Infrared Radiant Heaters

General Information

The major benefit of infrared heating is its ability to transfer heat to a person or object without heating the surrounding air.

As an example, a person doing heavy work requires an air temperature of 66°F to 68°F (19°C to 20°C) to maintain the feeling of warmth, but to provide the same feeling of warmth with infrared heating requires an air temperature of only 55°F to 60°F (13°C to 16°C).

Table 24 – Temperatures

Type of Work	Normal Air Temperature		Equivalent Temperature with Infrared Heating	
	°F	°C	°F	°C
Heavy Work	66 to 68	19 to 20	55 to 60	13 to 16
Light Work	70 to 72	21 to 22	60 to 65	16 to 18
Seated	74 to 76	23 to 24	65 to 70	18 to 21
Swimming Pool	85 to 90	29 to 32	75 to 80	24 to 27

DANGER - HAZARD OF FIRE

Avoid direct contact of heater case with any combustible surfaces. Energized heaters should be spaced so that no combustible surfaces exceed 194˚F (90˚C). For metal sheathed heaters, insulation contamination or moisture accumulation can cause fault to the element sheath generating arcing and releasing molten metal. Proper ground fault protection shall be provided to prevent personal injury and/or property.

Features

Caloritech™ infrared heaters are available in a wide variety of fixtures with a choice of metal sheathed (type C), quartz tube (type T), or quartz lamp (type L) heating elements. Quartz lamp heaters are more efficient than quartz tube heaters which are in turn more efficient than metal tube heaters.

Where vibration or mechanical shock risk exists, do not use quartz tube or quartz lamp heaters. Quartz tubes and lamps must be mounted horizontal. Use metal sheathed heaters in these instances. Terminal ends must be protected from severe moisture or contaminating vapours. Use heaters with moisture resistant terminal housings (See Type R, page C41 and Portable Radiant Heaters, page C44) in these environments. Two fixture types are available. The deep reflector type gives better radiation at greater than normal mounting height.

Life Expectancy

The normal life expectancy of a radiant heater depends, in part, on heater watt density and operating conditions. Applications characterized by high ambient temperatures or frequent switching are the most demanding. Note that the heaters are warranted only for defects in material and workmanship. Estimates of life expectancy for a particular application are available on request.

Application

In general, the application of infrared heaters is complex and allowances must be made for in-field adjustments to output intensity and heater positioning.

Space heating applications are reasonably straightforward. Pay close attention to the energy spread to achieve maximum utilization.

For process heating applications, it may be necessary to run a series of tests to establish the most satisfactory heating method. Thermon Heating Systems' technical sales specialists can help you to achieve the best results.

Energy Spread

Use the table below to determine the effective energy spread for the 45°, 60° and 70° fixtures. Proper application of this information will help in establishing an efficient layout for uniform infrared coverage of the product or space.

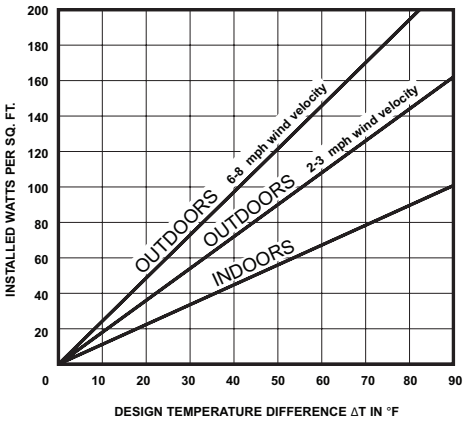


Figure 38 – Recommended installed watts/sq.ft of floor area using quartz lamp heaters

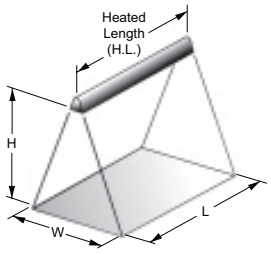


Figure 39

Table 25 – Radiant Coverage at Various Heights

Spread*	Width (W)	Length (L)
45°	0.83H	H + H.L.*
60°	1.15H	
70°	1.4H	

Note: * See listings for H.L. (heated length)

Selection

Table 26 – Applications and Elements

Application	Incoloy® Tubular Element	Quartz Tube Element	Quartz Lamp Element
Comfort Heating Application	-	-	-
Arenas	✓	-	-
Assembly Areas	✓	-	✓
Auditoriums	✓	✓	✓
Bathrooms	-	✓	-
Booths	✓	✓	-
Bowling Alleys	✓	✓	✓
Brooders for Chickens, etc.	✓	✓	-
Building Entrances	✓	-	✓
Bus Stations and Shelters	✓	✓	✓
Car Washes especially coin operated	✓	-	✓
Churches (Especially rural)	✓	✓	-
Drive-ins (Restaurants, Banks, etc)	✓	✓	✓
Entrances	-	-	✓
Exhibition Halls	✓	-	✓
Factories	✓	-	✓
Farm Animals	✓	-	✓
Farm Sheds	✓	✓	-
Garages	✓	-	✓
Gatehouses	✓	-	✓
Grandstands	-	-	✓
Gymnasiums	✓	-	✓
Hangers	✓	-	✓
Hospital Emergency Entrances	-	-	✓
Hotel Entrances	✓	-	✓
Loading Platforms	-	-	✓
Milk Parlours	✓	✓	-
Outdoor Cafes	-	✓	✓
Skating Shelters	✓	-	-
Ski Chalets	✓	-	-
Snow Melting (Refer to Factory)	-	-	✓
Spot heating, indoors	✓	✓	✓
Spot heating, outdoors	✓	-	✓
Stadiums	-	-	✓
Subway Stations	✓	-	✓
Process Heating Applications	-	-	-
Baking (curing) paint on metal	✓	✓	-
Baking (curing) paint on plastic or wood	-	✓	✓
Baking cakes, etc	-	-	✓
Blanching vegetables	✓	-	-

Application	Incoloy® Tubular Element	Quartz Tube Element	Quartz Lamp Element
Boosting Temperature in existing ovens	-	-	✓
Broiling chickens, etc	✓	✓	✓
Conveyorized Systems	✓	-	✓
Curing Concrete	✓	-	✓
Dehydrating	✓	-	-
Drying Abrasive Powder	✓	-	-
Drying Concentrates	-	-	✓
Drying Gum on Powder (ex. Envelopes and textiles)	✓	✓	✓
Drying Paint on textiles - Heavy	-	✓	✓
Drying Paint on textiles - Light	-	✓	✓
Drying paint or print on paper, plastic	✓	-	-
Drying soil, clay, sand, etc	✓	-	-
Frit drying in ceramic processes	✓	-	-
Ice-prevention in chutes, hoppers, etc.	-	-	✓
Melting snow (dump sites, etc.) Refer to Factory	✓	-	-
Mirror coatings	-	-	✓
Paper Machinery	-	-	✓
Peeling apples, etc	✓	-	-
Preheating metal prior to welding	-	-	✓
Silk Screen drying	✓	-	✓
Thawing frozen or or coal in railroad cars for easier dumping	-	-	✓
Thawing ice	-	-	✓
Thawing soil	✓	-	-
Vacuum Forming	-	-	-

Control Options

Percentage Timers

Percentage timers (input controllers) are used mainly for pulsing power to metal tubular element type radiant heaters. Where load voltage and current ratings exceed the timer's contact rating, the timer can be used to switch contactors (see Section F). Percentage timers can not be effectively used on quartz lamp type radiant heaters and have restricted use on quartz tube type heaters.

The OKT features a synchronous motor driven cam which closes a snap action switch for a percentage of 30 second **"ON"** time. The adjustment knob sets the pointer to an **"ON"** time of 0 to 100%. For instance, a timer set to 50% (mid scale) would allow full voltage to the heater(s) for 15 seconds and no voltage for 15 seconds thus reducing the average heat output. Standard features include a plug-in style mounting, an electrically isolated pilot light and a cycle progress pointer.

Figure 41 – Percentage timer

Thermostatic Control

Thermostatic control is used primarily for indoor applications and consists of an indoor thermostat, or an indoor thermostat combined with an outdoor thermostat. Rooms heated with infrared heaters can normally be maintained at lower temperatures and still be in the comfort range.

Thermostats should be located in the area to be heated but not directly exposed to the heater beam pattern. Thermostats may be shielded by placing a reflective cover over top.

Thermostatic controls can be used in conjunction with a percentage timer for cost efficient space heating. Two thermostats (or one 2-stage thermostat) are required.

In the above circuit, one thermostat is set at the maximum required room temperature and one is set at the minimum desired room temperature. The input controller is adjusted to provide modulated infrared heat when the space temperature is between the above limits.

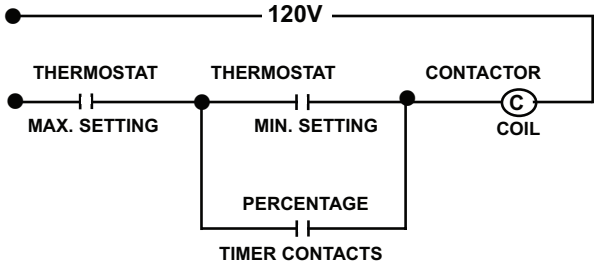


Figure 40

Step and Continuous Control

Larger installations may require custom control panels for more sophisticated zone control using staging and SCRs. Refer to Section D or consult your nearest Caloritech™ representative to aid you in selecting the proper type of control for your individual requirements.

Protective Wire Guards

Protective wire guards can be factory installed on all styles of infrared heaters.

Guards are recommended when there is a danger of accidental contact with the heating element by a person, animal or object.

Table 27 – Wire Guards for Infrared Radiant Heaters

Heated Length		OKA/OKB	OKD	OKH	OK3
in	mm	Catalog No.			
5	127	WGA012	WGD012	WGH012	
10	254	WGA025	WGD025	WGH025	
14	356	WGA035	–	WGH035	
16	406	WGA040	WGD040	WGH040	
19	483	WGA048	–	WGH048	
20	508	WGA050	WGD050	WGH050	
25	635	WGA063	WGD063	WGH063	
29	737	WGA073	–	WGH073	
32	813	WGA081	WGD081	WGH081	–
34	864	WGA086	–	WGH086	
38	965	WGA096	WGD096	WGH096	
40	1041	WGA104	–	WGH104	
47	1194	WGA119	–	WGH119	
50	1270	WGA127	WGD127	WGH127	
59	1499	WGA149	–	WGH149	
62	1575	WGA157	WGD157	WGH157	
71	1803	WGA180	–	WGH180	
72	1829	–	–	–	WGT182

OKA Series (Process Heating)

Applications

Caloritech™ OKA infrared radiant heaters are primarily designed for industrial applications such as:

- Conveyorized or batch type ovens
- Degreasing
- Weld preheating
- Roll heating
- Curing, drying, softening of resins, vinyls and plastics
- Baking, drying, curing of paint, lacquers and adhesives
- Defrosting soil prior to pouring concrete
- Curing concrete in winter construction
- Thawing ore and coal in railroad cars for easier dumping

Features

Available with a choice of single or dual Incoloy® tubular elements, quartz tubes, or quartz lamps. Anodized and chemically brightened extruded aluminum reflector. Custom mounting frames and carts to suit individual requirements can be provided upon request (check factory). Also see Construction, page C44.

For wiring, use standard 392°F (200°C) supply wires.

Type C – Single Tubular Element

Generally used in conveyorized or batch type process heating applications requiring far infrared for drying or curing where a small economical unit is preferred. The mineral insulated alloy sheath heating element enables the unit to withstand splashing and vibration and is the most durable of the three heat sources.

Table 28 – Type C 60° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
0.95	120, 208, 240	29	737	20	508	OKA299C6	2.5	1.1
1.5		41	1041	32	813	OKA411C6	3.4	1.5
1.9		47	1194	38	965	OKA471C6	4.2	1.9
2.0	208, 240, 480, 600	41	1041	32	813	OKA412C6	3.8	1.7
2.3		47	1194	38	965	OKA472C6	4.3	1.9
3.0		59	1499	50	1270	OKA593C6	5.2	2.4
3.8		71	1803	62	1575	OKA713C6	6.2	2.8

Note: For 45° spread, last number in catalog no. is changed from “6” to “4”.

DANGER - HAZARD OF FIRE

See warning located at the start of Infrared Radiant Heater Section.

Type E – Double Tubular Element

With two series wired heating elements in each reflector, these units are normally used in industrial applications where a rugged, efficient, high heat concentration is required. Applications include degreasing, weld preheating, roll heating, drying, sterilization, etc.

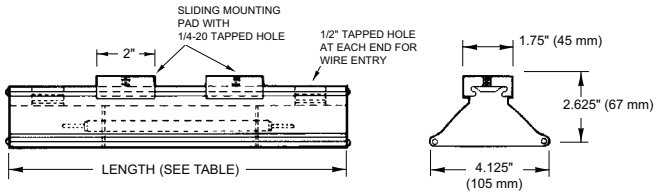


Figure 42

Table 29 – Type E 60° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
1.8	208, 240, 480, 600	29	737	20	508	OKA291E6	3.5	1.6
3.2		41	1041	32	813	OKA413E6	4.8	2.2
3.8		47	1194	38	965	OKA473E6	5.4	2.5
5.0		59	1499	50	1270	OKA595E6	6.7	3.0
6.2		71	1803	62	1575	OKA716E6	8.0	3.6

To Order Specify

- Quantity
- Catalog number
- Voltage
- Wattage

Type R – Hairpin Tubular Element with Moisture Resistant Terminal Housing

Type R heaters are for use in outdoor installations or areas subject to periodic washdown.

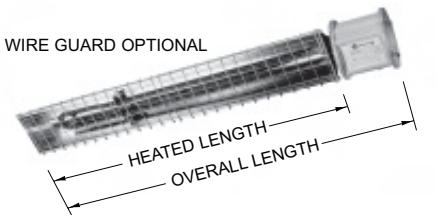


Figure 43 – Type R

Table 30 – Type R 60° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
1.1	208, 240 480, 600	18.25	463	14	356	OKA141H6R	2.9	1.3
1.6		23.25	590	19	483	OKA191H6R	4.8	2.2
2.1		29.25	743	25	635	OKA252H6R	5.4	2.5
2.5		33.25	844	29	737	OKA292H6R	5.8	2.6
3.0	208, 240 480, 600	38.25	971	34	864	OKA343H6R	6.4	2.9
3.6		45.25	1149	41	1041	OKA413H6R	7.1	3.2
4.2		51.25	1301	47	1194	OKA474H6R	7.8	3.5
5.3		63.25	1606	59	1499	OKA595H6R	9.1	4.1
6.5		75.25	1911	71	1803	OKA716H6R	10.4	4.7

Note: 1.1 kW unit also available 120V.

Type T – Quartz Tube Element

These units are commonly used in industrial applications where medium intensity infrared heat is required such as paint spray booths, curing, drying and softening of resins, vinyls, or plastics.

Note: Quartz tube fixtures must be mounted horizontally.

Table 31 – Type T 60° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
0.8	120, 208, 240	25	635	16	406	OKA258T6	2.6	1.2
1.6		41	1041	32	813	OKA411T6	3.8	1.7
2.5	208, 240, 480, 600	59	1499	50	1270	OKA592T6	5.0	2.3
3.1		70	1803	62	1575	OKA713T6	5.8	2.6

To Order Specify

- Quantity
- Catalog number
- Voltage
- Wattage

Type F – Double Quartz Tube Elements

For use in applications where high intensity heat is required but the light emitted by quartz lamps would be objectionable.

Note: Quartz tube fixtures must be mounted horizontally.

Table 32 – Type F 60° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
1.6	120, 208, 240	25	635	16	406	OKA251F6	3.2	1.5
3.2		41	1041	32	813	OKA413F6	4.6	2.1
5.0	208, 240, 480, 600	59	1499	50	1270	OKA595F6	6.1	2.8
6.2		71	1803	62	1575	OKA716F6	7.1	3.2

Type L – Quartz Lamp Element

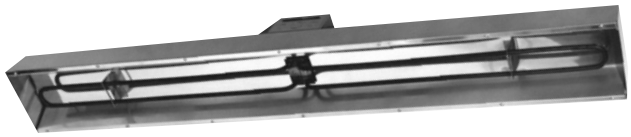
These are widely used in industrial applications where high intensity radiation is required and where it is essential to turn the heat on or off instantaneously. They are commonly used for baking, drying and curing items such as paint, varnishes, lacquers, and adhesives, for softening plastics and for food processing.

Note: Quartz lamp fixtures must be mounted horizontally.

Table 33 – Type L 60° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
0.5	120	14	356	5	127	OKA145L6	1.9	0.9
1.0	240	19	483	10	254	OKA191L6	2.2	1.0
1.6	208,240	25	635	16	406	OKA251L6	2.6	1.2
2.5	480, 600	34	864	25	635	OKA342L6	3.3	1.5
3.8	600	47	1194	38	965	OKA473L6	4.2	1.9

OK3 Series (Process or Comfort Heating)



Application

The OK3 infrared radiant heater is used where an extra high density rugged heat source is required. It is suited for process or comfort heating.

Features

This unit features two Incoloy® tubular elements which are designed for operation under severe working conditions. Thermal insulation decreases heat losses, increases efficiency, and reduces power required. Tarnish free, high lustre, aluminum reflector increases efficiency by concentrating energy on the area to be heated (energy spread approximately 60°).

Models are available with general purpose or weatherproof terminal boxes to meet a wide variety of special process heating applications.

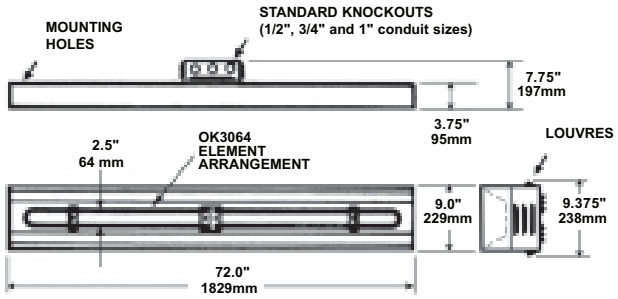


Figure 44

DANGER - HAZARD OF FIRE

See warning located at the start of Infrared Radiant Heater Section.

Table 34 – Type OK3 60° Spread

kW	Standard Voltages	Catalog No.		Shipping Weight	
		General Purpose Housing	Moisture Resistant Housing	lb	kg
6.4	208, 240, 480, 600	OK3064	OK3064R	38	17.4
8.0		OK3080	OK3080R		
10.0		OK3100	OK3100R		

OKB, OKH, OKD Series (Comfort Heating)

Applications

- Outdoor grandstands
- Indoor arenas
- Indoor pools
- Churches and halls
- Patios
- Outdoor shelters
- Spot heating in large unheated buildings and garages
- Entry vestibules
- Storefront snow melting
- Warehouse loading bays
- Work areas in farm buildings

Features

All units are available with Incoloy® tubular, quartz tube, or quartz lamp type elements. Extruded aluminium, anodized and chemically brightened reflectors are standard. Tilting accessories are not required; units come complete with swivel bracket and set screw adjustment. Eyebolts are supplied for chain mounting. Units may also be surface mounted to recessed outlet box on non-combustible surfaces. Use 194°F (90°C) wires.

Tilting accessories are not required. Simply adjust set screw at one end to achieve desired degree horizontal tilting. Eyebolts with holes for chain-mounting are provided.

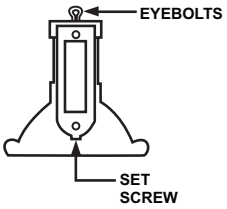


Figure 45 – Tilting accessories are not required. Simply adjust set screw at one end to achieve desires degree horizontal tilting. Eyebolts with holes for chain-mounting are provided.

DANGER - HAZARD OF FIRE

Avoid direct contact of heater case with any combustible surfaces. Energized heaters should be spaced so that no combustible surfaces exceed 194˚F (90˚C). For metal sheathed heaters, insulation contamination or moisture accumulation can cause fault to the element sheath generating arcing and releasing molten metal. Proper ground fault protection shall be provided to prevent personal injury and/or property.

OKB Series (Comfort Heating)

OKB

Type C – Single Tubular Element

Commonly used for indoor spot heating applications where a great amount of heat is not required and where the mounting height is relatively low. Example installations would include churches, garages, and indoor pools.

Table 35 – Type C 60° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
0.95	120, 208, 240	31.5	800	20	508	OKB299C6	5.1	2.3
1.5		43.5	1105	32	813	OKB411C6	6.8	3.7
1.9		49.5	1257	38	965	OKB471C6	8.0	3.6
2.0	208, 240 480, 600	43.5	1105	32	813	OKB412C6	7.2	3.3
2.3		49.5	1257	38	965	OKB472C6	8.1	3.7
3.0		61.5	1562	50	1270	OKB593C6	9.9	4.5
3.8		73.5	1867	62	1575	OKB713C6	11.7	5.3

Note: For 45°spread, last number in catalog number is changed from “6” to “4”.

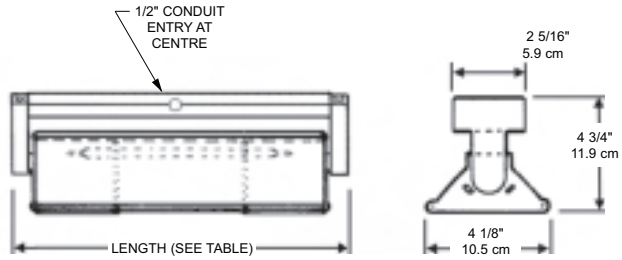


Figure 46

Type E – Double Tubular Element

Ideal for heating small indoor areas where a more intense heat is required and where the light emitted by a quartz lamp would be objectionable.

Table 36 – Type E 60° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
1.8	208, 240, 480, 600	31.5	800	20	508	OKB291E6	6.0	2.7
3.2		43.5	1105	32	813	OKB413E6	8.2	3.7
3.8		49.5	1257	38	965	OKB473E6	9.2	4.2
5.0		61.5	1562	50	1270	OKB595E6	11.4	5.2
6.2		73.5	1867	62	1575	OKB716E6	13.5	6.1

DANGER - HAZARD OF FIRE

See warning located at the start of Infrared Radiant Heater Section.

Type T – Quartz Tube

Ideal for indoor and outdoor applications where fast heat up and no light is required such as canopies, patios and garages.

Note: Quartz tube fixtures must be mounted horizontally.

Table 37 – Type T 60° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
0.8	120, 208, 240	27.5	699	16	406	OKB258T6	4.9	2.2
1.6		43.5	1105	32	813	OKB411T6	7.1	3.2
2.5	208, 240, 480, 600	61.5	1562	50	1270	OKB592T6	9.7	4.4
3.1		73.5	1867	62	1575	OKB713T6	11.3	5.1

Type L – Quartz Lamp

For use in indoor or outdoor comfort heating applications where the mounting height is greater than 15' and a small compact unit is required.

Note: Quartz lamp fixtures must be mounted horizontally.

Table 38 – Type L 60° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
0.5	120	16.5	419	5	127	OKB145L6	3.4	1.5
1.0	240	21.5	547	10	254	OKB191L6	4.1	1.9
1.6	208, 240	27.5	699	16	406	OKB251L6	4.9	2.2
2.5	480, 600	36.5	927	25	635	OKB342L6	6.2	2.8
3.8	600	49.5	1257	38	965	OKB473L6	8.0	3.6

To Order Specify

- Quantity
- Catalog number
- Voltage
- Wattage

OKH Series (Comfort Heating)

Type C – Incoloy® Tubular Element

Ideal for arenas and other indoor applications where a larger, more rugged unit is required and where the light emitted from a quartz lamp would be objectionable. Excellent for indoor comfort heating applications such as factory work stations or isolated service booths where good temperature control is required.

Table 39 – Type C 45˚ Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
0.95	120, 280, 240	31.5	800	20	508	OKH299C4	7.7	3.5
1.5		43.5	1105	32	813	OKH411C4	10.2	4.6
1.9		49.5	1257	38	965	OKH471C4	11.9	5.4
2.0	20, 240, 480, 600	43.5	1105	32	813	OKH412C4	10.6	4.8
2.3		49.5	1257	38	965	OKH472C4	11.9	5.4
3.0		61.5	1562	50	1270	OKH593C4	14.6	6.6
3.8		73.5	1867	62	1575	OKH713C4	17.3	7.9

Note: For 70° spread, last number in catalog number is changed from “4” to “7”.

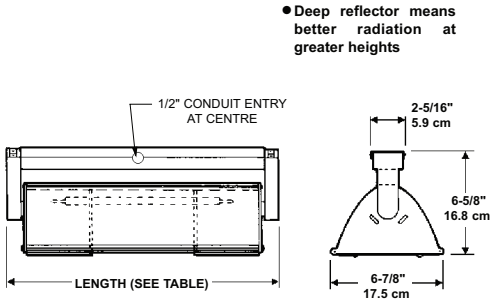


Figure 47

To Order Specify

- Quantity
- Catalog number
- Voltage
- Wattage

DANGER - HAZARD OF FIRE

See warning located at the start of Infrared Radiant Heater Section.

Type R – Hairpin Tubular Element with Moisture Resistant Terminal Housing

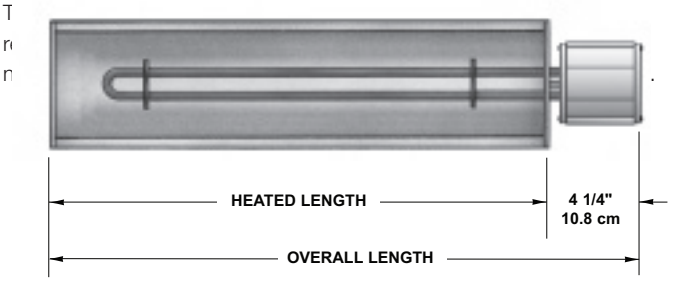


Figure 48

Note: This model does not have the tilting fixture. Sliding mounting pads with hooks are provided.

Table 40 – Type R 60° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
1.6	208, 240, 480, 600	23.25	590	19	483	OKH191H6R	6.3	2.9
2.1		29.25	742	25	635	OKH252H6R	7.4	3.4
3.0		38.25	971	34	864	OKH343H6R	9.0	4.1
4.2		51.25	1301	47	1194	OKH474H6R	11.3	5.1
5.3		63.25	1606	59	1499	OKH595H6R	13.5	6.1
6.5		75.25	1911	71	1803	OKH716H6R	15.6	7.1

Type T – Quartz Tube Element

Used in applications similar to the quartz lamp where light emitted by the lamp would be undesirable. Maintains high density at greater than normal mounting heights.

Note: Quartz tube fixtures must be mounted horizontally.

Table 41 – Type T 45° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
0.8	120, 208, 240	27.5	699	16	406	OKH258T4	7.2	3.3
1.6		43.5	1105	32	813	OKH411T4	10.6	4.8
2.5	208, 240, 480, 600	61.5	1563	50	1270	OKH592T4	14.3	6.5
3.1		73.5	1867	62	1575	OKH713T4	16.8	7.6

Type L – Quartz Lamp Element

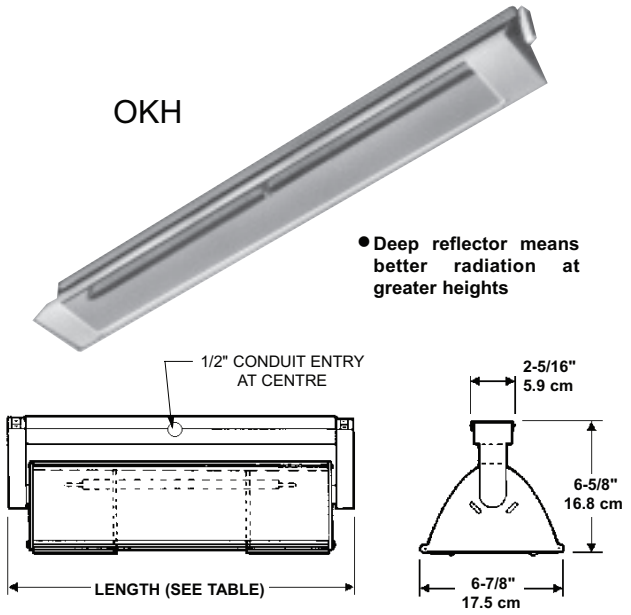


Figure 49

Excellent for indoor and outdoor areas where increased density at high mounting heights is essential and light emitted could be used to an advantage. For example: race tracks and other outdoor stadiums, parking garage amps, aircraft hangars and high bay industrial buildings.

Note: Quartz lamp fixtures must be mounted horizontally.

Table 42 – Type L 45° Spread

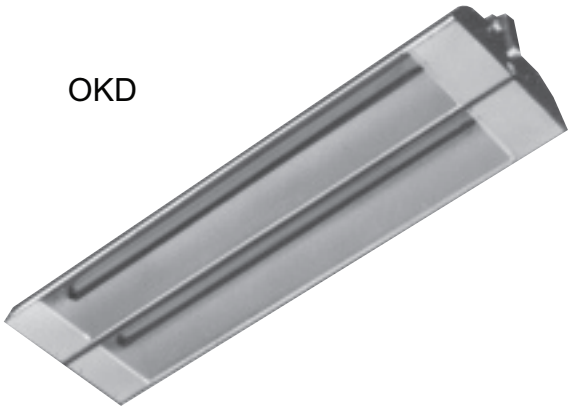
kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
0.5	120	16.5	419	5	127	OKH145L4	4.9	2.2
1.0	240	21.5	547	10	254	OKH191L4	6.0	2.7
1.6	208, 240	27.5	699	16	406	OKH251L4	7.2	3.3
2.5	480, 600	36.5	927	25	635	OKH342L4	9.1	4.1
3.8	600	49.5	1257	38	965	OKH473L4	11.8	5.4

Note: For 70° spread, last number within the catalog number is changed from “4” to “7”.

To Order Specify

- Quantity
- Catalog number
- Voltage
- Wattage

OKD Series (Comfort Heating)



- Double reflector unit using OKH fixtures
- Contains one element per reflector to utilize maximum reflector efficiency
- Available in choice of 45°or 70°energy spreads.
- Swivel mount

Type C – Incoloy® Tubular Element

Used in similar applications to OKH series except twice as much heat is emitted for harder to heat areas such as large unheated factories, sawmills, ice rinks and gymnasiums.

Table 43 – Type C 45° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
1.9	120, 208, 240	31.5	800	20	508	OKD291C4	14.3	6.5
3.0		43.5	1105	32	813	OKD413C4	19.0	8.6
3.8		49.5	1257	38	965	OKD473C4	22.2	10.1
4.0	208, 240 480, 600	43.5	1105	32	813	OKD414C4	19.8	9.0
4.6		49.5	1257	38	965	OKD474C4	22.3	10.1
6.0		61.5	1562	50	1270	OKD596C4	27.3	12.4
7.6		73.5	1867	62	1575	OKD717C4	32.4	14.7

Note: For 70° spread, last number within the catalog number is changed from “4” to “7”.

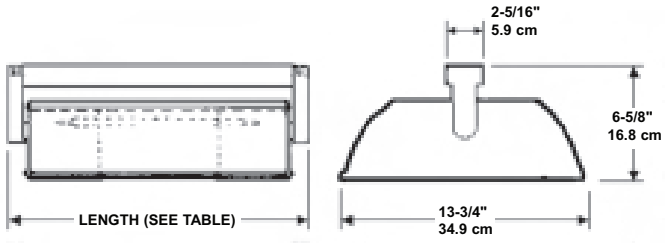


Figure 50

DANGER - HAZARD OF FIRE

See warning located at the start of Infrared Radiant Heater Section.

Type T – Quartz Tube Element

Used for indoor and outdoor comfort heating at higher than normal heights 12' to 20' (3.7 m to 6 m) where light emitted from lamps would be undesirable such as auditoriums, bowling alleys and open-air restaurants.

Note: Quartz tube fixtures must be mounted horizontally.

Table 44 – Type T 45° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
1.6	120, 208, 240	27.5	699	16	406	OKD251T4	13.3	6.0
3.2		43.5	1105	32	813	OKD413T4	19.7	9.0
5.0	208, 240, 480, 600	61.5	1563	50	1270	OKD595T4	26.8	12.2
6.2		73.5	1867	62	1575	OKD716T4	31.6	14.4

Note: For 70° spread, last number within the catalog number is changed from “4” to “7”.

Type L – Quartz Lamp Element

Very good for indoor applications where the light emitted could be used to an advantage such as warehouses, hangars and loading docks. Also well-suited for outdoor applications where a more intense heat is required, for example: snow melting, hotel entrances, building walkways.

Note: Quartz lamp fixtures must be mounted horizontally

Table 45 – Type L 45° Spread

kW	Standard Voltages	Overall Length		Heated Length		Catalog No.	Shipping Weight	
		in	mm	in	mm		lbs	kg
1.0	120	16.5	419	5	127	OKD141L4	9.0	4.1
2.0	240	21.5	547	10	254	OKD192L4	11.0	5.0
3.2	208, 240	27.5	699	16	406	OKD253L4	13.3	6.0
5.0	480, 600	36.5	908	25	635	OKD345L4	16.9	7.7
7.6	600	49.5	1258	38	965	OKD477L4	22.1	10.0

Note: For 70° spread, last number within the catalog number is changed from “4” to “7”.

To Order Specify

- Quantity
- Catalog number
- Voltage
- Wattage (if applicable)

Portable Radiant Heaters

OKP Series (Comfort Heating)

Type OKP portable radiant heaters provide spot heating in areas not normally heated. Heaters can be used to heat workers, thaw pipes, dry paint, remove moisture, etc. The unit is not suitable for operation in the presence of combustible liquids or vapours.

Construction

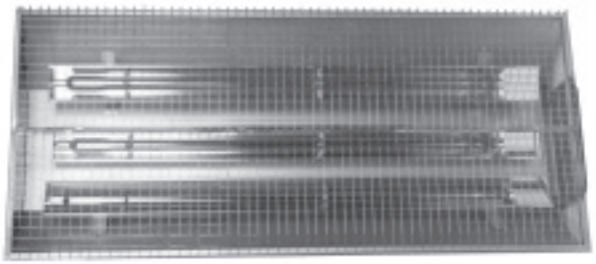
Three OKA hairpin type radiant heaters with a single moisture resistant housing are mounted to an aluminized steel casing which is bolted to a rugged two wheel trolley.

Three standard sizes are available: 6.3 kW, 9.0 kW and 13.5 kW. Special sizes can also be supplied on short notice.

The heating elements are epoxy end sealed. The moisture resistant housing, when properly connected, allows the assembly to be hosed clean. A plated steel safety screen protects persons from accidental contact with hot surfaces.

Movable support legs allow the unit to be self supporting when laid on its left or right side for wider coverage.

The heavy duty construction of the OKP, built to resist weathering and rough handling, ensures extended service life.



Wiring

Terminals from each of the three radiant heating fixtures are wired to an internal trolley mounted terminal block. All units are suitable for connection of either single or three phase power.

Table 46 – OKP Series Portable Radiant Heaters

kW	Standard Voltages	Dimensions				Catalog No.	Shipping Weight	
		A		B				
		in	mm	in	mm		lbs	kg
6.3	208, 240 480, 600	26	660	40	1016	OKP063	40	18
9.0		26	660	49	1245	OKP090	48	22
13.5		26	660	62	1575	OKP135	58	26

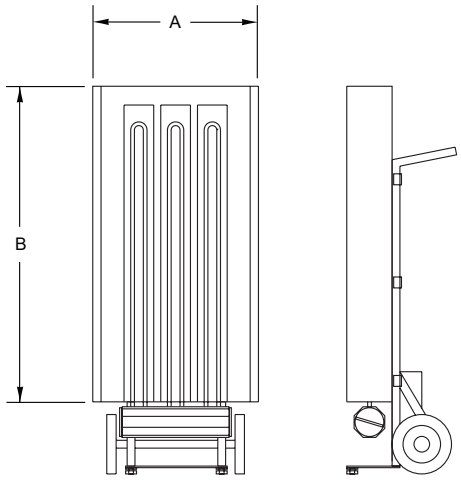


Figure 51