



Stainless Steel Unit Heater KBS Series



Model Code:

KBS	48	10	-1
A	B	C	D
A: Series			
B: 20 - 208V, 24 - 240V 27 - 277V, 48 - 480V			
C: KiloWatts			
D: -1 Phase, -3 Phase			



- 18 gauge stainless steel case
- Adjustable discharge louvers
- Auto-reset limit
- Long life unit bearing motor
- Padlock disconnect
- Heat-Fan-Off switch
- Spiral finned element
- Totally enclosed motor
- Pilot light
- Aluminum fan blade
- N.E.M.A. 4 enclosure
- 2-year limited warranty

The KBS Stainless Steel Unit Heater

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 18-gauge type 304 Stainless Steel and 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.

Factory Installed Options

Fan Delay: Standard above 11kW

Power Contactor: (when not standard)

24 Volt Control: (when not standard)

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

Mounting: Universal mounting

bracket made from Stainless Steel included.

Low profile rough service bracket available.

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-Fan-Off)
- Pilot light (power on indicator)
- Padlock disconnect

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" 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.

Stainless Steel 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 air flow stream. Stainless steel increases element life in extremely corrosive environments such as waste water treatment plants.

Totally Enclosed Fan Motor: Permanently lubricated, long life unit bearing 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 5kW, 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.

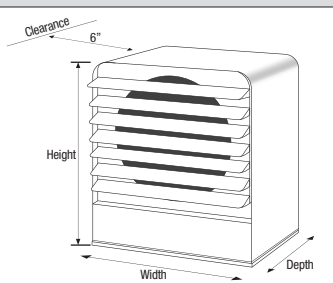
Fusing: Internal circuit fusing is provided when the heater ampacity exceeds 48 Amps to comply with UL standards. A fan delay is provided standard on models 12.5-kW and above to dissipate residual heat from the heating elements.

Optional Coated Fan Blade: Extra corrosion protection.

Approvals: cULus

*Dimensions

SIZE	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#	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 SPDT	19150	1

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Ordering Information

MODEL	UPC	KW	BTUH	PHASE	VOLTS	AMPS	**THERM. CONTROL VOLTAGE	MOTOR HP	CFM	TEMP. RISE	AIR THROW	MAX. MOUNT HEIGHT	*SIZE	WT. (lbs.)
KBS2003-1-B1	22118	3	10.2	1	208	14.4	208	5W	400	37°	15ft.	8ft.	A	30.5
KBS2403-1-B1	22217	3	10.2	1	240	12.5	240	5W	400	37°	15ft.	8ft.	A	30.5
KBS2703-1-B1	22218	3	10.2	1	277	10.8	277	5W	400	37°	15ft.	8ft.	A	30.5
KBS2005-1-B1	22124	5	17	1	208	24	208	9W	400	40°	16ft.	8ft.	A	30.5
KBS2405-1-B1	20847	5	17	1	240/208	20.8/18	240	9W	400	40°	16ft.	8ft.	A	30.5
KBS2705-1-B1	22127	5	17	1	277	18.1	277	9W	400	40°	16ft.	8ft.	A	30.5
KBS4805-1-B1	22128	5	17	1	480	10.4	24	9W	400	40°	16ft.	8ft.	A	30.5
KBS2007-1-B1	22133	7.5	25.6	1	208	36.1	208	16W	600	40°	20ft.	9ft.	C	45.0
KBS2407-1-B1	22137	7.5	25.6	1	240/208	31.2/27	240	16W	600	40°	20ft.	9ft.	C	45.0
KBS2707-1-B1	22219	7.5	25.6	1	277	27	277	16W	600	40°	20ft.	9ft.	C	45.0
KBS4807-1-B1	22142	7.5	25.6	1	480	15.6	24	16W	600	40°	20ft.	9ft.	C	45.0
KBS2010-1-B2	22147	10	34.1	1	208	48.1	208	25W	725	44°	24ft.	10ft.	C	45.0
KBS2410-1-B2	22151	10	34.1	1	240/208	41.6/36.1	240	25W	725	44°	24ft.	10ft.	C	45.0
KBS2710-1-B2	22154	10	34.1	1	277	36.1	277	25W	725	44°	24ft.	10ft.	C	45.0
KBS4810-1-B2	22155	10	34.1	1	480	20.8	24	25W	725	44°	24ft.	10ft.	C	45.0
KBS2012-1-B2	22159	12.5	42.7	1	208	60.1	208	35W	825	48°	30ft.	11ft.	C	45.0
KBS2412-1-B2	22163	12.5	42.7	1	240/208	52/45.1	240	35W	825	48°	30ft.	11ft.	C	45.0
KBS2020-3-B2	22173	20	68.3	3	208	55.5	208	50W	1100	57°	47ft.	13ft.	D	47.5
KBS2420-3-B2	20849	20	68.3	3	240/208	48.1/41.6	240	50W	1100	57°	47ft.	13ft.	D	47.5
KBS4820-3-B2	20852	20	68.3	3	480	24	24	50W	1100	57°	47ft.	13ft.	D	47.5
KBS2025-3-B2	22220	24	85.3	3	208	69.4	208	1/4HP / 50W	1350	58°	41ft.	14ft.	E	60.5
KBS2425-3-B2	22179	24	85.3	3	240/208	60.1/52.1	240	1/4HP / 50W	1350	58°	41ft.	14ft.	D	60.5
KBS4825-3-B2	22221	24	85.3	3	480	30.1	24	1/4HP / 50W	1350	58°	41ft.	14ft.	D	60.5
KBS2030-3-B2	22181	30	102.4	3	208	83.3	208	1/4HP	1800	53°	48ft.	15ft.	E	60.5
KBS2430-3-B2	22183	30	102.4	3	240/208	72.1/62.5	240	1/4HP	1800	53°	48ft.	15ft.	E	60.5
KBS4830-3-B2	22185	30	102.4	3	480	24	24	1/4HP	1800	53°	48ft.	15ft.	E	60.5
KBS2003-3MP-B2	22119	3	10.2	1-3	208	14.4/8.3	208	5W	400	37°	14ft.	8ft.	B	45.0
KBS2403-3MP-B2	22222	3	10.2	1-3	240/208	12.5/7.2	240	5W	400	37°	14ft.	8ft.	B	45.0
KBS4803-3MP-B2	22120	3	10.2	1-3	480	6.3	24	5W	400	37°	14ft.	8ft.	B	45.0
KBS2005-3MP-B2	22126	5	17.1	1-3	208	24 & 13.9	208	9W	400	40°	16ft.	8ft.	B	45.0
KBS2405-3MP-B2	22223	5	17.1	1-3	240/208	20.8/18 & 18/15.6	240	9W	400	40°	16ft.	8ft.	B	45.0
KBS4805-3MP-B2	20850	5	17.1	1-3	480	10.4 & 6	24	9W	400	40°	16ft.	8ft.	B	45.0
KBS2007-3MP-B2	22135	7.5	25.6	1-3	208	36.1 & 20.8	208	16W	600	40°	20ft.	9ft.	B	46.5
KBS2407-3MP-B2	22139	7.5	25.6	1-3	240/208	31.2/27 & 18/15.6	240	16W	600	40°	20ft.	9ft.	B	46.5
KBS4807-3MP-B2	20717	7.5	25.6	1-3	480	15.6 & 24	24	16W	600	40°	20ft.	9ft.	B	46.5
KBS2010-3MP-B2	22149	10	34.1	1-3	208	27.7	208	25W	725	44°	24ft.	10ft.	B	46.5
KBS2410-3MP-B2	20848	10	34.1	1-3	240/208	41.6/36.1 & 24/20.8	240	25W	725	44°	24ft.	10ft.	B	46.5
KBS4810-3MP-B2	20851	10	34.1	1-3	480	20.8 & 12	24	25W	725	44°	24ft.	10ft.	B	46.5
KBS2012-3MP-B2	22161	12.5	42.7	1-3	208	34.6	208	35W	825	48°	30ft.	11ft.	B	46.5
KBS2412-3MP-B2	22164	12.5	42.7	1-3	240/208	30/26	240	35W	825	48°	30ft.	11ft.	B	46.5
KBS4812-3MP-B2	22166	12.5	42.7	1-3	480	26 & 15	24	35W	825	48°	30ft.	11ft.	B	46.5
KBS2015-3MP-B2	22169	15	51.2	1-3	208	41.6	208	35W	925	51°	33ft.	12ft.	B	46.5
KBS2415-3MP-B2	22171	15	51.2	1-3	240/208	36/31.2	240	35W	925	51°	33ft.	12ft.	B	46.5
KBS4815-3MP-B2	22224	15	51.2	1-3	480	18	24	35W	925	51°	33ft.	12ft.	B	46.5
KBS4820-3MP-B2	20852	20	68.3	1-3	480	41.6/24.1	24	50W	1100	57°	37 ft.	12ft.	B	48.0

Options

SUFFIX	DESCRIPTION
-T	1-Pole Unit Mounted Thermostat (temperature range 40°F - 100°F)
-2TS	2-Stage Thermostat (Single Phase models 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)

Options

SUFFIX	DESCRIPTION
-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)
-DS40	40 Amp, 3-Pole Disconnect Switch w/ Padlock Provision
-DS60	60 Amp, 3-Pole Disconnect Switch w/ Padlock Provision
-DS80	80 Amp, 3-Pole Disconnect Switch w/ Padlock Provision
-SMT	5 Mounting Weld Nuts Provided on Heater for Rough Service Use (includes KBB-4 5 hole bracket)