/restocking charges.

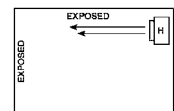


Figure A

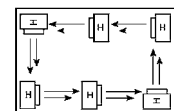


Figure B

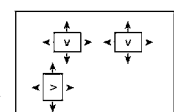


Figure C

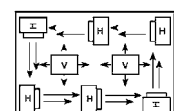
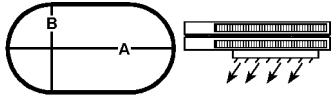
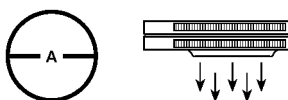
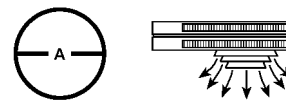
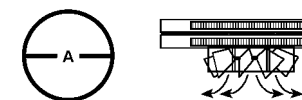


Figure D

5100 Series Horizontal or Vertical Mounted Fan Forced Unit Heater

Diffuser Options

DESCRIPTION		MFG CATALOG NUMBER	MFG 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	9	20	10	NA	NA	NA	
				7.5-10	12	40	22				
				25-30	18	52	30				
				40-50	22	75	42				
					24	84	47				
2	General Distribution (No Diffuser). The 5100 air chute venturi permits general down flow air pattern distribution as required at a higher mounting height.	NA	Not Required	3.3-5	9	15	NA	NA	NA		
				7.5-10	12	30					
				25-30	18	40					
				40-50	22	55					
					24	64					
3	Anemostat Diffuser (Optional). For applications where draft restriction is required at lower unit mounting heights.	06926802	AD5120	7.5-10	15	38	NA	NA	10		
		06811802	AD5150	25-30	17	50			12		
		06811802	AD5150	40-50	20	60			37		
		07220702	AD5175	60-70	31	-					
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.)	06926602	RD5120	7.5-20	45°	90°	45°	90°	NA	NA	12
		06926602	RD5120		10	14	36	30			14
		06926702	RD5150	25-50	14	21	42	35			14
		06926702	RD5150		20	30	62	44			
		07220802	RD5175	60-70	18	28	68	54			39
			RD5175		26	36	72	60			

 <p>Description 1 Louver Diffuser</p>	 <p>Description 2 No Diffuser</p>	 <p>Description 3 Anemostat Diffuser</p>	 <p>Description 4 Radial Diffuser</p>
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Mounting Brackets & Model Designator

DS5100

A5100 Wall Bracket

B5100 Heater Bracket (*Included with A5100 bracket.)

V5100

OFG

Not actual colors. Red & yellow shading is for diagram clarity only.

MOUNTING BRACKETS			
MFG CATALOG NUMBER	MFG MODEL NUMBER	MODEL SIZE	WT. (LBS)
06926902	A5105	3.3 KW TO 5.0 KW	9
06927002	A5120	7.5 KW TO 20.0 KW	13
06927102	A5150	25.0 KW TO 50.0 KW	16
06886202	B5105	3.3 KW TO 20.0 KW	3
06886302	B5150	25.0 KW TO 50.0 KW	8
06928402	V5105	3.3 KW TO 5.0 KW	9
06928502	V5120	7.5 KW TO 20.0 KW	13
06928602	V5150	25.0 KW TO 50.0 KW	16
DUST SHIELD			
06928702	DS5105	3.3 KW TO 5.0 KW	3
06928802	DS5120	7.5 KW TO 20.0 KW	4
06812202	DS5150	25.0 KW TO 50.0 KW	5
FAN GUARD			
07065402	OFG5101	3.3 KW TO 5.0 KW	3
07065502	OFG5102	7.5 KW TO 20.0 KW	4
07065602	OFG5103	25.0 KW TO 50.0 KW	5

HOW TO DESIGNATE A MODEL:

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

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Standard Taskmaster Models & Series Notes

MFG CATALOG NUMBER	MFG MODEL NUMBER	KW	BTU / H	VOLTS	PH	AMPS	CONTROL VOLTAGE	TEMP RISE	AIR THROW	CFM	RECOMMENDED MOUNTING HT.		WT. (LBS)						
											Horizontal	Vertical							
06450802	F1F5103N	3.3	11.2	208	1	15.9 / 9.17	208	26°F	12'	400	9'	9'	25						
06451002	HF1B5103N	3.3/2.5	11.2 / 8.5	240/208	1	13.7 / 11.9	240 / 208												
06456802	F2F5103N	3.3	11.2	208	1 / 3	15.9 / 9.17	208												
06457002	HF2B5103N	3.3/2.5	11.2 / 8.5	240/208	1 / 3	13.7 / 11.9	240 / 208												
06457202	G1G5103N	3.3	11.2	277	1	11.9	277												
06451202	P3P5103CA1N*			480	3	4.0	24												
06455402	F1F5105N			208	1	24.1	208												
06455602	HF1B5105N	5.0/3.7	17.1 / 12.8	240/208	1	20.9 / 18.1	240 / 208							40°F	12'	400	9'	9'	25
06451402	F2F5105N	5.0	17.1	208	1 / 3	24.1	208												
06451602	HF2B5105N	5.0	17.1	240	1 / 3	20.8 / 18.1	240												
		3.7	12.8	208	1 / 3	17.1 / 10.4	208												
06458402	G1G5105N	5.0	17.1	277	1	18.1	277												
06451802	P3P5105CA1N*	5.0	17.1	480	3	6.1	24												
06452002	F2F5107CA1L*	7.5	25.6	208	1 / 3	36.1 / 20.8	24	34°F	22'	700	10'	12'	54						
06452202	HF2B5107CA1L*	7.5	25.6	240	1 / 3	27.1 / 31.3													
06459202	G1G5107CA1L*	7.5	25.6	277	1	27.1													
06452402	P3P5107CA1N*	7.5	25.6	480	3	9.1													
06452602	F2F5110CA1L*	9.9	33.8	208	1 / 3	47.8 / 27.4													
06452802	HF2B5110CA1L*	10.0	34.1	240	1 / 3	41.2 / 24.0													
		7.5	25.6	208	1 / 3	36.1 / 20.8													
06456402	G1G5110CA1L*	10.0	34.1	277	1	36.1													
06453002	P3P5110CA1N*	10.0	34.1	480	3	12.4													
06453202	F3F5115CA1L*	15.0	51.2	208	3	41.7													
06453402	HF3B5115CA1L*	15.0/11.2	51.2 / 38.4	240/208	3	36.1 / 31.3													
06453602	P3P5115CA1N*	15.0	51.2	480	3	18.1													
06453802	HF3B5120CA1L*	19.7/14.8	67.2 / 50.5	240/208	3	47.8 / 41.1													
06454002	P3P5120CA1N*	20.0	68.3	480	3	24.1													
06458802	F3F5125CA1L*	25.0	85.3	208	3	69.5													
06459402	HF3B5125CA1L*	25.0/18.7	85.3 / 64.0	240/208	3	60.2 / 52.1													
06459802	P3P5125CA1N*	25.0	85.3	480	3	30.1													
06454202	F3F5130CA1L*	30.0	102.4	208	3	83.4													
06454402	HF3B5130CA1L*	30.0/22.5	102.4 / 76.8	240/208	3	72.3 / 62.5													
06454602	P3P5130CA1N*	30.0	102.4	480	3	36.2													
06440402	F3F5140CA1L*	40.0	136.5	208	3	111.2													
06440602	HF3B5140CA1L*	40.0/30.0	136.5 / 102.4	240/208	3	96.4 / 83.4													
06440802	P3P5140CA1N*	39.0	133.1	480	3	47.0													
06454802	F3F5150CA1L*	49.6	169.3	208	3	139.0													
06455002	HF3B5150CA1L*	50.0/37.5	170.6 / 128.0	240/208	3	120.5 / 104.3													
06455202	P3P5150CA1N	50.0	170.6	480	3	60.3													

*Double Eagle Promo Heater

International Models

MFG CATALOG NUMBER	MFG MODEL NUMBER	KW	BTU / H	VOLTS	PH	AMPS	CONTROL VOLTAGE	TEMP RISE	AIR THROW	CFM	RECOMMENDED MOUNTING HT.		WT. (LBS)
											Horizontal	Vertical	
07153002	Q3H5103CA1	3.3	11263	380	3	5.02	24	26	12'	400	9'	9'	25
07249202	R3H5103CA1			415		4.6							
07249302	Q3H5105CA1			380		7.6							
04249402	R3H5105CA1	5.0	17065	415	3	6.96	40	40	12'	400	9'	9'	27
07171302	Q3H5107CA1			380		11.4							
07249502	R3H5107CA1			415		10.5							
06865702	Q3H5110CA1	10.0	34130	380	3	15.2	34	22'	700	700	10'	12'	54
07249602	R3H5110CA1			415		13.9							
07249702	Q3H5115CA1			380		22.8							
07249802	R3H5115CA1	15.0	51195	415	3	20.9	43	32'	1100	1100	11'	20'	64
07041702	Q3H5120CA1			380		30.4							
07249902	R3H5120CA1			415		27.85							
07191902	Q3H5125CA1	25.0	85325	380	3	38.0	57	40	2000/1800	2000/1800	12'	22'	120
07106102	R3H5125CA1			415		34.8							
07250002	Q3H5130CA1			380		45.6							
07106202	R3H5130CA1	30.0	102390	415	3	41.8	47/53	40'	2000/1800	2000/1800	12'	20'	120
07250102	Q3H5140CA1			380		60.85							
07098302	R3H5140CA1			415		55.7							
07098302	R3H5140CA1	40.0	136520	380	3	60.85	40/45	55'	3100/2800	3100/2800	15'	24'	120
				415		55.7							

- 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.
- 600V models available 5-48.5 KW. Use "U" prefix to designate 600v and use 480v pricing.
- 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.

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Recommended Control Options, Control Accessory Options, & Control Accessories

MFG 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	ET9STS	FS5101	FSW5111	NA	TC5103	TC1602
HF1B5103N									
F2F5103N	NA	DCS 403	T5102	TW 1512	FS5101	FSW5111	NA	TC5103	TC1602
HF2B5103N	DCS 202	NA	T5100	ET 5SS					
	NA	DCS 403	T5102	TW 1512	FS5102	FSW5112	TFS5101	TC5102	NA
G1G5103N	DCS 202	NA	T5100	ET5SS					
P3P5103CA1N	NA	DCS 403		T5100	RK120EAA	FS5101	FSW5111	NA	TC5103
F1F5105N	DCS 403	NA	T5102		S2025				
HF1B5105N				DCS 403	NA	T5100	ET5SS		
F2F5105N	NA	DCS 403	T5102				TW 1512	FS5101	FSW5111
HF2B5105N	DCS 403	NA	T5100	ET5SS					
	NA	DCS 403	T5102	TW 1512	FS5102	FSW5112	TFS5101	TC5102	NA
G1G5105N	DCS 403	NA	T5100	S2025					
P3P5105CA1N	NA	DCS 403		T5100	RK120EAA	FS5101	FSW5111	TFS5101	TC5103
F2F5107CA1L	DCS 403	NA	T5100						
HF2B 5107CA1L	NA	DCS 403		T5100	RK120EAA	FS5101	FSW5111	TFS5101	TC5103
	DCS 403	NA	T5100						
G1G5107CA1L	DCS 403	NA		T5100	RK120EAA	FS5101	FSW5111	TFS5101	TC5103
P3P5107CA1L	NA	DCS 403	T5100						
F2F5110CA1L	DCS 603	NA		T5100	RK120EAA	FS5101	FSW5111	TFS5101	TC5103
HF2B5110CA1L	NA	DCS 403	T5100						
	DCS 603	NA		T5100	RK120EAA	FS5101	FSW5111	TFS5101	TC5103
G1G5110CA1N	DCS 603	NA	T5100						
P3P5110CA1N	NA	DCS 403		T5100	RK120EAA	FS5101	FSW5111	TFS5101	TC5103
F3F5115CA1L	DCS 603	NA	T5100						
HF3B5115CA1L	DCS 603	NA		T5100	RK120EAA	FS5101	FSW5111	TFS5101	TC5103
P3P5115CA1L	DCS 403	NA	T5100						
HF3B5120CA1L	DCS 603	NA		T5100	RK120EAA	FS5101	FSW5111	TFS5101	TC5103
P3P5120CA1N	DCS 403	NA	T5100						
F3F5125CA1L	DCS 1003	NA		T5100	TW123	FS5101	FSW5111	TFS5101	TC5103
HF3B5125CA1L	DCS 403	NA	T5100						
P3P5125CA1N	NA	DCS 403		T5100	TW123	FS5101	FSW5111	TFS5101	TC5103
F3F5130CA1L	DCS 1003	NA	T5100						
HF3B5130CA1L	DCS 603	NA		T5100	TW123	FS5101	FSW5111	TFS5101	TC5103
P3P5130CA1N	DCS 603	NA	T5100						
F3F5140CA1L	NA	DCS 603		T5100	TW123	FS5101	FSW5111	TFS5101	TC5103
HF3B5140CA1L	DCS 603	NA	T5100						
P3P5140CA1N	DCS 603	NA		T5100	TW123	FS5101	FSW5111	TFS5101	TC5103
F3F5150CA1L	NA	DCS 1003	T5100						
HF3B5150CA1L	DCS 1003	NA		T5100	TW123	FS5101	FSW5111	TFS5101	TC5103
P3P5150CA1N	DCS 1003	NA	T5100						

CONTROL ACCESSORY OPTIONS - FIELD INSTALLED IN HEATER		
MFG CATALOG NUMBER	MFG MODEL NUMBER	DESCRIPTION
POWER DISCONNECT SWITCH*		
07171502	DCS202 / 5100	20 AMP; 0-16 Amps
07171602	DCS403 / 5100	40 AMP; 16.1-32 Amps
07171702	DCS603 / 5100	60 AMP; 32.1-48 Amps
07171802	DCS1003 / 5100	100 AMP; 48.1-80 Amps
*Disconnect must be rated at 80% of total ampload.		
LINE VOLTAGE THERMOSTAT		
06927702	T5100	SPST; PILOT DUTY 25 AMP, 24-277V, (40-110 °F)
06927802	T5102	DPST; LINE DUTY 25 AMP 120-277V 25 AMP, 120-277V, (40-120 °F)
LOW VOLTAGE THERMOSTAT (ALL CA1 MODELS)		
06927702	T5100	SPST; LOW VOLT/PILOT DUTY; 125VA; (3.3-20 KW UNITS), (40-110 °F)
06927902	T5122	2-STAGE; LOW VOLT; 125VA; (25-50 KW UNITS), (40-100 °F)
STRATIFICATION THERMOSTAT		
06928002	TC5102	SPST; LOW VOLT/PILOT DUTY (W/RELAY); 70-130°
06928102	TC5103	SPST; LINE DUTY; AMP 120-240V; 70-130°
SUMMER FAN SWITCH		
06928202	FS5101	SPST; LINE VOLT ;120-277V
06928302	FS5102	SPST; LINE VOLT ; 480-600V

CONTROL ACCESSORIES - REMOTE WALL MOUNTED			
MFG CATALOG NUMBER	MFG MODEL NUMBER	DESCRIPTION	
LINE VOLTAGE THERMOSTAT			
05029102	S2025H10AA**	SP; 25 Amp; 120-277V; 50-90°F	
05238902	ET9STS**	SP; 22 Amp; 120-277V; 50-90°F	
06910902	TW1512*	DPST; 25 AMP; 120-277V; 50-90°F	
230V LOW VOLTAGE THERMOSTAT (ALL CA1 MODELS)			
02600002	RK120EAA	24VAC or MV; 50°-90°F	
06911102	TW123	2-STAGE; (25 - 50 KW UNITS); 40-90°F	
STRATIFICATION THERMOSTAT			
06911002	TC1602	SPST; LINE VOLT; 120-277V; 70-140°	
SUMMER FAN SWITCH			
06926202	FSW5111	SPST; LINE VOLT; 120-277V	
06926302	FSW5112	SPST; LOW VOLT; (W/RELAY)	
LOW VOLTAGE THERMOSTAT & SUMMER FAN SWITCH(W/RELAY) (CA1 MODELS)			
06926402	TFS5101	SPST; LOW VOLT; 50-90°	
06926502	TFS5102	2-STAGE; LOW VOLT; 50-90°	

**Any SPST thermostat of sufficient amperage may be substituted.
 *Use DPST double line break thermostat for 3-phase line voltage control in non "C" models.