

CH Series Heavy Duty Metal Sheath Electric Infrared Heater

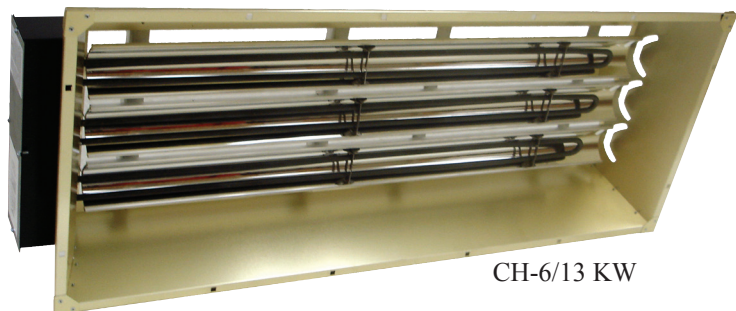
Heavy Duty Overhead Infrared Heaters for Indoor Spot Heating, Zone or Total Area Heating Applications



CH-2/4 KW



Manufactured in U.S.A.



CH-6/13 KW

- High-Density radiant heat, with 60° symmetric heat pattern.
- ETL Listed for suspended high-bay indoor applications (All CH-27 Models are ETL Listed Only).
- Rugged U-Shaped metal sheath elements installed, great for high vibration areas.
- Gold anodized Aluminum housing for efficient, long term reflectivity & corrosion resistance.
- Terminal box with high-temp Silicone wire.
- Single or three phase wiring.
- "L" brackets included for chain suspension, or rigid mounting.

CH Series Safety Note

To avoid potential hazards use model GF-SK-1 ground fault sensing switch with these heaters. This device is designed to provide a reliable way to quickly terminate power to the heaters in the event of a ground fault occurrence.

Standard Models

UPC# 686334	MODEL	KW	BTU'S	VOLTS	PHASE	AMPS		REPLACEMENT ELEMENT	WT. (Lbs.)	LIST	Optional Wireguards		
						3-Ph	1-Ph				UPC# 686334	MODEL	LIST
881609	CH-212-1A	1.8*	6,143	120	1		15.0	641-37211	9.0	361	449090	HDWG-2	50
881616	CH-220-1A			208				641-35661					
881623	CH-224-1A	2.0	6,826	240	1	N/A	8.5	641-35611	15.0	457	449069	HDWG-4	61
442008	CH-227-1A			277				641-36051					
881647	CH-248-1A			480				641-35621					
441773	CH-257-1A			600				641-50011					
881661	CH-420-1A			208				641-36061					
881678	CH-424-1A	240	641-35631	15.0	1	N/A	21.6	641-36071	15.0	457	449069	HDWG-4	61
443241	CH-427-1A	277	641-36071										
881692	CH-448-1A	480	641-35641										
441735	CH-457-1A	600	641-50021										
882804	CH-620-3A	208	641-35661					27.0					
882811	CH-624-3A	240	641-35611										
882828	CH-627-3A	277	641-36051										
882835	CH-648-3A	480	641-35621										
882842	CH-657-3A	600	641-50011										
882859	CH-1320-3A	13.5	46,076	208	3	N/A	37.5	641-36061	43.0	1112	449083	HDWG-13	133
882866	CH-1324-3A			240				641-35631					
882873	CH-1327-3A			277				641-36071					
882880	CH-1348-3A			480				641-35641					
441711	CH-1357-3A			600				641-50021					
441414	CH-2720-3B	27*	92,151	208	3	N/A	74.8	641-36061	288.0 Crated	2394	443258	HDWG-27	270
441421	CH-2724-3B			240				641-35631					
441438	CH-2748-3B			480				641-35641					
444002	CH-2757-3B			600				641-50021					
								26.7					

Note: Some 3-Phase models can be field converted to single phase operation.

* Model #CH-212-1A is NOT UL or CSA Approved. All CH-27 models are UL Listed only.

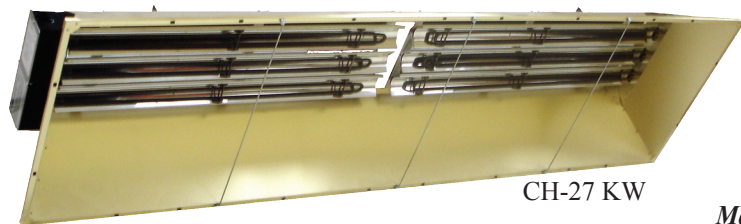
Heavy Duty Metal Sheath Infrared Control Options

CONTROL FEATURES:

- (GF-SK-1) Positive "off" and built-in "on/off" rocker switch illuminates "red" during operation.
- Only one optional control can be mounted directly to the terminal box on the back of the heater (CH-6/13/27). Additional control units if desired can be mounted to a remote wall surface.

UPC 686334	MODEL	DESCRIPTION	Operating Voltage (VAC)	Dimensions (In)			WT. (lbs.)	LIST
				Ht.	Wd.	Dp.		
486026	GF-SK-1	Ground Fault Sensing Switch	208V - 600V	10.3	10.3	5.0	12	690
589376	DC-SK-1	Disconnect Switch	120V - 600V	5.0	6.0	4.0	5	318

CH Series Heavy Duty Metal Sheath Electric Infrared Heater

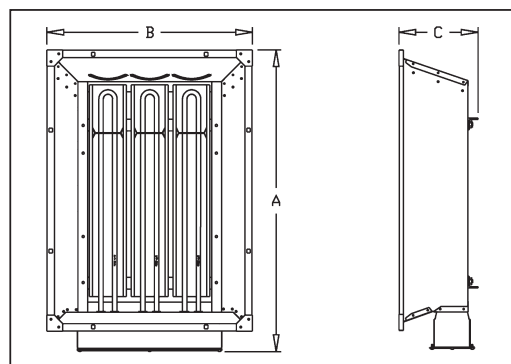


Note: The CH-27 Series includes (2) Terminal Box Assemblies, located on each end of the heater. All CH-27 Models are ETL Listed only.

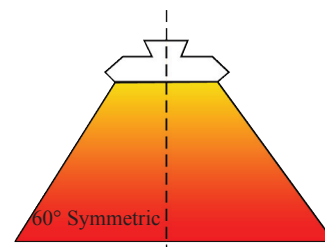


Manufactured in U.S.A.

CH Series Dimensions & Reflector Pattern



SERIES	DIMENSIONS (in.)		
	A LENGHT	B WIDTH	C DEPTH
CH-2	26	9	7.25
CH-4	46.5	9	7.25
CH-6	28.5	19.88	7.5
CH-13	50.5	19.88	7.5
CH-27	96.75	28.25	14.88



NOTE: Take into account that the CH Series is designed with a 60° symmetrical reflector heat pattern. The sizing chart can assist you based upon your mounting height.

Mounting Clearances & Recommended Mounting Height

Mounting Clearances		Recommended Mounting Height	
All CH Models	24" from ceiling 36" from vertical surface & from another heater 72" from face of heater to combustible surface	1.8 & 2.0 KW	8' - 10'
		4.5 KW	8' - 12'
		6.0 KW	10' - 14'
		13.5 KW	12' - 16'
CH-27 Only	87" from face of heater to combustible surface	27.0 KW	15' - 30'

Sizing Chart

Mounting Height	Heater Model	Length	Wide	Coverage (Sq. Ft.)	Watts / Sq. Ft.
8'	CH-2	8	8	64	31.3
	CH-4	9	8	72	62.5
10'	CH-2	11	10	110	18.2
	CH-4	11	10	110	40.9
	CH-6	12	10	120	50.0
12'	CH-4	12	11.5	138	32.6
	CH-6	14	12	168	35.7
	CH-13	15	13	195	69.2
14'	CH-6	16	14	224	26.8
	CH-13	18	16	288	46.9
16'	CH-6	18	16	288	20.8
	CH-13	21	18	378	35.7
	CH-27	24	19	456	59.2
18'	CH-13	23	20	460	29.3
	CH-27	28	20	560	48.2
20'	CH-27	28	23	644	41.9
24'	CH-27	33	27	891	30.3
30'	CH-27	41	32	1312	20.6

Product Specifications

Housing:

.040 Gold anodized Aluminum housing for efficeint, long-term reflectivity and corrosion resistance. High-density radiant heat. Housing is ETL Listed for indoor, dry environment applications only.

Reflector:

60 degree symmetric heat pattern.

Elements:

Rugged U-shaped metal sheath elements. .430" diameter Inconel metal sheath. Nickel-chrome alloy coiled filament imbedded within a Magnesium Oxide insulating powder and threaded end terminations. Available wattages from 1800 to 4500 Watts per element. Available voltages from 120 to 600 Volts.

Controls:

Heavy Duty, Metal Sheath heaters are not manufactured with any control device on the unit. All controls and accessories should be specified as remote mounted. Please consult the technical sales department of factory for help in determining applicable controls. Please follow installation instructions that accompany each heater.

Accessories:

Wire guards, thermostats, SCR controllers, and power contactor panels.

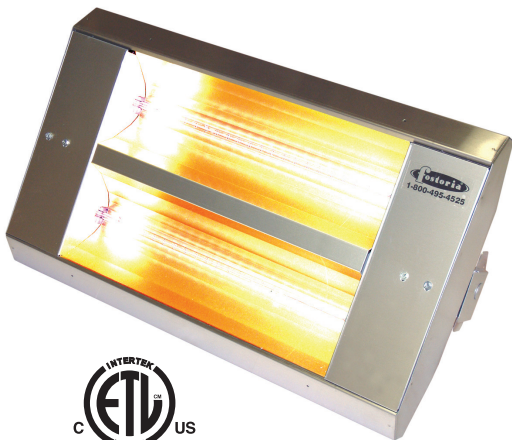
TH & THSS Series Mul-T-Mount Electric Infrared Heater

Overhead Infrared Heaters for Snow & Ice Control, Outdoor Spot Heating & All Indoor Heating Applications



Product Description

AVAILABLE IN 2 LAMP BROWN ENAMEL OR STAINLESS STEEL, OR 3 LAMP STAINLESS STEEL.



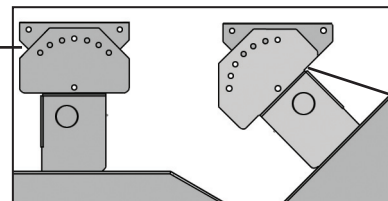
Manufactured in U.S.A.

- Listed for suspended, totally exposed (outdoor), high-bay (indoor) comfort heating and exterior snow & ice control applications.
- Listed for recessed applications.
- 20 Gauge painted steel or stainless steel housings.
- Gold anodized Aluminum reflectors & end caps.
- 50% higher Watt densities for 3-element units.
- 2-Lamp wiring, single phase.
- 3-Lamp wiring, three or single phase.
- Stainless steel models have non-corrosive housing, hardware and brackets; no ferrous metals used in the unit. Durable in harsh atmospheres & outdoor environments.
- High temperature lead wires.
- Clear Quartz Lamp(s) Included.

New Feature:

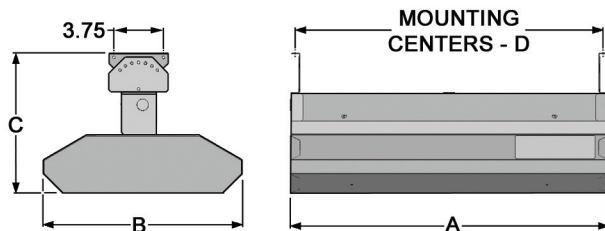
In-Built surface mounting brackets allows for fixture adjustment up to 45° horizontal tilt.

In-built surface mounting brackets attached to the top wiring channel.



0 to 45° tilt @ 15° increments

Product Dimensions



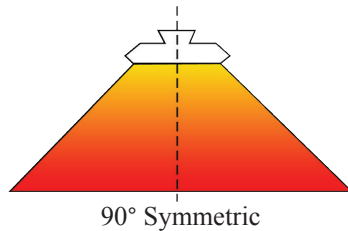
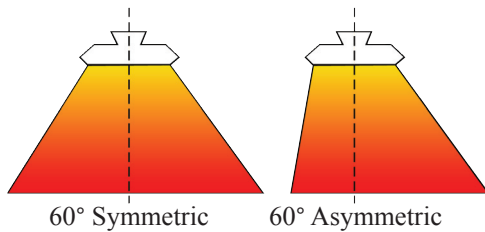
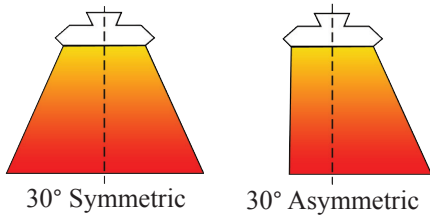
Mul-T-Mount Series	Dimensions (in.)			
	A Length	B Width	C Height	D Mtg. Ctr.
222	24"	15"	10-7/8"	23-1/2"
342	33"	15"	10-7/8"	32-1/2"
462	46"	15"	10-7/8"	45-1/2"
223	24"	21-1/2"	10-7/8"	23-1/2"
343	33"	21-1/2"	10-7/8"	34"
463	46"	21-1/2"	10-7/8"	45-1/2"

Mounting Clearances & Recommended Mounting Height

Mounting Clearances		Recommended Mounting Height	
2 & 3 Lamp Models	3" from ceiling	30° Symmetric & A30° Asymmetric Reflector - Indoor	14' - 30'
	24" from vertical surface	60° Symmetric & A60° Asymmetric Reflector - Indoor	12' - 18'
2 Lamp Models	72" from face of heater to combustible surface	90° Symmetric Reflector - Indoor	8' - 12'
3 Lamp Models	96" from face of heater to combustible surface	30° Symmetric & A30° Asymmetric Reflector - Outdoor	8' - 10'

TH & THSS Series Mul-T-Mount Electric Infrared Heater

Reflector Patterns



Product Specifications

Series:

222, 342, 462 (Painted Version) 2-lamp
 222, 342, 462 (Stainless Steel Version) 2-lamp
 223, 343, 463 (Stainless Steel Version) 3-lamp

Housing:

20 gage Galvanized Steel with a baked on, brown enamel (painted) finish. Housing is ETL Listed for both indoor and totally exposed outdoor applications.

20 gage Stainless Steel for durability and corrosion-resistance. Housing is ETL Listed for both indoor and totally exposed outdoor applications.

Reflectors and End Caps:

.040 Gold anodized Aluminum reflectors and end caps for superior reflectivity. Five choices of reflector patterns including 30 degree narrow (symmetric & asymmetric), 60 degree medium (symmetric & asymmetric), and 90 degree wide (symmetric).

Elements:

Clear quartz lamps. Coiled tungsten filament located within a sealed quartz envelope, halogen filled, with porcelain end caps and 6" wire pigtail leads. 96% radiant delivered efficiency with high moisture and thermal shock resistance. Instantaneous heat-up and cool-down performance. Available wattages from 500 to 3800 Watts per element. Available voltages from 120 to 600 Volts.

Controls:

Mul-T-Mount heaters are not manufactured with any control device on the unit. All controls are accessories and should be specified as such. Please consult the technical sales department of factory for help in determining applicable controls. Please follow installation instructions that accompany each heater.

Accessories:

Recessed mounting frames (painted or stainless steel), adjustable mounting brackets (stainless steel only), vertical mounting brackets (stainless steel only), wire guards, thermostats, snow detectors, SCR controllers, and power contactor panels.

Sizing Chart

Reflective Pattern (°)	Heater Output (kW)	# of Qiz. Lamps	Mounting Heights (feet)							Watts Delivered per Square Foot						
			8	10	12	14	16	18	20	8	10	12	14	16	18	20
			Heat Pattern Coverage @ Floor Level													
			L x W	L x W	L x W	L x W	L x W	L x W	L x W	L x W						
30°	3.2	2 - Quartz Lamp Heaters	5.5 x 4	6.5 x 5.5	7.5 x 6.5	8.5 x 7.5	9.5 x 8.5	10.5 x 9.5	11.5 x 10.5	145.5	89.5	65.6	50.2	39.6	32.1	26.5
60°	3.2		10.5 x 9.5	13 x 12	15 x 14	17 x 16	N/R	N/R	N/R	32.1	20.5	15.2	11.8	-	-	-
90°	3.2		17 x 16	21 x 20	N/R	N/R				11.8	7.6	-	-	-	-	-
30°	5.0		6 x 4	7.5 x 5.5	8.5 x 6.5	9.5 x 7.5	10.5 x 8.5	11.5 x 9.5	12.5 x 10.5	208.3	121.2	90.5	70.2	56.0	45.8	38.1
60°	5.0		11.5 x 9.5	14 x 12	16 x 14	18 x 16	20.5 x 18.5	23 x 21	N/R	45.8	29.8	22.3	17.4	13.2	10.4	-
90°	5.0		18 x 16	22 x 20	26 x 24	N/R	N/R	N/R		17.4	11.4	8.0	-	-	-	-
30°	7.3		N/R	8.5 x 5.5	9.5 x 6.5	10.5 x 7.5	11.5 x 8.5	12.5 x 9.5	13.5 x 10.5	-	156.1	118.2	92.7	74.7	61.5	51.5
60°	7.3		12 x 10.5	15 x 12	17 x 14	19 x 16	21.5 x 18.5	24 x 21	N/R	57.9	40.6	30.7	24.0	18.4	14.5	-
90°	7.3		19 x 16	23 x 20	27 x 24	N/R	N/R	N/R		24.0	15.9	11.3	-	-	-	-
30°	4.8	3 - Quartz Lamp Heaters	5.5 x 5	6.5 x 6.5	7.5 x 7.5	8.5 x 8.5	9.5 x 9.5	10.5 x 10.5	11.5 x 11.5	174.5	113.6	85.3	66.4	53.2	43.5	36.3
60°	4.8		10.5 x 10.5	13 x 13	15 x 15	17 x 17	21 x 21	N/R	N/R	43.5	28.4	21.3	16.6	10.9	-	-
90°	4.8		17 x 17	21 x 21	N/R	N/R	N/R			16.6	10.9	-	-	-	-	-
30°	7.5		N/R	7.5 x 6.5	8.5 x 7.5	9.5 x 8.5	10.5 x 9.5	11.5 x 10.5	12.5 x 11.5	-	153.8	117.6	92.9	75.2	62.1	52.2
60°	7.5		11.5 x 10.5	14 x 13	16 x 15	18 x 17	20.5 x 19.5	23 x 22	N/R	62.1	41.2	31.3	24.5	18.8	14.8	-
90°	7.5		18 x 17	22 x 21	26 x 25	N/R	N/R	N/R		24.5	16.2	11.5	-	-	-	-
30°	10.95		N/R	8.5 x 6.5	9.5 x 7.5	10.5 x 8.5	11.5 x 9.5	12.5 x 10.5	13.5 x 11.5	-	198.2	153.7	122.7	100.2	83.4	70.5
60°	10.95		12 x 11	15 x 13	17 x 15	19 x 17	21.5 x 19.5	24 x 22	N/R	83.0	56.2	42.9	33.9	26.1	20.7	-
90°	10.95		19 x 17	23 x 21	27 x 25	N/R	N/R	N/R	N/R	33.9	22.7	16.2	-	-	-	-

TH & THSS Series Mul-T-Mount Electric Infrared Heater



2 Lamp Mul-T-Mount Series Brown Enamel Or Stainless Steel With 2 Clear Quartz Lamps Included

BROWN HOUSING		STAINLESS STEEL HOUSING		KW	BTU'S	VOLTS	REFLECTOR PATTERN	Replacement Element	WT. (Lbs.)	LIST	
UPC 686334	MODEL	UPC 686334	MODEL							Brown	Stainless Steel
444163	222-30-TH-208V	444408	222-30-THSS-208V	3.2	10,922	208	30° Symmetrical	63016209	20	584	705
444170	222-30-TH-240V	444415	222-30-THSS-240V			240		63016249			
444187	222-30-TH-277V	444422	222-30-THSS-277V			277		63016279			
481380	222-30-TH-480V	481434	222-30-THSS-480V			480		63016489			
444194	222-A30-TH-208V	444439	222-A30-THSS-208V			208	30° Asymmetrical	63016209			
444200	222-A30-TH-240V	444446	222-A30-THSS-240V			240		63016249			
444217	222-A30-TH-277V	444453	222-A30-THSS-277V			277		63016279			
481410	222-A30-TH-480V	481465	222-A30-THSS-480V			480	63016489				
444224	222-60-TH-208V	444460	222-60-THSS-208V			208	60° Symmetrical	63016209			
444231	222-60-TH-240V	444477	222-60-THSS-240V			240		63016249			
444248	222-60-TH-277V	444484	222-60-THSS-277V			277		63016279			
481397	222-60-TH-480V	481441	222-60-THSS-480V			480	63016489				
444255	222-A60-TH-208V	444491	222-A60-THSS-208V			208	60° Asymmetrical	63016209			
444262	222-A60-TH-240V	444507	222-A60-THSS-240V			240		63016249			
444279	222-A60-TH-277V	444514	222-A60-THSS-277V			277		63016279			
481427	222-A60-TH-480V	481472	222-A60-THSS-480V			480	63016489				
443296	222-90-TH-208V	444521	222-90-THSS-208V	208	90° Symmetrical	63016209					
444286	222-90-TH-240V	444538	222-90-THSS-240V	240		63016249					
444293	222-90-TH-277V	444545	222-90-THSS-277V	277		63016279					
481403	222-90-TH-480V	481458	222-90-THSS-480V	480	63016489						
481083	342-30-TH-208V	480932	342-30-THSS-208V	5.0	17,065	208	30° Symmetrical	63025209	25	770	987
481090	342-30-TH-240V	480949	342-30-THSS-240V			240		63025249			
802611	342-30-TH-480V	802635	342-30-THSS-480V			480		63025489			
481175	342-A30-TH-208V	481021	342-A30-THSS-208V			208	30° Asymmetrical	63025209			
481182	342-A30-TH-240V	481038	342-A30-THSS-240V			240		63025249			
444316	342-A30-TH-480V	444569	342-A30-THSS-480V			480	63025489				
481113	342-60-TH-208V	480963	342-60-THSS-208V			208	60° Symmetrical	63025209			
481120	342-60-TH-240V	480970	342-60-THSS-240V			240		63025249			
802918	342-60-TH-480V	802932	342-60-THSS-480V			480	63025489				
481205	342-A60-TH-208V	481052	342-A60-THSS-208V			208	60° Asymmetrical	63025209			
481212	342-A60-TH-240V	481069	342-A60-THSS-240V			240		63025249			
444330	342-A60-TH-480V	444583	342-A60-THSS-480V			480	63025489				
481144	342-90-TH-208V	480994	342-90-THSS-208V			208	90° Symmetrical	63025209			
481151	342-90-TH-240V	481007	342-90-THSS-240V			240		63025249			
803212	342-90-TH-480V	803236	342-90-THSS-480V			480		63025489			
802710	462-30-TH-480V	802734	462-30-THSS-480V			7.3	24,915	480			
444361	462-A30-TH-480V	444613	462-A30-THSS-480V	30° Asymmetrical	63036489						
803014	462-60-TH-480V	803038	462-60-THSS-480V	60° Symmetrical	63036489						
444385	462-A60-TH-480V	444637	462-A60-THSS-480V	60° Asymmetrical	63036489						
803311	462-90-TH-480V	803335	462-90-THSS-480V	90° Symmetrical	63036489						

NOTE: Consult the factory, the product instruction manual, or a licensed electrician for 3-phase wiring of all 2-element heaters.

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THSS Series Mul-T-Mount Electric Infrared Heater

3 Lamp Mul-T-Mount Series Stainless Steel Housing With 3 Clear Quartz Lamps Included



Manufactured in U.S.A.

NOTE:

- 600-Volt Models also available, contact factory for more information.
- Asymmetrical pattern units are also available for 30° & 60°

UPC# 686334	MODEL	KW	BTU'S	VOLTS	Reflector Pattern	Replacement Elements	WT. (Lbs.)	LIST
443678	223-30-THSS-208V	4.8	16382	208	30° Symmetrical	63016209	25	1076
443685	223-30-THSS-240V			240		63016249		
443692	223-30-THSS-277V			277		63016279		
481588	223-30-THSS-480V			480	63016489			
443289	223-60-THSS-208V			208	60° Symmetrical	63016209		
443739	223-60-THSS-240V			240		63016249		
443746	223-60-THSS-277V			277		63016279		
481595	223-60-THSS-480V			480	63016489			
443784	223-90-THSS-208V			208	90° Symmetrical	63016209		
443791	223-90-THSS-240V	240	63016249					
443807	223-90-THSS-277V	277	63016279					
481601	223-90-THSS-480V	480	63016489					
481236	343-30-THSS-208V	7.5	25298	208	30° Symmetrical	63025209	33	1372
481243	343-30-THSS-240V			240		63025249		
811439	343-30-THSS-480V			480		63025489		
481237	343-60-THSS-208V			208	60° Symmetrical	63025209		
481274	343-60-THSS-240V			240		63025249		
811637	343-60-THSS-480V			480		63025489		
481298	343-90-THSS-208V			208	90° Symmetrical	63025209		
481304	343-90-THSS-240V			240		63025249		
811835	343-90-THSS-480V			480		63025489		
810531	463-30-THSS-480V	10.95	37372	480	30° Sym.	63036489	41	1606
810739	463-60-THSS-480V				60° Sym.	63036489		
810937	463-90-THSS-480V				90° Sym.	63036489		

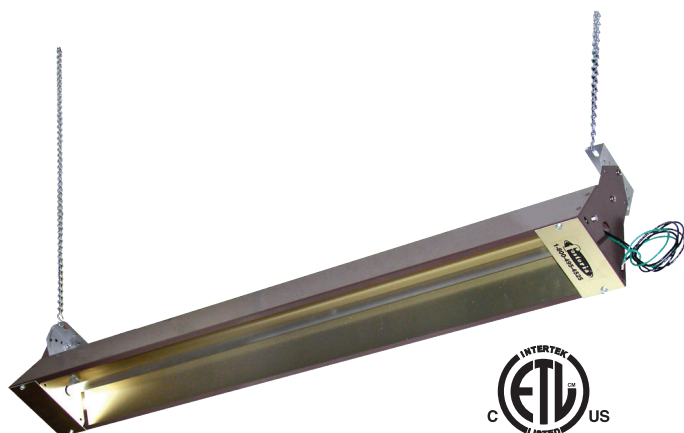
TH & THSS Series Product Accessories

UPC 686334	MODEL	DESCRIPTION		FOR USE WITH	WT. (LBS.)	LIST
881128	VMB-41-SS	Wall Mounting Brackets (2)		All Mul-T-Mount Models	12	180
881152	CHWG-222	Stainless Steel Wire Guards		222 Series	2	45
881145	CHWG-342			342 Series		59
851626	CHWG-462			462 Series		81
854368	CHWG-223			223 Series		55
854351	CHWG-343			343 Series		72
854344	CHWG-463			463 Series		84
				Recessed Mounting Frames (UL)		
		Ceiling Cutout (in.)	Frame Size (in.)			
441995	RMF-222-SS-A	27 x 17-7/8	29-1/8 x 20	222 Series Stainless	6	199
449441	RMF-222-A	27 x 17-7/8	29-1/8 x 20	222 Series Painted		145
442077	RMF-342-SS-A	36 x 17-7/8	30-1/8 x 20	342 Series Stainless	9	246
441872	RMF-342-A	36 x 17-7/8	30-1/8 x 20	342 Series Painted		156
442107	RMF-462-SS-A	49 x 17-7/8	51-1/8 x 20	462 Series Stainless	11	302
449458	RMF-462-A	49 x 17-7/8	51-1/8 x 20	462 Series Painted		199
881104	RMF-223-SS	32 x 29-3/8	34-1/8 x 31-1/2	223 Series Stainless	15	302
881135	RMF-343-SS	41 x 29-3/8	43-1/8 x 31-1/2	343 Series Stainless	18	355
881111	RMF-463-SS	54 x 29-3/8	56-1/8 x 31-1/2	463 Series Stainless	20	433
440783	31939009	Red Vycor Sleeves		All 1600W Qtz. Lamp	2	78
440738	31940009	Reduces Quartz Lamp Brightness by 90%		All 2500W Qtz. Lamp		103
440745	31941009			All 3650W Qtz. Lamp		127
446150	632-1620	Red Quartz Lamps; 1.6kw, 208v		222,223 & RPH Series	2	133
446167	632-1624	Red Quartz Lamps; 1.6kw, 240v				133
446228	632-2548	Red Quartz Lamps; 2.5kw, 480v				342 & 343 Series

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OCH Series Outdoor / Indoor Rated Quartz Electric Infrared Heater

Heats Solid Objects - Not The Air



Manufactured in U.S.A.

- Frosted Quartz Tube heating element (included)
- Listed for suspended, totally exposed (outdoor) and indoor spot heating applications
- Finish: High-temp brown powder coated finish or corrosion resistant stainless steel 24-Gauge housing
- 60° Symmetric Heat Pattern
- Gold anodized Aluminum reflector and end caps
- Brown finished models are direct wire and include (3) 24" long lead wires for field connections in a remote enclosure (not supplied). Optional electrical box enclosure is available for this series to allow for direct wire connection to the end of the heater housing.
- Stainless steel models include an electrical enclosure assembled to the end of the heater housing and (2) 6" long lead wires for direct field connection.
- Two 2' ft. long mounting chains and four S-Hooks included
- The OCH-Series can be surfaced mounted using the supplied mounting brackets which allow up to a 45° horizontal tilt adjustment.
- Three different mounting options are available:
Chain Mount (supplied, as shown)
Wall Mount
Ceiling Mount

Product Models

FINISH - BROWN			FINISH - STAINLESS STEEL			WATTS	BTU'S	VOLTS	AMPS	Cordset Included	Qtz. Tube Repl. Element	WT. (LBS.)
Enclosure Sold Separately			Includes Electrical Enclosure									
UPC# 686334	MODEL	LIST	UPC# 686334	MODEL	LIST							
480444	OCH-46-120V	276	480529	OCH-46-120V-SS	325	1500	5120	120	12.5	Yes	671-3784	10
480451	OCH-46-208V		480536	OCH-46-208V-SS		2000	6826	208	9.6	Cord Only, NO Plug	671-5061	
480468	OCH-46-240V		480543	OCH-46-240V-SS		2000	6826	240	8.3	Yes	671-3785	
480475	OCH-46-277V		480550	OCH-46-277V-SS		2000	6826	277	7.2	No	671-5018	
480499	OCH-57-208V	318	480574	OCH-57-208V-SS	361	3000	10239	208	14.4	Cord Only, NO Plug	671-5060	12
480482	OCH-57-240V		480567	OCH-57-240V-SS		3000	10239	240	12.5	Yes	671-3786	
480505	OCH-57-277V		480581	OCH-57-277V-SS		3000	10239	277	10.8	No	671-5059	
480512	OCH-57-480V		480598	OCH-57-480V-SS		2250	7679	480	4.7	No	671-5058	

Product Accessories

UPC # 686334	MODEL	DESCRIPTION	FOR USE WITH	WT. (Lbs.)	LIST
480888	OCHWG-46	Stainless Steel Wire Guards	OCH-46 Series Models	2	45
480895	OCHWG-57		OCH-57 Series Models	2	47
881128	VMB-41-SS	Wall Mtg. Brackets (2)	ALL OCH Models	12	180
445948	VHC-15	Variable Heat Controller	ALL OCH Models	3	390
871556	OCH-EBK-120	Enclosure w/ cord & plug	OCH 120V Models	3	59
871563	OCH-EBK-208	Enclosure w/ cord	OCH 208V Models	3	
871570	OCH-EBK-240	Enclosure w/ cord & plug	OCH 240V Models	3	
871587	OCH-EBK-480	Enclosure Only	OCH 277/480V Models	2	44

Mounting Clearances & Recommended Mounting Height

Mounting Clearances	Recommended Mounting Height	
3" from ceiling 12" from vertical surface 72" from face of heater to combustible surface 36" from another heater	OCH-46	7'-9'
	OCH-57	8'-10'

OCH Series Outdoor / Indoor Rated Quartz Electric Infrared Heater

Product Specifications

Series:
OCH-46 & OCH-57

Housing:
24 gage Aluminized Steel with a baked on, brown enamel (painted) finish. Housing is ETL Listed for indoor applications only. Horizontal mounting only.

Reflectors and End Caps:
.040 Gold anodized Aluminum reflectors and end caps for superior reflectiveness. 60 degree medium (symmetric) pattern only.

Elements:
Quartz Tubes. Frosted quartz envelope with a Nickel-Chrome coiled filament, porcelain end caps, and threaded-screw (stud) terminations. Fast heat-up and cool-down performance. Available Wattages from 1500 to 3000 Watts per element. Available voltages from 120 to 480 Volts.

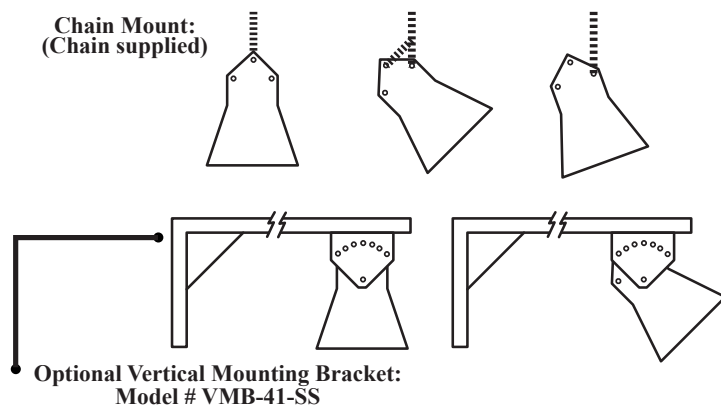
Controls:
OCH Series heaters are not manufactured with any control device on the unit. All controls are accessories and should be specified as such. Please consult the technical sales department of factory for help in determining applicable controls. Please follow installation instructions that accompany each heater.

Accessories:
Adjustable mounting brackets (stainless steel only), vertical mounting brackets (stainless steel only), wire guards, thermostats, SCR controllers, and power contactor panels.

Mounting Configurations & Reflector Pattern

Mounting

- Chain, surface mount or use our vertical mounting bracket as shown below.
NOTE: All units can only be mounted horizontally.
- In-Built surface mounting bracket allows for fixture adjustment up to a 45° horizontal tilt.
- As shown, the heater may be suspended at any horizontal angle desired.



OCH-46
Length: 44.4"
Width: 5.4"
Height: 6.5"

OCH-57
Length: 55.4"
Width: 5.4"
Height: 6.5"

OCH Sizing Chart

Mounting Height	Heater Model	Watts	Heat Pattern Coverage (at floor level)			Total Watts / Sq. Ft.
			Length	Width	Sq. Ft.	
7'	OCH-46	1500	11	9	99	15.2
	OCH-46	2000	11	9	99	20.2
8'	OCH-46	1500	12	10	120	12.5
	OCH-46	2000	12	10	120	16.7
	OCH-57	3000	13	10	130	23.1
9'	OCH-57	2250	13	10	130	17.3
	OCH-46	1500	13	11	143	10.5
	OCH-46	2000	13	11	143	14.0
10'	OCH-57	3000	14	11	154	19.5
	OCH-57	2250	14	11	154	14.6
	OCH-57	3000	15	12	180	16.7
12'	OCH-57	2250	15	12	180	12.5
	OCH-57	3000	17	14	238	12.6
	OCH-57	2250	17	14	238	9.5

RPH Series Outdoor Rated Stainless Steel Electric Infrared Heater



- Instant, high-intensity radiant heat, with 30° symmetric heat pattern.
- Listed for indoor spot heating and for outdoor unprotected applications.
- Specialized Ruby “Red” Quartz Lamp infrared heating element for glare reduction.
- Stainless Steel housing with Coilzak Aluminum reflector for good reflectivity & corrosion resistance.
- Heating element and mounting plate included.
- Dimensions: 24” x 5-3/8” x 4-1/2.”



Manufactured in U.S.A.



Mounting Plate (provided) on top center allows heater to be mounted parallel or angled using a standard pipe nipple and box cover (supplied by installer)

Mounting Clearances							Recommended Mounting Height					
6” from ceiling 24” from vertical surface 72” from face of heater to combustible surface							RPH-208			8’-12’		
							RPH-240			8’-12’		
UPC# 686334	MODEL	WATTS	BTU’S	VOLTS	PHASE	AMPS	REPLACEMENT QUARTZ LAMP	WT. (LBS.)	LIST	Optional Wireguard		
884501	RPH-208-A	1600	5,461	208	1	7.7	632-1620	5	318	UPC# 686334	MODEL	LIST
884518	RPH-240-A	1600	5,461	240	1	6.7	632-1624	5		880992	RPHWG	31

MM Series “Mitey Midget” Electric Infrared Heater



- Instant, high-intensity radiant heat, with 60° symmetric heat pattern.
- MM heaters excel as people-heaters in areas requiring a linear, compact & concentrated heat source.
- Listed for indoor industrial and commercial comfort heat applications.
- Heavy duty Aluminum extrusion with a bright Aluminum insert for maximum reflectivity.
- Anodized Aluminum housing, (0.62” thick).
- Heat Element Sold Separately.
- Dimensions: 3.750” Wide x 3.380” High.

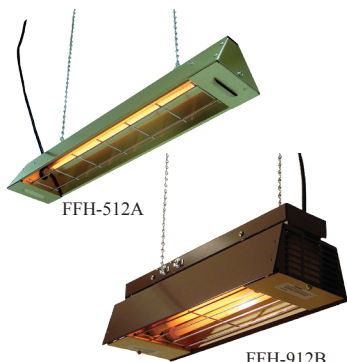
Manufactured in U.S.A.

Mounting Clearances
24” from ceiling & from vertical surface 24” from face of heater to combustible surface 36” from another heater

UPC 686334	MODEL	MAX WATTS	MAX BTU'S	VOLTS	PH	UNIT LENGTH	WT. (LBS.)	LIST	Optional Wireguards		
									UPC 686334	MODEL	LIST
444019	MM-13A	500	1707	120	1	13"	3	216	443906	MMWG-13	22
442763	MM-18A	750 / 1000	3413	208-240	1	18"	4	225	443913	MMWG-18	33
449540	MM-24A	900 / 1600	5461	208-277	1	24"	5	235	441896	MMWG-24	42
442725	MM-33A	2500	8533	480	1	33"	6	252	443920	MMWG-33	46
442039	MM-46A	3000 / 3800	12457	480-600	1	46"	7	276	442046	MMWG-46	55

All MM-13A through MM-46A models are ETL Listed for use with Quartz Lamps Only!

FFH Series Electric Utility Infrared Heater



- Both FFH Series Heaters are excellent for Farrowing & Finishing applications.
- Both units feature an 8 ft. 18/3 grounded cordset to plug into any 120V service.
- Gold anodized Aluminum reflectors, with a 90° symmetrical reflector pattern.
- Compact housing design, with the following housing finish:
FFH-512A: Gold Anodized Finish
FFH-912B: Brown Enamel Finish
- Quartz Tubes Heat Element(s), Wire Guard & (2) 4’ ft. Jack Chains are included.
- FFH-912B Only: Offers (2) On/Off toggle switches to operate heating elements independently.
- Listed for indoor industrial and commercial comfort heat

Manufactured in U.S.A.



SIZING CHART - FFH SERIES					
MOUNTING HEIGHT	Heater Model	LENGTH	WIDTH	COVERAGE (Sq. Ft.)	WATTS / Sq. Ft.
6'	FFH-512A	7	6	42	13.1
	FFH-912B	6	7	42	21.4
7'	FFH-512A	8	7	56	9.8
	FFH-912B	7	8	56	16.1
8'	FFH-512A	9	8	72	7.6
	FFH-912B	8	9	72	12.5

UPC# 686334	MODEL	WATTS	BTU'S	VOLTS	PHASE	AMPS	REPLACEMENT QUARTZ TUBE	WT. (LBS.)	Dimensions (in.)			LIST
									Length	Width	Height	
883894	FFH-512A	550	1877	120	1	5	671-3492	4	22	5	3	195
882781	FFH-912B	450/900	3072	120	1	8	671-3454	4	17	6	4	354

Mounting Clearances
3” from ceiling 24” from vertical surface 72” from floor

Electric Infrared Heating Elements

Clear & Red Quartz Lamps

Notes: Life expectancy of all heating elements - 5,000 hours (4yr. Pro-rated Warranty).
All heating elements operate at 50 / 60 Hertz.

UPC 686334	Item #	Watts	Volts	Length (in.)		Fits Model	LIST	UPC 686334	Item #	Watts	Volts	Length (in.)		Fits Model	LIST		
				Overall	Heated							Overall	Heated				
440059	630-05129	500	120	8-11/16	5	MM-13A	93	440363	631-25489	2500	480	28-11/16	25	342, 343 or MM-33A	150		
442770	630-10209	1000	208	13-11/16	10	MM-18A	164	440684	630-25609	3000	600	41-11/16	38	462, 463 or MM-46A	205		
444118	630-10249		240				99	446235	630-38579							480	216
440165	630-16209	1600	208	19-11/16	16	222, 223 or MM-24A	110	444132	631-38579	3800	480	41-11/16	38	462, 463 or MM-46A	205		
440172	630-16249		240				110	440677	630-36489							480	216
440998	631-16249		240				133	446235	630-38579							600	216
440189	630-16279		277				110	444132	631-38579							600	216
481731	630-16489		480				133	444132	631-38579							600	216
481748	630-25209		208				133	RED QUARTZ LAMPS									
481755	630-25249	2500	240	28-11/16	25	342, 343 or MM-33A	156	446150	632-1620	1600	208	19-11/16	16	222/223 or RPH	133		
481762	630-25279		277				446167	632-1624	1600	240	19-11/16	16	133				
440547	630-25489		480				138	446228	632-2548	2500	480	28-11/16	25	342 or 343	156		

Model Suffix: 630 = Horizontal Burning "Clear"; 631 = Vertical OR Horizontal Burning "Clear"; = Horizontal Burning "Red"

- Color temperature emitted: approx. 4100° F (high brightness).
- Approximately 96% radiant efficiency.
- Excellent resistance to thermal shock.
- 3/8" Diameter clear or red quartz envelope.
- Coiled tungsten filament; sealed porcelain end caps; halogen gas filled.

Quartz Tubes

Notes: Life expectancy of all heating elements - 5,000 hours (4yr. Pro-rated Warranty).
All heating elements operate at 50 / 60 Hertz.

UPC 686334	Item #	Watts	Volts	Length (in.)		Fits Model	LIST
				Overall	Heated		
443234	671-3784	1500	120	39-11/16	34-3/16	OCH-46	114
441810	671-5061	2000	208	39-11/16	34-3/16		
441803	671-3785	2000	240	39-11/16	34-3/16		
441933	671-5018	2000	277	39-11/16	34-3/16		
441667	671-5060	3000	208	50-11/16	45-3/16	OCH-57	127
441476	671-3786	3000	240	50-11/16	45-3/16		
441940	671-5059	3000	277	50-11/16	45-3/16		
441957	671-5058	2250	480	50-11/16	45-3/16		
440356	671-3454	450	120	12-15/16	8-7/16	FFH-912B	72
440080	671-3492*	550	120	19-1/2	16	FFH-512A	76
446242	671-5056	1000	120	18-5/16	14-7/16	CH-2212-1C	84
446259	671-5057	1425	240	27-5/16	23-7/16	CH-6424-1C	96

*3/8" Diameter

- 5/8" Diameter frosted quartz envelope
- Nickel-chrome alloy coiled element with porcelain end caps and pigtailed termination
- Color temperature emitted: approx. 1800° F (bright orange glow)
- Approximately 60% radiant efficiency
- Fast heat-up/cool-down
- Moisture resistance: High
- Mechanical ruggedness: Good

Metal Sheath Elements

Notes: Life expectancy of all heating elements - 5,000 hours (4yr. Pro-rated Warranty).
All heating elements operate at 50 / 60 Hertz.

UPC 686334	Item #	Watts	Volts	Length (in.)		Fits Model	LIST
				Overall	Heated		
445870	641-37211	1800	120	23-1/16	18"	FHK & CH 212	133
445832	641-35661	2000	208	23-1/16	18	FHK & CH 2.0 & 6.0 KW Models	
445795	641-35611		240				
445849	641-36051		277				
445801	641-35621		480				
445887	641-50011		600				
445856	641-36061	4500	208	44-7/16	39	FHK & CH 4.5 & 13.5 KW Models	175
445818	641-35631		240				
445863	641-36071		277				
446174	641-35641		480				
445894	641-50021		600				

Note: Inner reflector shipped with replacement Metal Sheath Elements.

- 0.430" Diameter Inconel metal sheath envelope
- Nickel-Chrome alloy coiled element imbedded in Magnesium Oxide insulating powder
- Color temperature emitted: approx. 1600° F (dull orange glow)
- Approximately 50% radiant efficiency
- Slowest heat-up/cool-down
- Moisture resistance: Lowest
- Mechanical ruggedness: Highest

Electric Infrared Heating Controls

Variable Controllers



VHC-32

Manufactured in U.S.A.

- Solid State phase angle variable "Triac" knob controller adjusts heat settings from 10-100% with heat loads up to 15.4-Amps.
- 208/240 VAC single-phase, single stage controller, 3200 Watt max.
- Positive "Off" & built-in On/Off Rocker switch lights "red" during operation.
- NEMA 1 Aluminum enclosure with stainless steel face plate designed for wall mounting or suitable for semi-recessed applications.
- Must be mounted in a protected area.
- Can either operate Quartz Lamps or Quartz Tube Infrared Heaters.



VHC-15

Manufactured in U.S.A.

- Solid state variable device controls heat loads up to 15-Amps.
- 208/240 Volt "In-Line" Controller.
- Built in On/Off knob switch with positive "off" & surface plate included.
- Designed for a 2" x 4" electrical wall box mounting (not supplied).
- Must be mounted in a protected area.
- Can only operate Fostoria Quartz Tube Infrared Heaters.

30-Amp or 80-Amp Enclosed



18D-2-80CF ENC.

Manufactured in U.S.A.

- SCR Voltage Controller - 80 Amp MAX.
- Includes (1) 24-volt Potentiometer (3" square) to control the heat output.
- Only operates Quartz Lamps at 240 or 208-Volts, single phase only.
- Potentiometer can be mounted outside, but the SCR must be located in a protected area.
- Factory wired with millisecond fuses included.

UPC 686334	Model	Description	Dimension (In.)			Wt.	LIST
			Depth	Width	Height		
485357	VHC-32	Variable Heat Controller 208/240-Volt; 15.4 Amp	3	5	5	3 lbs.	390
445948	VHC-15	Variable Heat Controller 208/240-Volt; 15 Amp	3	5	5	3 lbs.	150
445634	18D-2-30CF Open	SCR Controller - 26 Amp MAX No Enclosure	6	6	9	11 lbs.	872
445641	18D-2-30CF Enclosed	SCR Controller - 26 Amp MAX Enclosure Included	8	10	12	15 lbs.	1294
445658	18D-2-80CF Enclosed	SCR Controller - 80 Amp MAX Enclosure Included	8	12	14	29 lbs.	2106

Snow & Ice Detectors



APS-3C

APS-3C Includes: Remote Switch/Plate Assembly (RCU-3)

Manufactured in U.S.A.

- Main control unit for Automatic Snow & Ice Control Systems.
- By sensing both temperature and moisture the system activates and melts any snow & ice accumulations until conditions subside.
- NEMA 3R Enclosure is UL Listed and houses timers and switching electronics to operate the system.
- Capability to monitor up to 6 sensors (CIT-1).
- Unit can be manually activated and can be controlled and monitored from an optional remote switch (Model RCU-).



CIT-1

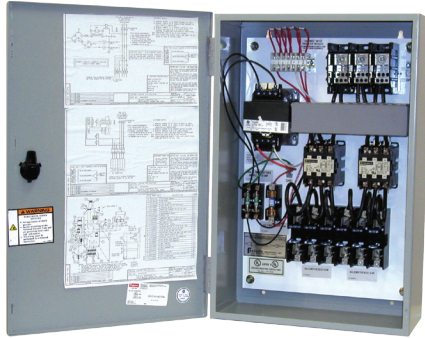
- Positioned above ground to maximize the sensors capability.
- Detects falling or blowing of precipitation such as snow when the temperature is below 38° F.
- Most common sensor device.

UPC# 686334	Model	Description	Dimension (In.)			Wt.	LIST
			Depth	Width	Height		
319614	APS-3C	Snow / Ice Control Switch	6.56	11.5	9.25	8 lbs.	2345
319761	CIT-1	General Purpose Snow Sensor	3.25	3.25	4.13	1 lb.	843

Note: Any snow & ice control system should be used with the correct sized control panel (with contactors & fusing) as supplied by factory or your electrical contractor. Also, the APS-3B requires a control device (RCU-1, CIT-1, SIT-6E) in order to operate properly.

Electric Infrared Heating Controls

Pre-Wired Contactor Panels



FPC2120

Manufactured in U.S.A.



- Factory pre-wired for quick installation, with the following optional equipment:
Snow & Ice Detector (APS-3C)
Single & Two-Stage Thermostats*
*requires 2-contactors
- Step-down transformer and secondary fusing for 24V or 120V control circuit.
- 3-Phase load rated.
- Fuses are NOT included.
- NEMA 1 Enclosures.
- Max 50-Amp branch circuit fusing.

Note: Contact factory for 3R, 4, 4X, & NEMA 12 “special” built models.

IMPORTANT FUSING INFORMATION

Fuses are NOT included since panels can be used with various infrared heat sources. Quartz Lamp Heat Sources: Use FRS-600V (or equal) “Time Delay” fuses; Class RK-5. Quartz Tube & metal Sheath Heat Sources: Use KTS-R 600V (or equal) “Fast Acting” fuses; Class RK-1. Fuse circuits as close to calculated load as possible. Circuits less than 35 Amps will require the use of fuse reducers.

120-V Control System		24-V Control System		Max. Amps	Volts	Cabinet Size (In.)			WT. (Lbs.)	LIST
UPC# 686334	Model	UPC# 686334	Model			Depth	Width	Height		
4459902	FPC8110	4864302	FPC8210	50	208	6.75	16	24	52	1622
4460002	FPC2110	4864402	FPC2210		240					1751
4460102	FPC7110	4864502	FPC7210		277/480					1622
4460202	FPC4110	4864602	FPC4210		480					
4460302	FPC8120	4864702	FPC8220	100	208	6.75	16	24	70	1983
4460402	FPC2120	4864802	FPC2220		240					2163
4460502	FPC7120	4864902	FPC7220		277/480					1983
4460602	FPC4120	4865002	FPC4220		480					
4460702	FPC8140	4865102	FPC8240	200	208	6.75	24	30	88	2910
4460802	FPC2140	4865202	FPC2240		240					3090
4460902	FPC7140	4865302	FPC7240		277/480					2910
4461002	FPC4140	4865402	FPC4240		480					
4461102	FPC8160	4865502	FPC8260	300	208	6.75	30	36	106	3579
4461202	FPC2160	4865602	FPC2260		240					3760
4461302	FPC7160	4865702	FPC7260		277/480					3579
4461402	FPC4160	4865802	FPC4260		480					

Contactor Enclosures



FEC-30-120

Manufactured in U.S.A.

- Economical load handling / switch device, ideal for use with other control equipment.
- NEMA 1 Enclosures.
- Load rating up to 600V Max., 3-Pole.
- Magnetic contactor.

UPC 686334	Model	Contactor Amps	Coil Voltage	Cabinet Size (In.)			Wt. (LBS.)	LIST
				Depth	Width	Height		
440851	FEC-30-120	30	120	5	6	10	5	180
440868	FEC-30-240		208/240					
440875	FEC-60-120	60	120	5	6	10	5	241
440882	FEC-60-240		208/240					

Note: Installer to provide overload protection for all infrared heaters.

FHK Series Portable Metal Sheath Electric Infrared Heater



2.0KW & 4.5KW
Stand Models

Manufactured in U.S.A.

6.0KW & 13.5KW
Hand Cart Models

- Double side wall housings to reduce operating temperatures.
- 6.0 and 13.5KW heaters have double top baffles to reduce operating temperatures.
- 60° symmetrical heat pattern.
- Factory installed U-shaped metal sheath infrared heating elements have an average 5000 hour life.
- Heavy duty protective wire screens.
- GOLD anodized Aluminum internal reflector.

Square Feet Heated

KW	NON-PROTECTED AREA		SEMI-PROTECTED AREA		Required Clearance From Front of Heater
	BELOW 35 °F	ABOVE 35 °F	BELOW 35 °F	ABOVE 35 °F	
1.8 / 2.0	25	36	40	50	2 feet
4.5	64	75	90	125	3 feet
6	85	100	120	150	4 feet
13.5	192	225	270	375	7 feet

Standard FHK Models

UPC# 686334	MODEL	KW	BTU's	VOLTS	PH	AMPS	WT.	LIST
881739	FHK-224-1A	2.0	6,826	240	1	8.3	17 lbs.	442
881753	FHK-248-1A			480	1	4.2		
881784	FHK-424-1A	4.5	15,359	240	1	18.8	24 lbs.	494
881807	FHK-448-1A			480	1	9.4		
882910	FHK-624-3A	6.0	20,478	240	3	14.4	37 lbs.	851
					1	25.0		
882934	FHK-648-3A			480	3	7.5		
					1	13		
882965	FHK-1324-3A	13.5	46,076	240	3	33.0	65 lbs.	1412
					3	17.0		
882989	FHK-1348-3A			480	1	29.0		

OPTIONAL 25' POWER CORD			
UPC# 686334	Model #	TYPE	LIST
880435	880435	16/3 SO	80
880435	880435	16/3 SO	
880459	880459	12/3 SO	113
880466	880466	14/3 SO	90
880497	880497	14/4 SO	113
880442	880442	10/3 SO	125
880497	880497	14/4 SO	113
880466	880466	14/3 SO	90
880510	880510	8/4 SO	237
316422	316422	12/4 SO	130
880527	880527	8/3 SO	210

Contact Factory for Special Build Models @ 208V, 277V or 600V.

Factory Pre-Wired FHK Models With 15 Ft. Cord & Grounded Plug

UPC# 686334	MODEL	TYPE	KW	BTU's	VOLTS	PHASE	AMPS	WT.	LIST
881715	FHK-212-1CA	STAND	1.8	6,143	120	1	15.0	18 lbs.	425

FHK Infrared Control Options

UPC 686334	MODEL #	DESCRIPTION	Operating Voltage (VAC)	Dimensions (In)			WT. (lbs.)	LIST
				Ht.	Wd.	Dp.		
485814	TO-SK-1	Tip-Over Switch	208V - 600V	10.3	10.3	5.0	12	350
589376	DC-SK-1	Disconnect Switch	120V - 600V	5.0	6.0	4.0	5	300
486026	GF-SK-1	Ground Fault Sensing Switch	208V - 600V	10.3	10.3	5.0	12	650

Note: All SK-1 Models have NEMA-1 Enclosure, 50-Amp Max. & 1/3-Phase Rated.

Model "TO" & "GF" features include a positive "off" & a built-in on/off rocker switch that glows red during operation. Additionally, enclosure can mount directly to the terminal box on the back of the heater (FHK-6/13 only) or be mounted to a remote wall surface.



TO-SK-1 or GF-SK-1