

LOW TEMPERATURE AIR DUCT HEATERS

CAB and CABB Styles

- Side Terminals (Type CAB)
- Bottom Terminals (Type CABB)
- 6 to 100 kW
- 120, 208, 240 and 480V
- 1 or 3 Phase
- Rust-Resisting Iron or Chrome Steel Sheath Elements
- 440°F Max Outlet Air Temp

Applications

- Sole Heat Source
- Booster Heater in Process and Comfort Heating Ducts
- Convert existing Forced Air Dryers and Ovens
- With Blower and Duct, can be used to Fabricate simple Forced Air Drying Unit

Features

Simple Duct Transition Sections may be used to adapt standard heater sizes to various duct sizes to increase air velocities for better heat transfer, lower sheath temperature and longer element life.

Field Wiring Terminals—Heavy duty 3/4" diameter bolts of either brass (iron sheath units) or Stainless Steel (chrome steel sheath units) with necessary hardware are provided for field wiring connections. Terminals are located on the side for CAB units and on the bottom for CABB units, and should be on the outside of ducting.

Fins of aluminized steel are provided to improve heat transfer to the air.

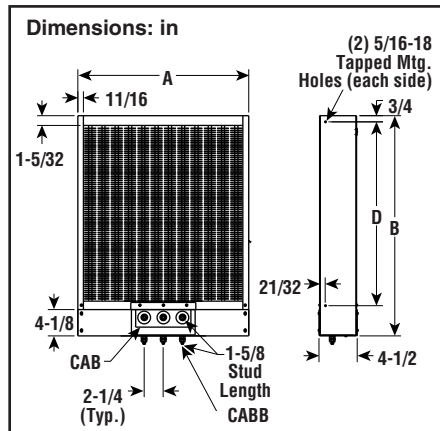
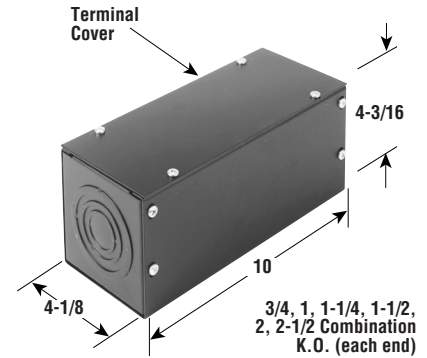
Elements are individually replaceable.

Terminal Cover Option is available to prevent accidental contact with live electrical terminals (PCN 269720), one (1) required per circuit

MONEL Sheath and MONEL Fins are available for humid conditions. Model TDH heaters, using Fintube elements are also available.

Construction

Rugged Finstrip Elements are mounted in a sturdy steel frame with narrow side of elements and fins facing the air flow.



Finstrip Elements, Exclusive Construction—High-quality, coiled resistor wire is uniformly spaced over the width and length of the Finstrip element, then embedded in high-grade refractory material which insulates the wire and transfers heat rapidly. Refractory is then compressed to rock hardness and maximum density under tremendous hydraulic pressure to improve heat transfer from coil to sheath. Elements are oven baked at high temperatures to semi-vitrify and mature the refractory. Sheath material is either rust-resisting iron or chrome steel.

Sturdy Steel Frame—14 gauge cold rolled steel painted with high heat resisting black enamel paint.

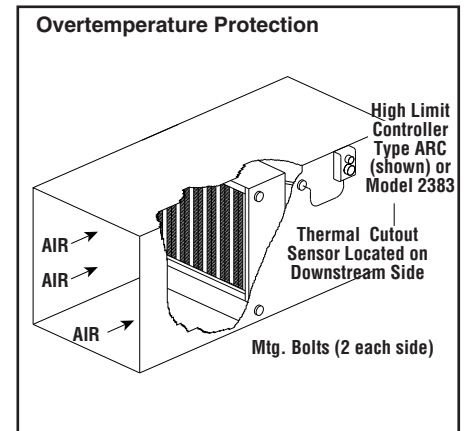
Internal Electrical Connections are made using a combination of buss bars and jumper straps consisting of either Manganese-Nickel or MONEL.

Mounting

Always install heaters in duct work with terminal box on bottom of heater. Type CAB units should have field wiring terminals facing upstream to provide maximum cooling affect. Secure to duct work using mounting holes on both vertical sides of heater.

Application and Selection Guidelines

Selection Heater Size — Refer to Technical section for examples on determining kW requirements. For quick estimating purposes, the following



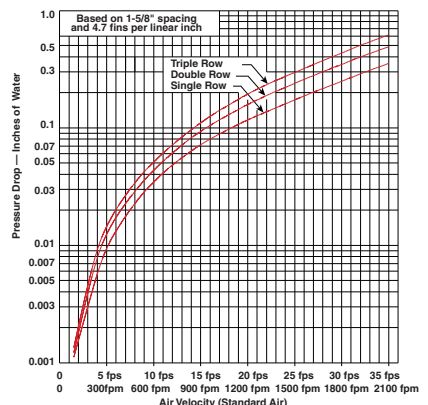
formula may be used for air at standard conditions:

$$kW = \frac{SCFM \times \text{Temp. Rise } (^\circ F)}{3000}$$

Maximum Work Temperatures—Type CAB and CABB heaters can generally be used at the following maximum temperatures, provided the minimum air velocity is maintained uniformly through the heater.

Air Velocity (ft/sec)	Max Outlet Air Temp	
	Iron Sheath	Chrome Steel Sheath
4	—	200
9	90	330
16	220	440

Note—Maximum temperatures are based on 26 W/in². If elements have a lower watt density, work temperatures may be increased; if watt density is higher, work temperatures should be lower.



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CAB and CABB Styles

MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)

kW	Volts	Phase	Amps/ Circ.	No. Circ.	No. Elem.	inches			Rust-Resisting Iron Sheath Temperatures to 750°F		Chrome Steel Sheath Temperatures to 950°F		Wt. (lb)
						A	B	D	Model No.	Price	Model No.	Price	
CAB—Side Terminals (26 W/in²)													
6	120	1	50	1	6	10%	15%	11½	CAB-62/120	\$850	CAB-611/120	\$950	25
6	208	1	28.9	1	6	10%	15%	11½	CAB-62/208	850	CAB-611/208	950	25
6	240	1	25	1	6	10%	15%	11½	CAB-62/240	850	CAB-611/240	950	25
6	480	1	12.5	1	6	10%	15%	11½	CAB-62/480	850	CAB-611/480	950	25
6	208	3	16.7	1	6	10%	15%	11½	CAB-62/208/3P	850	CAB-611/208/3P	950	25
6	240	3	14.5	1	6	10%	15%	11½	CAB-62/240/3P	850	CAB-611/240/3P	950	25
6	480	3	7.2	1	6	10%	15%	11½	CAB-62/480/3P	850	CAB-611/480/3P	950	25
12	208	1	57.7	1	9	15%	18½	14¼	CAB-122/208	\$1300	CAB-1211/208	\$1425	35
12	240	1	50	1	9	15%	18½	14¼	CAB-122/240	1300	CAB-1211/240	1425	35
12	480	1	25	1	9	15%	18½	14¼	CAB-122/480	1300	CAB-1211/480	1425	35
12	208	3	33.4	1	9	15%	18½	14¼	CAB-122/208/3P	1300	CAB-1211/208/3P	1425	35
12	240	3	28.9	1	9	15%	18½	14¼	CAB-122/240/3P	1300	CAB-1211/240/3P	1425	35
12	480	3	14.5	1	9	15%	18½	14¼	CAB-122/480/3P	1300	CAB-1211/480/3P	1425	35
15	208	1	72.1	1	9	15%	21%	17¼	CAB-152/208	\$1550	CAB-1511/208	\$1900	40
15	240	1	62.5	1	9	15%	21%	17¼	CAB-152/240	1550	CAB-1511/240	1900	40
15	480	1	31.3	1	9	15%	21%	17¼	CAB-152/480	1550	CAB-1511/480	1900	40
15	208	3	41.7	1	9	15%	21%	17¼	CAB-152/208/3P	1550	CAB-1511/208/3P	1900	40
15	240	3	36.1	1	9	15%	21%	17¼	CAB-152/240/3P	1550	CAB-1511/240/3P	1900	40
15	480	3	18.1	1	9	15%	21%	17¼	CAB-152/480/3P	1550	CAB-1511/480/3P	1900	40
20	208	3	55.6	1	12	20%	21%	17¼	CAB-202/208	\$2000	CAB-2011/208	\$2350	55
20	240	3	48.2	1	12	20%	21%	17¼	CAB-202/240	2000	CAB-2011/240	2350	55
20	480	3	24.1	1	12	20%	21%	17¼	CAB-202/480	2000	CAB-2011/480	2350	55
25	208	3	69.5	1	12	20%	26%	21¼	CAB-252/208	\$2350	CAB-2511/208	\$2850	65
25	240	3	60.2	1	12	20%	26%	21¼	CAB-252/240	2350	CAB-2511/240	2850	65
25	480	3	30.1	1	12	20%	26%	21¼	CAB-252/480	2350	CAB-2511/480	2850	65
30	480	3	18.1	2	18	29½	21%	17¼	—	—	CAB-3011/480	\$2900	75
40	208	3	55.6	2	18	29½	27%	23	CAB-402/208	\$3000	CAB-4011/208	\$3500	90
40	240	3	48.2	2	18	29½	27%	23	CAB-402/240	3000	CAB-4011/240	3500	90
40	480	3	24.1	2	18	29½	27%	23	CAB-402/480	3000	CAB-4011/480	3500	90
50	208	3	69.5	2	18	29½	33%	28%	CAB-502/208	\$3750	CAB-5011/208	\$4450	110
50	240	3	60.2	2	18	29½	33%	28%	CAB-502/240	3750	CAB-5011/240	4450	110
50	480	3	30.1	2	18	29½	33%	28%	CAB-502/480	3750	CAB-5011/480	4450	110
75	208	3	69.5	3	27	44⅞	42%	37%	CAB-752/208	\$5600	CAB-7511/208	\$6050	200
75	240	3	60.2	3	27	44⅞	42%	37%	CAB-752/240	5600	CAB-7511/240	6050	200
75	480	3	30.1	3	27	44⅞	42%	37%	CAB-752/480	5600	CAB-7511/480	6050	200
100	208	3	92.6	3	27	44⅞	47½	43%	CAB-1002/208	\$7150	CAB-10021/208	\$7500	220
100	240	3	80.3	3	27	44⅞	47½	43%	CAB-1002/208	7150	CAB-10021/208	7500	220
100	480	3	40.1	3	27	44⅞	47½	43%	CAB-1002/480	7150	CAB-10021/480	7500	220
CABB—Bottom Terminals (26 W/in²)													
6	240	3	14.5	1	6	10%	15%	11½	—	—	CABB-611/240	\$1050	25
6	480	3	7.2	1	6	10%	15%	11½	—	—	CABB-611/480	1050	25
12	208	3	33.4	1	9	15%	18½	14¼	—	—	CABB-1211/208	1550	35
12	240	3	28.9	1	9	15%	18½	14¼	—	—	CABB-1211/240	1550	35
12	480	3	14.5	1	9	15%	18½	14¼	—	—	CABB-1211/480	1550	35
20	480	3	24.1	1	12	20%	21%	17¼	—	—	CABB-2011/480	2550	55
25	480	3	30.1	1	12	29½	26%	21¼	CABB-252/480	\$2500	CABB-2511/480	3000	65
40	480	3	24.1	2	18	29½	27%	23	CABB-402/480	3200	CABB-4011/480	3700	90
50	480	3	30.1	2	18	29½	33%	28%	CABB-502/480	4100	CABB-5011/480	4650	110
75	480	3	30.1	3	27	44⅞	42%	37%	CABB-752/480	6000	CABB-7511/480	6450	200
100	480	3	40.1	3	27	44⅞	47½	43%	—	—	CABB-10021/480	8000	220

Ordering Examples: CAB-611/120, chrome steel sheath heater, 6 kW, 120V, \$950.

CAB-252/480, rust-resisting iron sheath heater, 25 kW, 480V, \$2350.

Free Area for Air Flow

Model No.	Square Feet	Model No.	Square Feet	Note — The volume of air being circulated along with the free area for air flow (in table above) will enable you to calculate the air velocity over the heater.
CAB-62 & 611	0.500	CAB-402 & 4011	3.29	
CAB-122 & 1211	0.927	CAB-502 & 5011	4.13	
CAB-152 & 1511	1.19	CAB-752 & 7511	8.25	
CAB-202 & 2011	1.63	CAB-1002 & 10021	9.38	
CAB-252 & 2511	2.07			



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