

MUL-T-MOUNT INFRARED HEATERS

OVERHEAD INFRARED HEATERS

FOR SNOW & ICE CONTROL, OUTDOOR SPOT HEATING
& ALL INDOOR HEATING APPLICATIONS



3-Lamp Series
Stainless Steel

2-Lamp Series
Brown Enamel
(or Stainless Steel)

208, 240, 277 & 480 VOLT APPLICATIONS

BENEFITS

- Heats people and objects to a desired temperature level, creating a safe and clean atmosphere.
- High-intensity radiant infrared heating element provides the maximum heat output in less than 60-seconds.
- Provides staging and zone control flexibility.
- Highly engineered and proven, our gold anodized aluminum reflectors and end caps provide maximum reflectivity and longevity for a variety of applications.

APPLICATION SOLUTIONS

- Outdoor spot heating for hotel & hospital entrance areas, patio & restaurant areas, bus shelters, airport terminals, etc.
- Indoor spot heating for over workstation areas, vestibule areas, high-bay buildings, process applications for parts, etc.
- Heaters can provide a snow & ice control-heating system by suspending units accordingly. By heating surfaces to desired temperature levels, this will eliminate the build-up of snow and ice for an affected area.

WHAT TO LOOK FOR

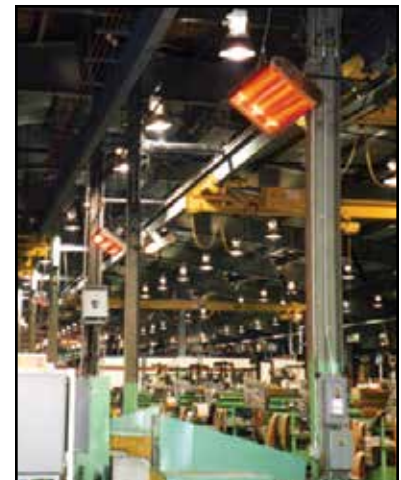
- Measure the affected area that requires the infrared heating system.
- Determine heating application type (indoor or outdoor application).
- No controls included with these heaters, all units require direct wire installations!



Snow & Ice Control Heating Systems



Outdoor Spot Heating



Indoor Spot Heating

FEATURES

- ETL C/US listed for suspended, totally exposed outdoor and indoor spot comfort heating applications, including exterior snow/ice control applications.
- ETL C/US listed for recessed applications.
- Clear quartz lamp heating elements operate at 96% radiant efficiency & offered in both 2-Lamp & 3-Lamp heaters that operate on 208, 240, 277 or 480 Volt.
- Quartz lamps are short wavelength infrared elements that generate a bright light providing 8-lumens/watt.
- Gold anodized one-piece reflector offered in 30°, 60°, or 90° symmetrical patterns for various distribution of infrared heat (*).
- Feature two different housing materials: Stainless steel or galvanized steel painted with a high temperature brown powder-coat.
- Built-in surface mounting bracket allows for fixture adjustment up to a 45° horizontal tilt.
- 2-Lamp heaters wire for single-phase operation (consult factory for 3-phase wiring).
- All 3-Lamp heaters wire for either single or three-phase wiring.

Fostoria's "Mul-T-Mount" (MTM) high-density, quartz lamp infrared heaters provide instantaneous radiant heat in areas where a forced air heater would require more time and energy to heat. Electric infrared heats people and objects directly, and re-radiates in the form of convection heat. Objects within the reflector/heat pattern such as tools, work benches and floors are quickly warmed.

The 2 - lamp element MTM heater is offered in either 20 ga. SS (Stainless Steel) or galvanized steel with brown powder-coat finish. The 3 - lamp element MTM heater is only offered in a 20 ga. SS housing cavity. All Mul-T-Mount heaters include clear quartz infrared lamps and are equipped with engineered gold anodized aluminum reflectors and end caps.

This is the only infrared heater designed for snow and ice control applications, because of the generated heat output and versatility. These units are the best infrared heaters for ceilings and overhangs that exceed 10'.



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2-LAMP MTM SERIES

PAINTED HOUSING		STAINLESS STEEL HOUSING		kW	BTUs	VOLTS	AMPS	PHASE	REFLECTOR PATTERN (*)	WT. (lbs.)	REPL ELEMENT
GRAINGER MODEL #	MFG MODEL #	GRAINGER MODEL #	MFG MODEL #								
5E159	222-30-TH-208V	3UD51	222-30-THSS-208V	3.2	10,922	208	15.4	1	30° Symmetrical	20	1UMN3
4E217	222-30-TH-240V	3UD52	222-30-THSS-240V			240	13.3				1UMN4
5E160	222-30-TH-277V	3UD53	222-30-THSS-277V			277	11.6				29XR22
2KCX3	222-30-TH-480V	2KCX4	222-30-THSS-480V			480	6.7				2KCZ8
5E161	222-60-TH-208V	3UD54	222-60-THSS-208V			208	15.4				1UMN3
4E218	222-60-TH-240V	3UD55	222-60-THSS-240V			240	13.3				1UMN4
5E162	222-60-TH-277V	3UD56	222-60-THSS-277V			277	11.6		29XR22		
2KCX5	222-60-TH-480V	2KCX6	222-60-THSS-480V			480	6.7		2KCZ8		
5E163	222-90-TH-208V	3UD57	222-90-THSS-208V			208	15.4		1UMN3		
5E164	222-90-TH-240V	3UD58	222-90-THSS-240V			240	13.3		1UMN4		
5E165	222-90-TH-277V	3UD59	222-90-THSS-277V			277	11.6		29XR22		
2KCX7	222-90-TH-480V	2KCX8	222-90-THSS-480V			480	6.7		2KCZ8		
2KCX9	342-30-TH-480V	2KCY1	342-30-THSS-480V	5.0	17,065	480	10.4	1	30° Sym.	25	2KDA1
2KCY2	342-60-TH-480V	2KCY3	342-60-THSS-480V						60° Sym.		2KDA1
2KCY4	342-90-TH-480V	2KCY5	342-90-THSS-480V						90° Sym.		2KDA1
4E219	462-30-TH-480V	3UD66	462-30-THSS-480V	7.3	24,915	480	15.2	1	30° Sym.	32	1UMN5
4E220	462-60-TH-480V	3UD67	462-60-THSS-480V						60° Sym.		1UMN5
2KCY6	462-90-TH-480V	2KCY7	462-90-THSS-480V						60° Sym.		1UMN5

OPTIONAL VARIABLE HEAT CONTROLLER - VHC-32



FEATURES

- Designed to operate quartz lamp or quartz tube heating elements up to a maximum of 3200 watts
- 208/240V rated "in-line" single phase variable controller device can heat loads up to 15.4 amps
- Positive "Off" and built-in On/Off rocker switch lights red when the controller is operational
- NEMA-1 aluminum enclosure with a stainless steel face plate

BENEFITS

- Designed for wall mounting in a semi-protected areas
- Will operate the following infrared heating elements
 - One (1) or two (2) quartz lamps totaling up to 3200W or;
 - One (1) or two (2) quartz tubes totaling up to 3000W

The VHC-32 controller is used in conjunction with Fostoria's Electric Infrared Heaters (new or existing) to provide the ability to control the "delivered" amount of wattage from the unit, thus regulating the heating output to the target. This device allows you to control the output from zero to 100%, based on your individual desired comfort level!



MFG MODEL #	OPERATING WATTAGE
All MTM 222-Series (208 & 240V)	3200
OCH-46-208V	2000
OCH-46-240V	2000
OCH-57-208V	3000
OCH-57-240V	3000
RPH-208V-A	1600
RPH-240V-A	1600

GRAINGER MODEL #	MFG MODEL #	DESCRIPTION	FITS MODELS	WT. (lbs.)
1UMN2	VHC-32	Variable Heat Controller	222-Series 208 & 240V, RPH & OCH-Series	3



MUL-T-MOUNT INFRARED HEATERS

3-LAMP MTM SERIES



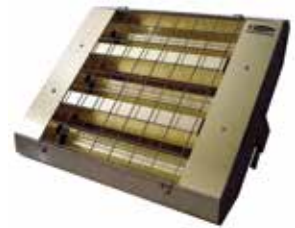
STAINLESS STEEL HOUSING (3-LAMP)		kW	BTUs	VOLTS	AMPS	PHASE	REFLECTOR PATTERN (*)	WT. (lbs.)	REPLACEMENT ELEMENT
GRAINGER MODEL #	MFG MODEL #								
3UD60	223-30-THSS-208V	4.8	16,382	208	13.3	3/1	30° Symmetrical	25	1UMN3
3UD61	223-30-THSS-240V			240	11.5				1UMN4
2KCY8	223-30-THSS-480V			480	5.8				2KCZ8
3UD62	223-60-THSS-208V			208	13.3		60° Symmetrical		1UMN3
3UD63	223-60-THSS-240V			240	11.5				1UMN4
2KCY9	223-60-THSS-480V			480	5.8				2KCZ8
3UD64	223-90-THSS-208V			208	13.3		90° Symmetrical		1UMN3
3UD65	223-90-THSS-240V			240	11.5				1UMN4
2KCZ1	223-90-THSS-480V			480	5.8				2KCZ8
2KCZ2	343-30-THSS-240V	7.5	25,298	240	18.0	3/1	30° Symmetrical	33	2KCZ9
2KCZ3	343-30-THSS-480V			480	9.0				2KDA1
2KCZ4	343-60-THSS-240V			240	18.0				60° Symmetrical
2KCZ5	343-60-THSS-480V			480	9.0		2KDA1		
2KCZ6	343-90-THSS-240V			240	18.0		90° Symmetrical		
2KCZ7	343-90-THSS-480V			480	9.0				2KDA1
3UD68	463-30-THSS-480V			10.95	37,372		480		13.1
3UD69	463-60-THSS-480V	60° Symmetrical	1UMN5						
3UD70	463-90-THSS-480V	90° Symmetrical	1UMN5						

MUL-T-MOUNT ACCESSORIES

GRAINGER MODEL #	MFG MODEL #	DESCRIPTION		FOR USE WITH	WT. (lbs.)
2KDD1	VMB-41-SS	Wall Mounting Brackets (2)		All Mul-T-Mount Models	12
2KDD2	CHWG-222	Stainless Steel Wire Guards		222 Series	2
2KDD3	CHWG-342			342 Series	
2KDD4	CHWG-462			462 Series	
2KDD5	CHWG-223			223 Series	
2KDD6	CHWG-343			343 Series	
2KDD7	CHWG-463			463 Series	
				Recessed Mounting Frames (UL)	
		Ceiling Cutout (in.)	Frame Size (in.)		
3UD76	RMF-222-SS-A	27 x 17-7/8	29-1/8 x 20	222 Series Stainless	6
3UD75	RMF-222-A	27 x 17-7/8	29-1/8 x 20	222 Series Painted	
2KDD8	RMF-342-SS-A	36 x 17-7/8	38-1/8 x 20	342 Series Stainless	9
2KDD9	RMF-342-A	36 x 17-7/8	38-1/8 x 20	342 Series Painted	
3UD79	RMF-462-SS-A	49 x 17-7/8	51-1/8 x 20	462 Series Stainless	11
2KDE2	RMF-462-A	49 x 17-7/8	51-1/8 x 20	462 Series Painted	
3UD77	RMF-223-SS	32 x 29-3/8	34-1/8 x 31-1/2	223 Series Stainless	15
2KDE1	RMF-343-SS	41 x 29-3/8	43-1/8 x 31-1/2	343 Series Stainless	18
2KDE3	RMF-463-SS	54 x 29-3/8	56-1/8 x 31-1/2	463 Series Stainless	20
1UMR1	31939009	Red Vycor Sleeves Reduces Quartz Lamp Brightness by 90%		All 1600W Qtz. Lamp	2
2KDA2	31940009			All 2500W Qtz. Lamp	
1UMR2	31941009			All 3650W Qtz. Lamp	
31TP48	632-1620	Red Quartz Lamps; 1.6kw, 208v		222, 223, & RPH Series	2
31TP49	632-1624	Red Quartz Lamps; 1.6kw, 240v			
31TP50	632-2548	Red Quartz Lamps; 2.5kw, 480v			

HEATER WITH WIRE GUARD

Wire guard sold separately



HEATER WITH RECESSED FRAME

Recessed frame sold separately



RUBY RED SLEEVE

Reduces brightness by 90%



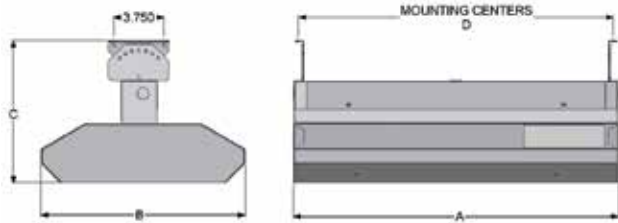
MUL-T-MOUNT INFRARED HEATERS

SIZING CHART - MUL-T-MOUNT SERIES																
Reflective Pattern (°)	Heater Output (kW)	# of Qtz. Lamps	Mounting Heights (feet)							Watts Delivered per Square Foot						
			Heat Pattern Coverage @ Floor Level							8	10	12	14	16	18	20
			8	10	12	14	16	18	20							
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	N/R	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	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	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	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	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	-	-	-	-

N / R = Not Recommended

MOUNTING CLEARANCE REQUIREMENTS

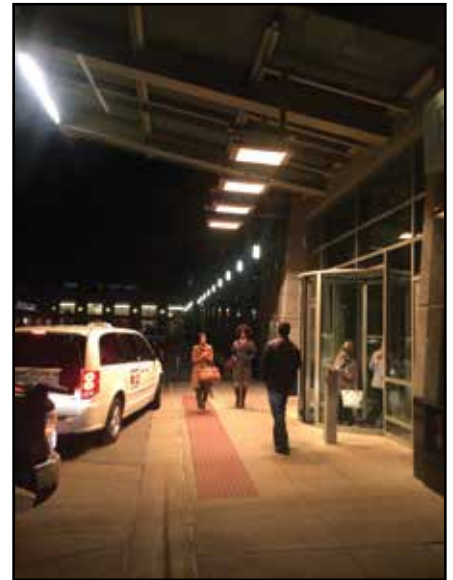
- 2 & 3-Lamp Models 3" from ceiling
- 2&3-Lamp Models 24" from vertical surface
- 2-Lamp Models 72" from face of heater to combustible surface
- 3-Lamp Models 96" from face of heater to combustible surface
- 2 & 3-Lamp Models 36" from another heater



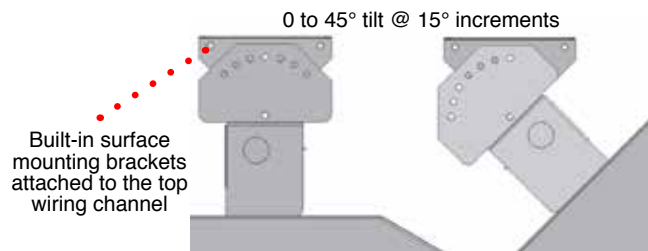
RECOMMENDED MOUNTING HEIGHTS

- 30° Symmetric Reflector - Indoor: 14'-30'
- 60° Symmetric Reflector - Indoor: 12'-18'
- 90° Symmetric Reflector - Indoor: 8'-12'
- 30° Symmetric Reflector - Outdoor: 8'-12'

Outdoor Spot Heating Application



SPECIAL MOUNTING FEATURES





PRODUCT DIMENSIONS						
HEATER SERIES	HEATER (KW)	# OF LAMPS	L	W	H	MTG. CTRS.
222	3.2	2	24"	15"	10.9"	23.5"
223	4.8	3		21.5"		
342	5.0	2	33"	15"	10.9"	32.5"
343	7.5	3		21.5"		
462	7.3	2	46"	15"	10.9"	45.5"
463	10.95	3		21.5"		



ELECTRIC INFRARED REPLACEMENT HEATING ELEMENTS



CLEAR & RED QUARTZ LAMPS	WWG MODEL #	Item #	Watts	Volts	Length (in.)		Fits Model	Lamp Type
					Overall	Heated		
 <p><i>Short Wavelength</i></p>	1UMN3	630-16209	1600	208	19 1/16	16	222/223 or MM24	Clear
	1UMN4	630-16249		240				
	2KCZ8	630-16489		480				
<ul style="list-style-type: none"> Coiled tungsten filament; sealed porcelain end caps; halogen gas filled 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 <p>Note: Item # (*) 630 = Horizontal Burning "Clear" 631 = Vertical OR Horizontal Burning "Clear" 632 = Horizontal Burning "Red"</p>	2KCZ9	630-25249	2500	240	28 1/16	25	342/343 OR MM33	Clear
	2KDA1	630-25489		480				
	31TP46	631-25489		480				
	1UMN5	630-36489	3650	480	41 1/16	38	462/463 or MM46	Red
	31TP48	632-1620	1600	208	19 1/16	16	222/223 or RPH	
	31TP49	632-1624		240				
31TP50	632-2548	2500	480	28 1/16	25	342 or 343		

QUARTZ TUBES	GRAINGER MODEL #	Item #	Watts	Volts	Length (in.)		Fits Model
					Overall	Heated	
 <p><i>Medium Wavelength</i></p>	1UMN6	671-3784	1500	120	39 1/16	34 3/16	OCH-46
	31TP47	671-3785	2000	240			
	1UMN7	671-5060	3000	208	50 1/16	45 3/16	OCH-57
	1UMN8	671-3786	3000	240			
<ul style="list-style-type: none"> 5/8" Diameter frosted quartz envelope Nickel-chrome alloy coiled element with porcelain end caps and pigtailed terminations Approximately 60% radiant efficiency Fast heat-up/cool-down Mechanical ruggedness: Good 	1UMN9	671-3454	450	120	12 15/16	8 7/16	FFH-912B
	1UMP1	671-3492*	550	120	19 1/2	16	FFH-512A
	1UMP2	671-5056	1000	120	18 5/16	14 7/16	CH-2212-1C
	1UMP3	671-5057	1425	240	27 5/16	23 7/16	CH-6424-1C

FLAT PANEL EMITTER ELEMENTS (for discontinued MR, CH & FHK Heaters)

GRAINGER MODEL #	MFG MODEL #	WATTS	VOLTS	Dim. (in.)		Fits "Discontinued" Heater Model		Replaces element
				L	W	Fostoria Model #	Grainger Model #	Grainger Model #
45EM42	64337-022	3150	208	48	3	MR-420-1, CH-420-1C, CH-420-3A	20HN41, 15A734, 2KDA3	20HN55, 15A748, 1UMP7
45EM43	64337-023		240			MR-424-1, CH-424-1C, CH-424-1A	20HN42, 15A735, 2KDA4	20HN56, 15A749, 1UMP8
45EM44	64337-025		480			MR-448-1, CH-448-1C, CH-448-1A	20HN43, 15A736, 2KDA5	20HN57; 15A750, 1UMP9
45EM45	64337-027	4300	208	29	12	MR-620-3, CH-620-3C, CH-620-3A	20HN44, 15A737, 2E971	20HN52, 15A745, 1UMP4
45EM46	64337-028		240			MR-624-3, CH-624-3C, CH-624-3A	20HN45, 15A738, 2E972	20HN53, 15A746, 1UMP5
45EM47	64337-030		480			MR-648-3, CH-648-3C, CH-648-3A	20HN46, 15A739, 2E973	20HN54; 15A747, 1UMP6
45EM48	64337-032	9500	208	51	12	MR-1320-3, CH-1320-3B, CH-1320-3A	20HN47, 15A740, 3E545	20HN55, 15A748, 1UMP7
45EM49	64337-033		240			MR-1324-3, CH-1324-3B, CH-1324-3A	20HN48, 15A741, 3E546	20HN56, 15A749, 1UMP8
45EM50	64337-035		480			MR-1348-3, CH-1348-3B, CH-1348-3A	20HN49, 15A742, 3E547	20HN57; 15A750, 1UMP9
45EM51	64337-038	9500	240	57	12	MR-2724-3, CH-2724-3C, CH-2724-3B	20HN50, 15A743, 3UD71	20HN56, 15A749, 1UMP8
45EM52	64337-040		480			MR-2748-3, CH-2748-3C, CH-2748-3B	20HN51, 15A744, 3UD72	20HN57; 15A750, 1UMP9
45EM53	64337-050	4300	240	27	12	FHK-624-3A	2E529	30PL15, 20HN53, 1UMP5
45EM54	64337-051		480			FHK-648-3A	2E530	30PL16, 20HN54; 1UMP6
45EM55	64337-053	9500	240	49	12	FHK-1324-3A	3E214	30PL18, 20HN56, 1UMP8
45EM56	64337-054		480			FHK-1348-3A	3E215	30PL19, 20HN57; 1UMP9

