

# Compact Heavy Duty Unit Heater SKB Series



### Model Code:

SKB	24	05	1	T	B
A	B	C	D	E	F

A: Series  
 B: 20 - 208V  
 24 - 240V  
 C: Watts  
 D: Single Phase  
 E: Thermostat  
 F: Bracket



- Spiral finned element
  - Permanently lubricated motor
  - Patented Smart Limit® protection
  - High efficiency aluminum fan blade
- Built-in thermostat
  - Universal mounting bracket
  - Standard color: Gray
  - 3-year limited warranty
- Adjustable louvers
  - Power On & Over-temp caution indicating lights
  - High /Low switch & fan delay\*
  - Prewired for remote wall thermostat option



## The SKB Compact Heavy Duty Unit Heater

The SKB compact heavy duty unit heater is designed for use as primary or supplemental heat sources in large or exposed areas, including commercial stores, workshops, barns, storage shed and garages to prevent freezing. Spiral finned steel elements and high air volume (CFM) ensure efficient heat exchange producing cooler element operation, prolonging heater life. By combining the highest quality components with a dynamically balanced fan blade, the SKB unit heater will provide years of trouble-free service. Includes both a power on indicating light and a red caution light that comes on if the heater stops due to the over temperature limit tripping. A universal wall/ceiling bracket provides for quick and simple installation. The built-in thermostat turns the heater on and off to maintain the desired room temperature or a remote wall thermostat can be used. The heater is prewired to easily convert from the built-in thermostat to a wall mounted line voltage thermostat. The heater can also be controlled by purchasing a transformer relay to operate a remote 24V wall thermostat. Refer to the installation instructions regarding the amperage requirements for use of both the line voltage thermostats and transformer relays.

\*Not available in 5kW Unit

### Ordering Information - single phase

MODEL	UPC	KW	BTUH	PHASE	VOLTS	AMPS	MOTOR HP	CFM	TEMP. RISE	AIR THROW	MAX. MOUNT	WT. (lbs.)
SKB2005-1-T-B	13413	5	17	1	208	24	9W	400	40°	16ft.	8ft.	30.5
SKB2007-1-T-B	13414	7.5	25.6	1	208	36.1	16W	600	40°	20ft.	9ft.	45.0
SKB2009-1-T-B	13415	9.2	31.4	1	208	44.2	25W	725	42°	24ft.	10ft.	45.0
SKB2405-1-T-B	13410	5	17	1	240/208	20.8/18	9W	400	40°	16ft.	8ft.	30.5
SKB2407-1-T-B	13411	7.5	25.6	1	240/208	31.2/27	16W	600	40°	20ft.	9ft.	45.0
SKB2410-1-T-B	13412	10	34.1	1	240/208	41.6/36.1	25W	725	44°	24ft.	10ft.	45.0

### Engineering Specifications

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

**Construction:** All exterior and interior metal enclosure parts are made from 20 gauge electrogalvanized Steel with a rust inhibiting baked enamel finish. Rounded corners give it an attractive modern appearance.

**Adjustable Outlet Louver:** Louvers direct air up or down as needed for the heating application.

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

**Spiral Fin Elements:** The metal sheath element is copper brazed with spiral fins then molded into 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.

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

**Built-in Thermostat:** Single pole factory installed hydraulic capillary tube thermostat for precision heating control. Operating range 40° to 90° F.

**Red Over-temp Caution in Light:** Only comes on if the high temperature safety limit has tripped.

**Yellow Power on Light:** Gives visual indication that the heater is turned on.

**\* High/Low Switch:** Provided on 7.5kw & 10kw models. Low setting reduces wattage in half. Fan delay keeps fan running after thermostat cycles off to dissipate all the heat from the elements, making the heater more efficient and prolonging the life of the elements.

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## Engineering Specifications Continued

**Two Pole Contactor:** Provided on 7.5kw & 10kw models. Breaks both L1 and L2 of the power supply wires, the control circuit operates at 240V.

**Pre-Wired For Optional Room Thermostat:** Heater shall include a 2-pole terminal block and is prewired to easily convert from the built-in thermostat to a wall mounted line voltage thermostat. The heater can also be controlled by purchasing a transformer relay to operate a remote 24V wall thermostat. Refer to the installation instructions regarding the amperage requirements for use of both the line voltage thermostats and transformer relays. For 240V heaters use transformer relay model 24A01G-3 or RC840T-240/U. For 208V heaters use model 24A05E-1 or RC840T-240/U can be used on 7.5kW/10kW heaters.

**Electrically Held Thermal Overload:** Heaters shall be equipped with King's patented Smart Limit Protection®, which disconnects the heater when an over temperatures condition occurs. If the Smart Limit trips, it will remain open and will not automatically reset until the thermostat or circuit breaker is turned off for a few minutes. After the overload switch cools the power can be turned back on and the heater will operate again. This keeps the heater from repeatedly cycling allowing the user to

determine the cause of the over temperature condition such as an object being placed in front of heater.

**Totally Enclosed Fan Motor:** Permanently lubricated long life, unit bearing with 20cc of oil. Epoxy-coated motor with enclosed rotor resists moisture and corrosion for long-lasting, trouble-free operation.

**Easy Installation:** A quick access panel located on the bottom of the heater allows for quick wiring and easy maintenance for the life of the heater. Includes universal wall/ceiling bracket for simple installation.

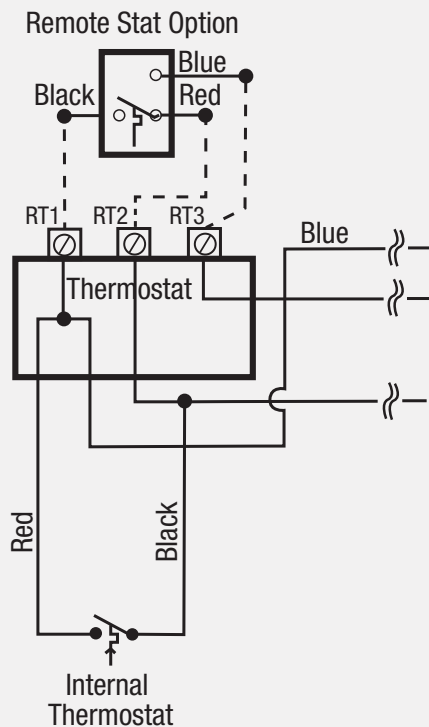
**Approvals:** cULus (E41422)

### • SKB Wall/Ceiling Bracket Included

Unit heater brackets can be used for mounting on ceiling or wall. 3/8" threaded hole on top of unit heater can also be used with threaded rod to drop the unit closer to the floor.

### Pre-Wired For Optional Line Voltage Room Thermostat\*:

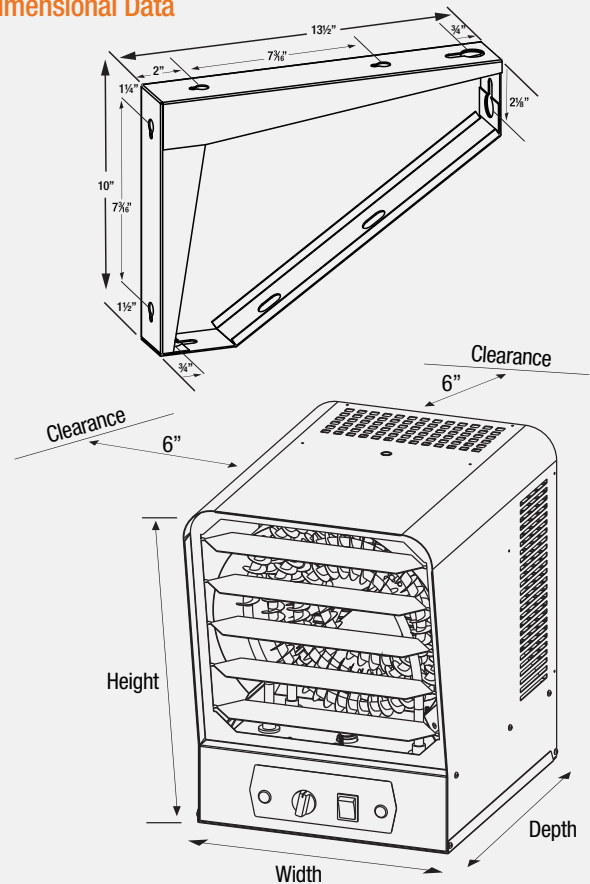
Connect a standard 240V single pole (SP) thermostat as a switch leg or a 3-wire SP electronic thermostat by providing both power legs, (L1 and L2) to drive the electronics.



**Note:** Do not use a double pole thermostat. The incoming power supply is connected to the heater and is then switched through a contactor, so the thermostat will draw less than 1 amp through the control circuit.

\*Above diagram reflects wiring for 7.5kW & 10kW heaters only. For 24V or line voltage remote thermostat wiring of 5kW units, refer to installation manual for details

### Dimensional Data



HEATER MODEL	HEIGHT	DEPTH	WIDTH
5kW	15.5"	12"	12.5"
7.5kW	16.25"	16.5"	12.5"
10kW	16.25"	16.5"	12.5"

### Field Mount Accessories

MODEL	DESCRIPTION	WT. (lbs.)
24A01G-3	Electric Heat Relay For 240V	0.5
24A05E-1	Electric Heat Relay For 208V	0.5
RC840T-240/U	Electric Heat Relay With a 24V-208/240V Transformer	0.5