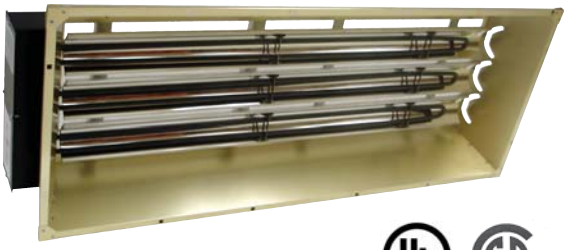
HEAVY DUTY METAL SHEATH INFRARED HEATERS

FOR INDOOR HEATING APPLICATIONS

CH-2/4 KW



CH-6/13 KW

- UL & CSA listed for suspended indoor applications.
- High-density radiant heat, with 60° symmetric heat pattern utilizing bright aluminum reflectors
- Features aluminum extrusion and support clip for high vibration areas and rugged environments
- Rugged U-Shaped Metal Sheath elements installed, generates large amounts of infrared radiant energy in a fairly concentrated area.
- Gold anodized aluminum housing for good, long-term reflectivity & corrosion resistance
- "L" brackets included for chain suspension or rigid mounting
- Terminal box with high-temp silicone wire
- Designed for direct wire, single or three-phase wiring configurations
- Units can be operated horizontally or vertically

Model # CH-212-1A is NOT UL or CSA Approved
All CH-27 Models are UL Listed Only.

											Optional Wireguards		
UPC 686334	MODEL	KW	BTU'S	VOLTS	PHASE	AMPS (^) 3-Ph	AMPS (^) 1-Ph	Replacement Element	WT. (Lbs.)	LIST	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	2.0	6,826	208	1	-	9.6	641-35661					
881623	CH-224-1A			240		-	8.5	641-35611					
442008	CH-227-1A			277		-	7.2	641-36051					
881647	CH-248-1A			480		-	4.2	641-35621					
441773	CH-257-1A			600		-	3.3	641-50011					
881661	CH-420-1A	4.5	15,359	208	1	-	21.6	641-36061	15.0	**457**	449069	HDWG-4	**61**
881678	CH-424-1A			240		-	18.8	641-35631					
443241	CH-427-1A			277		-	16.3	641-36071					
881692	CH-448-1A			480		-	9.5	641-35641					
441735	CH-457-1A			600		-	7.5	641-50021					
882804	CH-620-3A	6.0	20,478	208	3 or 1	17.0	29.0	641-35661	27.0	**717**	449076	HDWG-6	**78**
882811	CH-624-3A			240		14.5	25.0	641-35611					
882828	CH-627-3A			277		-	21.7	641-36051					
882835	CH-648-3A			480		7.5	13.0	641-35621					
882842	CH-657-3A			600		5.8	10.0	641-50011					
882859	CH-1320-3A	13.5	46,076	208	3	37.5	-	641-36061	43.0	**1112**	449083	HDWG-13	**133**
882866	CH-1324-3A			240		33.0	-	641-35631					
882873	CH-1327-3A			277	3 or 1	-	48.8	641-36071					
882880	CH-1348-3A			480		17.0	29.0	641-35641					
441711	CH-1357-3A			600		13.6	-	641-50021					
441414	CH-2720-3B	27.0	92,151	208	3	74.8	-	641-36061	288.0 Crated	**2394**	443258	HDWG-27	**270**
441421	CH-2724-3B			240		64.8	-	641-35631					
441438	CH-2748-3B			480		32.4	-	641-35641					
444002	CH-2757-3B			600		26.7	-	641-50021					

ELECTRIC INFRARED CONTROL OPTIONS

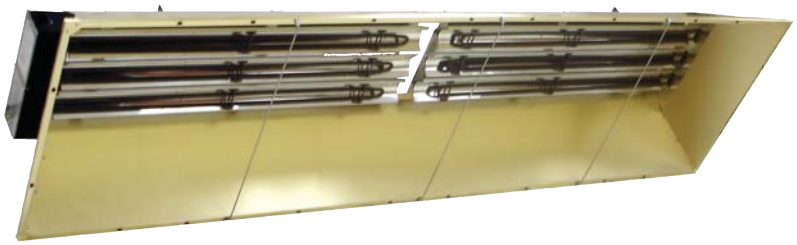
	UPC 686334	MODEL #	DESCRIPTION	Operating Voltage (VAC)	Dimensions (In) Ht.	Wd.	Dp.	WT. (lbs.)	LIST
	486026	GF-SK-1	Ground Fault Sensing Switch	208V - 600V	10.3	10.3	5.0	12	**690**
	589376	DC-SK-1	Disconnect Switch	120V - 600V	5.0	6.0	4.0	5	**318**

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

Control Features:

- (GF-SK-1) Positive "Off" & built-in On/Off rocker switch lights "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.

HEAVY DUTY METAL SHEATH INFRARED HEATERS

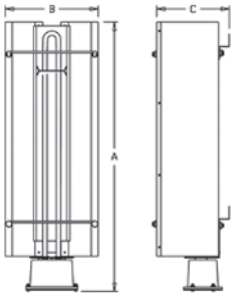


CH-27 kW Models

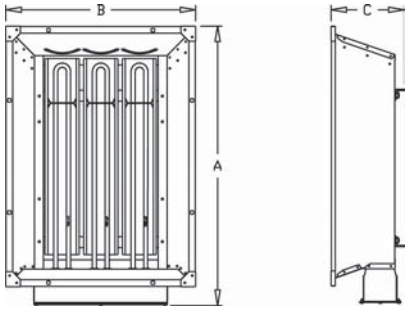
The CH-27 Series includes (2) Terminal Box Assemblies, located on each end of the heater.

DIMENSIONAL DATA

Metal Sheath Heaters Series	DIMENSIONS (in.)		
	A Length	B Wide	C Depth
CH-2	26	9	7.3
CH-4	46.3	9	7.3
CH-6	28.5	19.9	7.5
CH-13	50.5	19.9	7.5
CH-27	96.8	28.3	14.9



CH-2/4 kW



CH-6, 13 & 27 kW

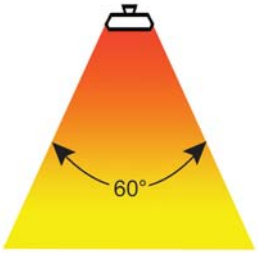
SIZING & INSTALLATION INFORMATION

SIZING CHART - CH SERIES					
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

Recommended Mounting Height	
Heater Series	Mounting Height
1.8 & 2.0kW	8' - 10'
4.5kW	8' - 12'
6.0kW	10' - 14'
13.5kW	12' - 16'
27.0kW	15' - 30'

Mounting Clearance Requirements		
All CH Models	24"	from ceiling
All CH Models	36"	from vertical surface & from another heater
All CH Models	72"	from face of heater to combustible surface
CH-27 Only	87"	from face of heater to combustible surface

Reflector Pattern



ELECTRIC INFRARED SIZING INFORMATION

TYPES OF ELECTRIC INFRARED APPLICATIONS

1. Total Area / Building Heating

Average: **8-20 Watts per Square Foot**

Calculation: **Sq. Ft. of Area x .5 x Desired Temp Rise* = Total Watts Required.**

* - Desired Temperature Rise = Desired Comfort Level - Outside Design Temp

Note: Above calculation is an **AVERAGE ONLY**. Always Reference Fostoria's Heating Manual to determine ALL heat loss calculations.

Principles of Total Area / Building Heating:

~Always complete a "Heat Loss Calculation"
~Concentrate heat on perimeter areas
~Avoid mounting below 8' ft.
~Avoid mounting unit directly over an individual's head

2. Indoor Spot Heating

Average: **25-60 Watts per Square Foot**

Calculation: **Sq. Ft. of Area x 1 x Desired Temp Rise = Total Watts Required.**

Principles of Indoor Spot Heating:

~Always cross beam patterns
~Always try to heat from both sides of object
~Avoid mounting below 8' ft.
~Avoid mounting unit directly over an individual's head

3. Outdoor Spot Heating

Average: **2 Watts per Square Foot per Desired Temp. Rise**

Calculation: **Sq. Ft. of Area x 2 x Desired Temp Rise = Total Watts Required.**

Principles of Outdoor Spot Heating:

~Use Quartz Lamps or Quartz Tubes
~Always use the MTM, OCH & RPH Heaters
~Never use 90-Degree Patterns
~Strive for Blanket Coverage of Area

4. Snow and Ice Control Heating System

Average: **85-110 Watts per Square Foot**

Calculation: **Sq. Ft. of Area x Required Watts / Sq.Ft.* = Total Watts Required.**

* - Required Watts = Table B Result (Table A: Factor I + Factor II)

Principles of IR Snow & Ice Control Systems:

~Always use Quartz Lamps
~Always use the Mul-T-Mount Heater
~Strive for Blanket Coverage of Area
~Never use 90-Degree Patterns
~Never Mount Above 16' ft.

Table A

Factor I		*Factor II*	
Outside Design Temp. Deg.F	Value	Annual Snowfall (In.)	Value
-20 to -60 Deg.F	4	80" to 115"	4
-10 to -19 Deg.F	3	50" to 79"	3
0 to -9 Deg.F	2	20" to 49"	2
+19 to 1 Deg.F	1	10" to 19"	1
+40 to 18 Deg.F	0	0" to 9"	0

Note: Must Reference Table 4 of Fostoria's Heating Manual to determine the outside design temp. and the annual snowfall for the designated area.

Table B

Total Value (From TABLE A)	*Watt Densities per Square Foot (*)*		
	Exposed	Semi-Protected	Protected
8	200	185	160
7	175	160	145
6	125	110	100
5	110	100	90
4	100	90	85
3	95	80	75
2	90	70	65

(*) - Exposed = Totally Open Area; Semi-Protected = One side closed plus roof or overhang; Protected = Three sides plus roof or overhang.

NOTE: Always refer to the Fostoria Electric Infrared Heating Manual to verify all calculations. The above formulas are for average heating requirements in average locations.