



Stars Management DMCC

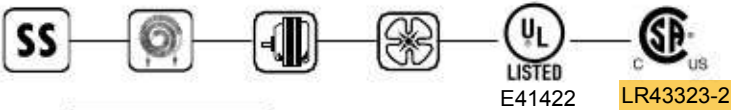
SUBMITTAL

**ELECTRIC HEATER
STAINLESS STEEL
(KBS Series)**

STAINLESS STEEL

KBS
SERIES

3000 - 20,000 WATTS
CEILING UNDER 12 FT



FEATURES

- 18 Gauge Stainless Steel
 - Spiral Steel Fin Element
 - Cast Iron Motor
 - Aluminum Fan Blade
- Adjustable discharge louvers
 - Monel® elements
 - Totally enclosed motor
 - N.E.M.A. 4 enclosure
 - Auto-reset thermal cutout
 - Heavy gauge case
 - Stainless Steel bird screen

OPTIONS

- Multiple control options
- 3-position switch (Heat-Off-Fan)
- Two stage thermostat (single phase only)
- Pilot light (power On indicator)
- Door interlocking disconnect



All New Design

KBS unit heaters are specially constructed for heating of, and freeze protection in, dirty, dusty or corrosive areas requiring periodic washing or hose-down. Typical places of use are: waste water treatment plants, car/truck washes, cement plants, steel mills or such, canneries and dairy facilities, ship and marine docks, fish processors and load banks for generators.

The heater is constructed from 16 gauge type 304 Stainless Steel and Monel® #400 elements making it extremely corrosion resistant.

The N.E.M.A. 4 wiring compartment is sealed and gasketed making it water tight.

All optional control components are U.L. listed for use in N.E.M.A. 4 enclosures.

ENGINEERING SPECIFICATIONS

Contractor shall supply and install KBS Series Stainless Steel heaters, manufactured by King Electrical Mfg. Company. Heaters shall be of the wattage and voltage as indicated on the plans.

Stainless Steel Construction: All exterior and interior metal enclosure parts are made from 18 gauge type 304 Stainless Steel. All fasteners and hardware are Stainless Steel.

Adjustable Outlet Louver: Stainless Steel louvers direct air up or down as needed for the heating application.

Rear Intake Screen: Heavy gauge Stainless Steel screen protects against foreign objects making accidental contact with the rotating fan blade.

N.E.M.A. 4 enclosure: Every electrical component in the wiring compartment is sealed with a polyurethane adhesive. The bottom access panel is sealed with a 1/4" Poron® high density polyurethane gasket. This provides excellent protection against corrosion, windblown dust, dirt, and rain, splashing water and hose-directed water. All optional control accessories are N.E.M.A. 4 rated.

Monel® Spiral Fin elements: The metal sheath element is brazed with spiral fins then molded in to a coil configuration. This combination produces the best heat transfer while eliminating the potential for hot spots by positioning the element in the maximum airflow stream. Monel® alloy #400 composed of 66.5% Nickel and 31.5% Copper increases

element life in extremely corrosive environments such as waste water treatment plants.

Totally enclosed Fan Motor: Permanently lubricated, cast iron epoxy-coated motor with enclosed rotor resists moisture and corrosion for long-lasting, trouble-free operation.

Aluminum Fan blade: Axial flow-type mounted directly to the motor shaft for maximum efficiency.

Auto-Reset Thermal Cutout: Power is disconnected from the heater if an overheated condition occurs. The heater is re-energized automatically when the normal operating temperature returns.

Internal Controls: Magnetic contactors are standard on all 480V heaters, all 208V/1-Phase, 240V/1-Phase, 277V/1-Phase heaters above 6kW, and all 3-Phase heaters. The control voltage is equal to the line voltage (208, 240 or 277) except for 480V models where a transformer is provided for 24V control. Over 5kW the line voltage control is operating the contactor coil only and will draw only 1 Amp.

Fusing: Internal circuit fusing is provided when the heater Ampacity exceeds 48 Amps to comply with N.E.C. standards. A fan delay is provided standard on models 12.5-kW and above to dissipate residual heat from the heating elements.

Optional Coated Fan Blade: Extra corrosion protection.

Approvals: UL (E41422), cCSA_{us} (LR43323-2)

FACTORY INSTALLED OPTIONS:

Heavy Gauge Case: 18 gauge Stainless Steel can be provided for extra enclosure strength in severe duty applications.

Stainless Steel bird Screen: Applied to discharge outlet for additional protection from foreign objects.

Fan Delay: (when not standard)

Power Contactor: (when not standard)

24 Volt Control: (when not standard)

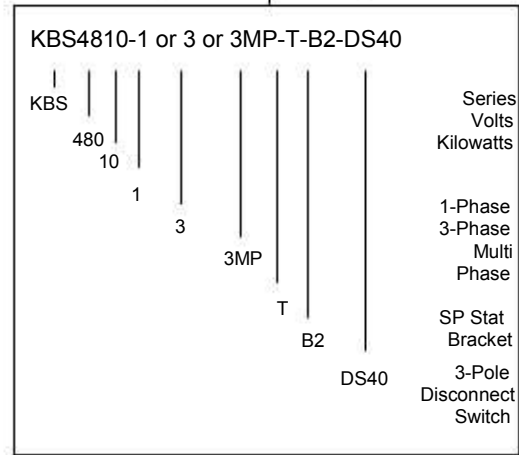
120 Volt Control: Control components modified to accept 120V control.

Mounting: Choose universal or low profile ceiling bracket made from Stainless Steel.

Rough Service: 5 weld nuts provided to securely mount heater in heavy industrial applications or marine vessels where vibration and movement is a concern.

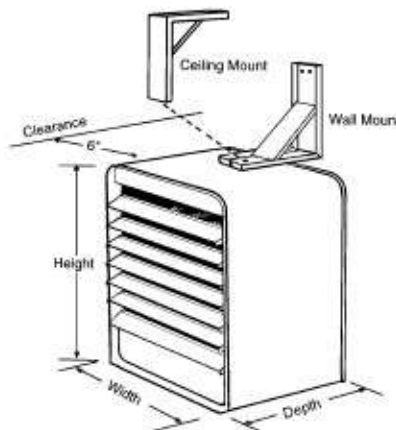
NEMA 4 Control Options:

- SPST or DPDT thermostat
- Two stage thermostat (single phase only)
- Summer fan switch
- 3-position switch (Heat-Off-Fan)
- Pilot light (power on indicator)
- Door interlocking disconnect

MODEL CODE

QUICK SELECTION CHART

KILLO-WATTS	PHASE	208V			240V			277V			480V		
		MODEL	UPC #093319 PART#	WT. (lbs.)	MODEL	UPC #093319 PART#	WT. (lbs.)	MODEL	UPC #093319 PART#	WT. (lbs.)	MODEL	UPC #093319 PART#	WT. (lbs.)
3	1	KBS2003-1	19700	25	KBS2403-1	19713	34	KBS2703-1	19706	25	KBS4803-1	19709	28
	3	KBS2003-3MP	19703	25	KBS2403-3MP	19714	25				KBS4803-3MP	19710	35
5	1	KBS2005-1	19712	25	KBS2405-1	19715	25	KBS2705-1	19718	25	KBS4805-1	19721	28
	3	KBS2005-3MP	19748	32	KBS2405-3MP	19751	32				KBS4805-3MP	19754	35
7.5	1	KBS2007-1	19724	29	KBS2407-1	19727	29	KBS2707-1	19731	29	KBS4807-1	19733	32
	3	KBS2007-3MP	19757	42	KBS2407-3MP	19760	42				KBS4807-3MP	19763	45
10	1	KBS2010-1	19736	32	KBS2410-1	19739	32	KBS2710-1	19742	32	KBS4810-1	19745	35
	3	KBS2010-3MP	19766	42	KBS2410-3MP	19769	56.5				KBS4810-3MP	19772	45
12.5	3	KBS2012-3MP	19775	42	KBS2412-3MP	19778	42				KBS4812-3MP	19781	45
15	3	KBS2015-3MP	19784	46	KBS2415-3MP	19787	46				KBS4815-3MP	19790	49
20	3	KBS2020-3	19793	46	KBS2420-3	19796	46				KBS4820-3MP	19799	49

HEATER SIZE	DIMENSIONS		
	HEIGHT	DEPTH	WIDTH
A	16.5"	11"	15"
B	16.5"	18"	15"
C	18.5"	11"	15"
D	18.5"	18"	15"
E	20.5"	18"	15"


ACCESSORIES

MODEL	DESCRIPTION	UPC #093319 PART #	WT. (lbs.)
KBB-1-SS	Mounting Bracket - Small	15254	3
KBB-2-SS	Mounting Bracket - Large	15256	4
KBB-4-SS	Mounting Bracket - Low Profile 5 Hole	15257	4
TF115	Single Pole Wall Mount Thermostat N.E.M.A. 4X - 25A	19150	1

TECHNICAL DATA CHART

380V-3Ø Heaters are available
in most kW ratings

CATALOG #	UPC #093319 PART #	KIIO-WATTS	BTUH (000)	PHASE	VOLTS	AMPS		CONTROL VOLTAGE	MOTOR HP	CFM	TeMP. RISE °F	AIR	*Size	WT. (lbs.)
						1-Ph	3-Ph							
KBS2003-1 KBS2403-1 KBS2703-1 KBS4803-1	19700 19713 19706 19709	3	11	1	208 240/208 277 480	14.4 12.5/10.8 10.8 6.2		208 240 277 24	3 Watt	300	35°	14 ft.	A	25 25 25 28
KBS2005-1 KBS2405-1 KBS2705-1 KBS4805-1	19712 19715 19718 19721	5	17.1	1	208 240/208 277 480	24 20.8/18 18.1 10.4		208 240 277 24	9 Watt	400	40°	16 ft.	A	25 25 25 28
KBS2007-1 KBS2407-1 KBS2707-1 KBS4807-1	19724 19727 19731 19733	7.5	25.6	1	208 240/208 277 480	36.1 31.2/27 27 15.6		208 240 277 24	16 Watt	600	40°	20 ft.	B A	29 29 29 32
KBS2010-1 KBS2410-1 KBS2710-1 KBS4810-1	19736 19739 19742 19745	10	34.1	1	208 240/208 277 480	48.1 41.6/36.1 36.1 20.8		208 240 277 24	25 Watt	725	44°	24 ft.	B	32 32 32 35
KBS2005-3MP KBS2405-3MP KBS4805-3MP	19748 19751 19754	5	17.1	1-3	208 240/208 480	24 20.8/18 10.4	13.9 12/10.4 6	208 240 24	9 Watt	400	40°	16 ft.	B	32 32 35
KBS2007-3MP KBS2407-3MP KBS4807-3MP	19757 19760 19763	7.5	25.6	1-3	208 240/208 480	36.1 31.2/27 15.6	20.8 18/15.6 9	208 240 24	16 Watt	600	40°	20 ft.	B	42 42 45
KBS2010-3MP KBS2410-3MP KBS4810-3MP	19766 19769 19772	10	34.1	3 1-3 1-3	208 240/208 480		27.8 24/20.8 12	208 240 24	25 Watt	725	44°	24 ft.	B	42 42 45
KBS2012-3MP KBS2412-3MP KBS4812-3MP	19775 19778 19781	12.5	42.7	3 3 1-3	208 240/208 480		34.6 30/26 15	208 240 24	35 Watt	825	48°	30 ft.	B	42 42 45
KBS2015-3MP KBS2415-3MP KBS4815-3MP	19784 19787 19790	15	51.2	3 3 1-3	208 240/208 480		41.6 36/31.2 18	208 240 24	35 Watt	925	51°	33 ft.	B	46 46 49
KBS2420-3 KBS4820-3MP	19796 19799	20	68.3	3 1-3	240/208 480		48.1/41.6 24.1	240 24	50 Watt	1100	57°	37°	B	46 49

*Refer to DIMENSIONS Chart on previous page. Heater will draw 13% less Amps 25% less wattage. Note: Consult factory for special wattages and/or voltages. Rated kW load tolerance of plus 5% minus 10%.

OPTIONS:

ADD SUFFIX:	DESCRIPTION
-T	1-Pole Unit Mounted Thermostat (temperature range 40°F - 100°F)
-2TS	2-Stage Thermostat (Single Phase model only)
-B1	Mounting Bracket KBB-1 (included with heater size A and C)
-B2	Mounting Bracket KBB-2 (included with heater size B, D and E)
-SF	Summer Fan Switch
-SFR	Control Relay and 24V Transformer for Remote Summer Fan Operation
-3PS	3-Position Switch (Heat / Fan / Off)
-PL	Pilot Light (power ON indication)
-CX	Power Contactor for 3 kW - 5kW 1-Phase Models (Line Voltage Coil)
-CT24	Transformer that Converts 208, 240 and 277 Volts to 24 Volt Control Circuit {add power contactor (-CX) for 3 kW - 5kW 1-Phase models}
-DS30	30 Amp, 3-Pole Disconnect Switch w/ Door Interlock and Padlock Provision
-DS40	40 Amp, 3-Pole Disconnect Switch w/ Door Interlock and Padlock Provision
-DS60	60 Amp, 3-Pole Disconnect Switch w/ Door Interlock and Padlock Provision
-DS80	80 Amp, 3-Pole Disconnect Switch w/ Door Interlock and Padlock Provision
-5MT	5 Mounting Weld Nuts Provided on Heater for Rough Service Use (includes KBB-4 5 hole bracket)



Corrosion resistance for high moisture or chemical treatment areas



Disconnects can be specified in 40, 60 or 80 Amp ratings with door interlock and padlock provision

Rough Service / Low Profile • KBB-4 Mounting Bracket

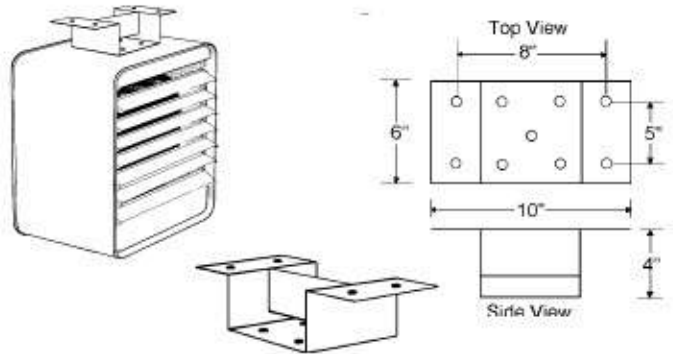
This bracket is manufactured in a low profile design with 5 mounting holes. **For low ceiling profile installation use center hole only.**

Option (-5MT) is for rough **service support**. This is ideal for use on ships, containers or any application where the heater will experience vibration. Request this option

at the time of order placement. The heater will have four mounting holes fabricated into top.

To provide a rigid mount attach bracket using the four outside mounting holes.

The price of option (-5MT) includes the **Kbb-4 bracket**.



RAINTIGHT, WEATHER RESISTANT, N.E.M.A. 4X THERMOSTAT

FEATURES:

- N.E.M.A. 4X enclosure complies with N.E.C. Article 547 when used with appropriate watertight connections
- Rugged weather resistant enclosure made of corrosion resistant materials
- Low mass, high surface area of stainless steel
- coiled sensor provides rapid response to temperature change
- Large, readily visible dial; 40° - 100°F range
- Multi-positional mounting
- One control for both heating and cooling applications
- Underwriters Laboratories listed and C.S.A. certified



The TF115 N.E.M.A. 4X thermostat is specifically designed for use in National Electrical Code Article 547 applications requiring a rugged, weather resistant, durable control for both heating and cooling (ventilation), such as agricultural, industrial and commercial environments.

The TF115 is suitable for use in poultry or hog houses, livestock barns, brooder houses, greenhouses, factories, warehouses, garages and gymnasiums.

SELECTION

RATING	120 VAC	240 VAC	277 VAC	480 VAC
FULL LOAD	16 Amp	12 Amp	10 Amp	
LOCKED ROTOR	80 Amp	60 Amp	50 Amp	
NON-INDUCTIVE	25 Amp	25 Amp	22 Amp	5 Amp
PILOT DUTY	125 VA	125 VA	125 VA	125 VA

DIMENSIONS:

