CABINET UNIT HEATER

STANDARD AND CUSTOM
BCUH Series

WARNING! **DO NOT ATTEMPT TO INSTALL, OPERATE, OR SERVICE THIS PRODUCT BEFORE READING ALL INSTRUCTIONS CAREFULLY. FAILURE TO COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN** FIRE, PERSONAL INJURY **AND/OR** PROPERTY DAMAGE! **RETAIN INSTRUCTIONS FOR FUTURE REFERENCE**.

DESCRIPTION

Electric Cabinet Unit Heaters provide quiet, controlled heat distribution by centrifugal blowers and a variety of air inlet and discharge arrangements.

The cabinet is styled for use in offices, stores, schools, churches, dormitories, airport terminals, reception rooms, entrance lobbies, corridors and stairwells. They are easily installed in new or existing buildings.

These heaters are painted with a beige, baked-on textured finish which blends with almost any location. Cabinet unit heaters are designed for recessed, semi-recessed or surface mounting on walls, or ceilings.

Standard models feature a fan switch, hi-lo fan and heat operation, dust filter, single/three phase field convertible, 24 volt control circuit, built-in thermostat and field convertible for remote thermostat control.

ASSEMBLY

Cabinet Unit Heaters come completely assembled. No assembly is required.

REQUIRED CLEARANCE

REFER TO MOUNTING CLEARANCES ON PAGE 3.

SPECIFICATIONS

Housing……..Constructed with durable 16ga. steel
Housing finish……..Baked-on textured beige enamel
Wiring diagram……..Located inside center front access panel

Dimensions- Standard Models

W33", H25", D9-1/2" – 99lbs……..5KW Heater
W46", H25", D9-1/2" – 130lbs……..10KW Heater

Dimensions- Custom Models

W33", H25", D9-1/2" – 99lbs……2 thru 6KW Heater
W46", H25", D9-1/2" – 130lbs……4 thru 12KW Heater
W66", H25", D9-1/2" – 215lbs……6 thru 18KW Heater
W79", H25", D9-1/2" – 248lbs……8 thru 24KW Heater

IMPORTANT SAFETY INFORMATION

Read all instructions before using this heater.

1. Follow all local and electrical codes, the National Electric code (NEC) and the Occupational Safety and Health Act (OSHA).

2. Before attempting any electrical connections or inspections for any reason to service the heater, make sure that the circuit breaker controlling the circuit to which the heater is to be connected has been thrown to the OFF position, or make sure the fuse for the circuit has been removed. The circuit panel door, or fuse box door, should be locked or tagged to prevent unexpected application of power. Failure to do so could result in electrical shock.

3. The heater must be grounded in accordance with applicable codes to the ground screw provided in the housing. Failure to ground may result in electrical shock.

4. Protect the power supply cable from kinks, sharp objects, oil, grease, hot surfaces and chemicals.

5. Do not install heater behind room or cabinet doors or in a position where the air discharge or intake louvers can be blocked in any manner. Do not install behind towel racks, furniture, drapes or coat racks

6. Check heater voltage on data plate and make sure that it is the same as the electrical supply.

7. The wall/ceiling mounting structure and anchoring provisions must be of sufficient strength to support the weight of the heater.

8. All wiring and servicing of this heater should be done by a qualified electrician.

9. Do not locate this heater in an area where combustible vapors, gases, liquids, or excessive lint or dust is present.

SAVE THESE INSTRUCTIONS

INSTALLATION

Safe and dependable operation of the heater depends on proper installation by qualified personnel.

The heater can be mounted in any of the positions shown in Mounting Configurations, observing proper clearances form the inlet and outlets as shown in Mounting Configurations. In all positions, clearance from the end of the heater to a side wall is zero inches.

Inlet grille and outlet grilles can easily be field altered. In no case can inlet and outlet grilles be partially recessed into the walls or ceilings.

Mounting holes are provided in the back of the cabinet, accessible through the blower compartment, for securing the heater to the wall. In some cases, it may be necessary to remove the blower deck if more mounting screws of bolts are desired. The blower deck may be slipped forward by loosening two screws at the front to provide access to mounting holes located behind the blowers.

NOTE: For ceiling mounted heaters, never use internal thermostat. Always use a field supplied external thermostat.

OPERATING INSTRUCTIONS

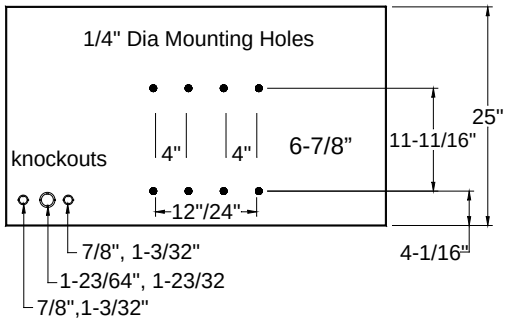
Controls are accessible through the discharge grille, using a screwdriver. The rocker switch for heat can be adjusted for high or low, and the rocker for the summer fan (if supplied) can be set for automatic or "continuous fan" for continuous room air circulation. Adjust the thermostat and let the heater operate a few hours. If more or less heat is then desired, adjust accordingly. If a remote thermostat is desired, remove factory installed jumper wire on the control terminal block. Attach wires from the remote field supplied thermostat. Adjust the heat/fan rocker switch to either high or low.

Cabinet Size	Nominal Low CF	Nominal High CFM
33"	230	250
46"	460	500
66"	690	750
79"	920	1000

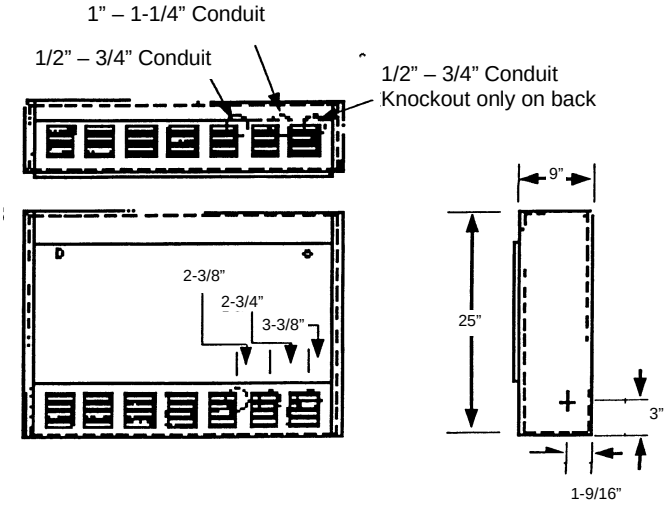
The 480 volt, 3-phase, 3-wire; 600 volt 1-phase and 600 volt 3-phase units are all single speed only.

If external load management control of the unit is desired, replace factory installed jumper wire on the control terminal block with leads from the external management control.

Refer to page 7 for description of control options.



Mounting Dimensions



MAINTENANCE

WARNING: Disconnect heater from power supply before servicing and/or inspecting the heat source. Failure to do so may result in electrical shock.

1. Fan and motor are permanently lubricated. No oiling is necessary.
2. Make sure all wire connections are tight.
3. Be sure to keep the blower wheel tight on the motor shaft.
4. For optional filters—Periodically check the condition of the filter. The filter can be removed by opening the front access panel with a screwdriver. Lift the filter up and out. (Contact Brasch Manufacturing Co. Inc or your local Representative for replacement filters. Please provide the model number of the heater and whether the filter is disposable or permanent).

TROUBLESHOOTING CHART

SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Heater does not energize	1. Defective thermostat 2. Defective Hi/Lo switch 3. Defective transformer 4. Defective linear limit 5. Tripped manual limit(s)	1. Replace thermostat 2. Replace Hi/Lo switch 3. Replace transformer 4. Replace linear limit 5. Determine cause before resetting*
No power to heater	1. Defective fuse or breaker	1. Check fuse/circuit breaker
Not enough heat	1. Element may be Defective. 2. Defective contactor 3. Defective Hi/Lo switch 4. Air filter may be dirty 5. Defective fan motor 6. Defective fan time delay relay.	1. Replace defective element(s) 2. Replace contactor 3. Replace Hi/Lo switch 4. Replace/clean filter 5. Replace fan motor 6. Replace fan time delay relay

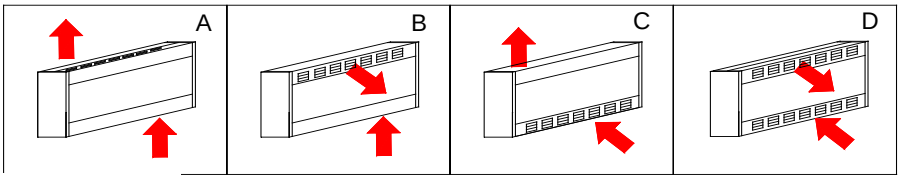
* If unit is installed in/on ceiling, check for temperature stratification

MOUNTING CONFIGURATIONS

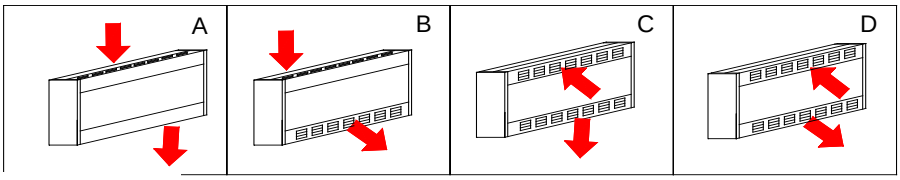
All Angle Heater Series offers a selection of air inlet and discharge arrangements. Inlet and outlet grille arrangements are easily altered by opening front panel of unit and removing (2) screws.

Heaters Cannot be mounted on the END!

UP FLOW

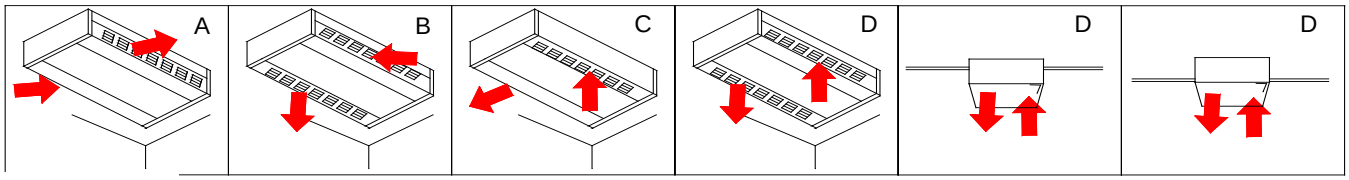


DOWN FLOW

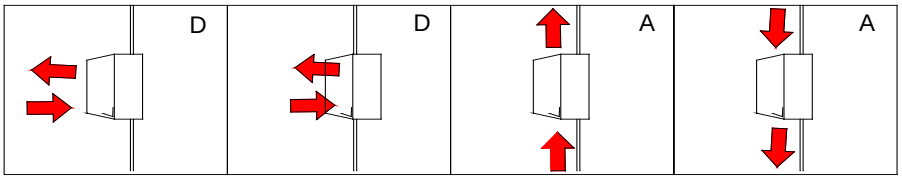


Unit may be mounted upside down to reverse direction of air flow.

CEILING



WALL



SEMI RECESSED | FULLY RECESSED | SEMI RECESSED | SEMI RECESSED

NOTE: Semi recessed to be recessed 3 ½ " maximum unless both inlet and outlet grilles are to the front.

MOUNTING CLEARANCES

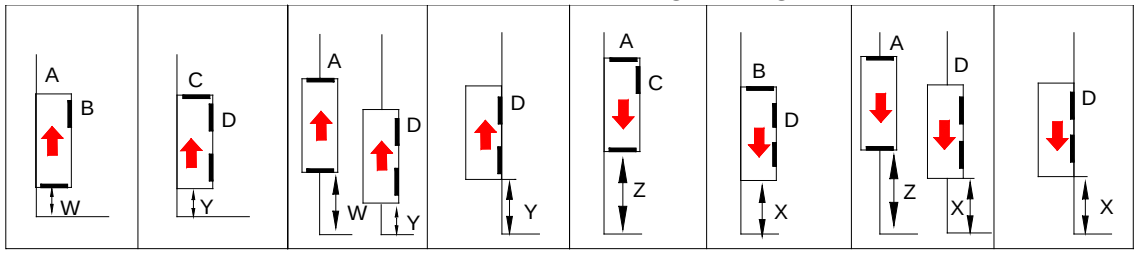
Proper clearances are indicated for each mounting configuration. In all positions, clearance from end of heater to a side wall is zero inches.

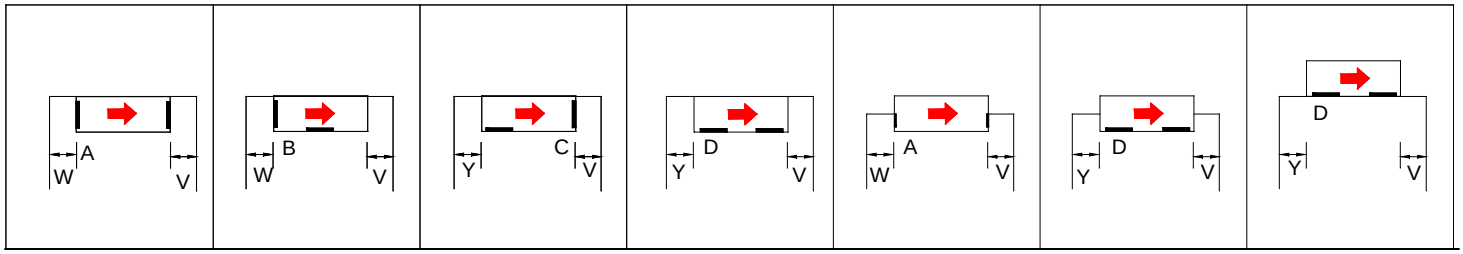
Mounting holes are provided in the back of the cabinet, accessible through the blower compartment. If necessary, remove blower deck if additional mounting screws or bolts are desired. Blower deck may be slipped forward by loosening four screws at the front to provide access to mounting holes.

KEY

W	6" minimum
X	12"minimum
Y	0 or greater
Z	24"minimum
V	48"minimum

UP FLOW **DOWN FLOW**





CAUTION

The NEC requires that over current protection and supply wire for electric heating equipment be rated at least 125% of the full amp load of the circuit. A field supplied disconnect switch should be used to control the input voltage to the unit.

All supply wiring shall conform to the latest edition of the NEC and to all local codes having jurisdiction. Conduit knockouts are provided in the back of the wiring compartment. Make sure all field wiring connections are properly made and are tight.

Electrical Ground---This heater must be grounded before operating, as required by the National Electric Code and by applicable local codes. Use a conductor, of the appropriate size, secured to the ground lug in the heater and to a grounded connection in the service panel.

Typical Wiring

For actual wiring of your unit(s) refer to the diagram located inside the front access panel.