

LOW TEMPERATURE AIR DUCT HEATERS

CAB & CABB Styles

- ✓ Side Terminals (type CAB)
- ✓ Bottom Terminals (type CABB)
- ✓ 6 - 100 kW
- ✓ 120, 208, 240 and 480 Volt
- ✓ 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 $\frac{3}{8}$ " 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, \$89.

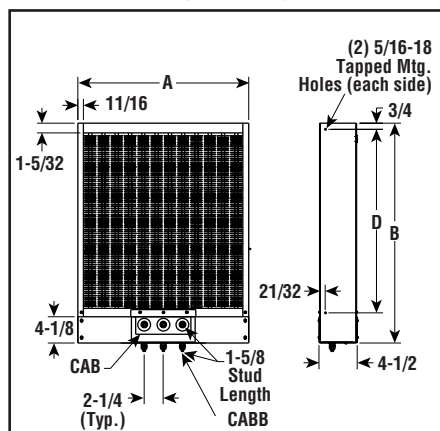
MONEL Sheath and MONEL Fins are available for humid conditions. Model TDH heaters, using Fintube elements are also available.

Construction

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



Dimensions (Inches)



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.

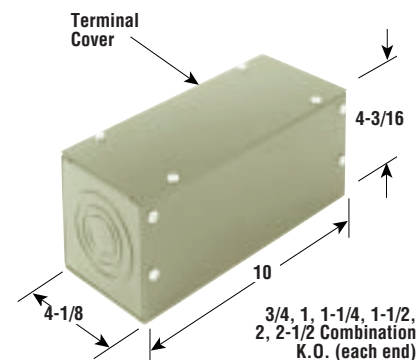
Internal Electrical Connections are made using a combination of buss bars and jumper straps consisting of either Manganese-Nickel or MONEL.

Mounting

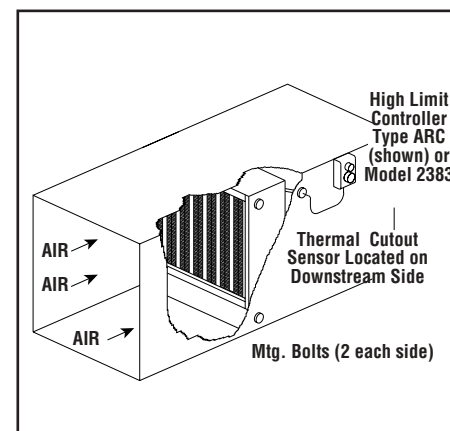
Always install heaters in duct work with terminal box on bottom of heater. Type CAB units should have field wiring terminals facing upstream to provide maximum cooling affect. Secure to duct work using mounting holes on both vertical sides of heater.

Application & Selection Guidelines

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



Overtemperature Protection



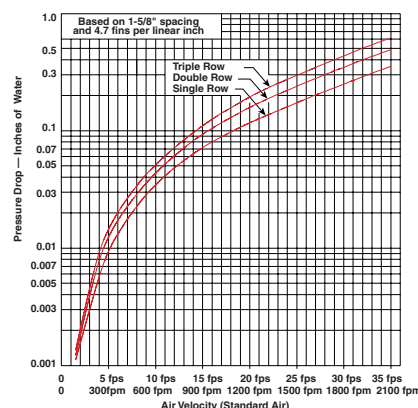
formula may be used for air at standard conditions:

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

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	Max. Outlet Air Temp. 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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To Order (Specify Model Number)

MOST POPULAR MODELS HIGHLIGHTED!

kW	Volts	Phase	Amps/ Circ.	No. Circ.	No. Elem.	A	B	D	Rust-Resisting Iron Sheath Temperatures to 750°F		Chrome Steel Sheath Temperatures to 950°F		Wt. (Lbs.)
									Model No.	Price	Model No.	Price	
CAB — Side Terminals (26 W/in ²)													
6	120	1	50	1	6	10%	15%	11½	CAB-62/120	\$640	CAB-611/120	\$715	25
6	208	1	28.9	1	6	10%	15%	11½	CAB-62/208	640	CAB-611/208	715	25
6	240	1	25	1	6	10%	15%	11½	CAB-62/240	640	CAB-611/240	715	25
6	480	1	12.5	1	6	10%	15%	11½	CAB-62/480	640	CAB-611/480	715	25
6	208	3	16.7	1	6	10%	15%	11½	CAB-62/208/3P	640	CAB-611/208/3P	715	25
6	240	3	14.5	1	6	10%	15%	11½	CAB-62/240/3P	640	CAB-611/240/3P	715	25
6	480	3	7.2	1	6	10%	15%	11½	CAB-62/480/3P	640	CAB-611/480/3P	715	25
12	208	1	57.7	1	9	15%	18½	14%	CAB-122/208	995	CAB-1211/208	1085	35
12	240	1	50	1	9	15%	18½	14%	CAB-122/240	995	CAB-1211/240	1085	35
12	480	1	25	1	9	15%	18½	14%	CAB-122/480	995	CAB-1211/480	1085	35
12	208	3	33.4	1	9	15%	18½	14%	CAB-122/208/3P	995	CAB-1211/208/3P	1085	35
12	240	3	28.9	1	9	15%	18½	14%	CAB-122/240/3P	995	CAB-1211/240/3P	1085	35
12	480	3	14.5	1	9	15%	18½	14%	CAB-122/480/3P	995	CAB-1211/480/3P	1085	35
15	208	1	72.1	1	9	15%	21%	17%	CAB-152/208	1215	CAB-1511/208	1440	40
15	240	1	62.5	1	9	15%	21%	17%	CAB-152/240	1215	CAB-1511/240	1440	40
15	480	1	31.3	1	9	15%	21%	17%	CAB-152/480	1215	CAB-1511/480	1440	40
15	208	3	41.7	1	9	15%	21%	17%	CAB-152/208/3P	1215	CAB-1511/208/3P	1440	40
15	240	3	36.1	1	9	15%	21%	17%	CAB-152/240/3P	1215	CAB-1511/240/3P	1440	40
15	480	3	18.1	1	9	15%	21%	17%	CAB-152/480/3P	1215	CAB-1511/480/3P	1440	40
20	208	3	55.6	1	12	20%	21%	17%	CAB-202/208	1535	CAB-2011/208	1810	55
20	240	3	48.2	1	12	20%	21%	17%	CAB-202/240	1535	CAB-2011/240	1810	55
20	480	3	24.1	1	12	20%	21%	17%	CAB-202/480	1535	CAB-2011/480	1810	55
25	208	3	69.5	1	12	20%	26%	21%	CAB-252/208	1790	CAB-2511/208	2175	65
25	240	3	60.2	1	12	20%	26%	21%	CAB-252/240	1790	CAB-2511/240	2175	65
25	480	3	30.1	1	12	20%	26%	21%	CAB-252/480	1790	CAB-2511/480	2175	65
30	480	3	18.1	2	18	29%	21%	17%	—	—	CAB-3011/480	2215	75
40	208	3	55.6	2	18	29%	27%	23	CAB-402/208	2290	CAB-4011/208	2680	90
40	240	3	48.2	2	18	29%	27%	23	CAB-402/240	2290	CAB-4011/240	2680	90
40	480	3	24.1	2	18	29½	27%	23	CAB-402/480	2290	CAB-4011/480	2680	90
50	208	3	69.5	2	18	29%	33%	28%	CAB-502/208	2940	CAB-5011/208	3395	110
50	240	3	60.2	2	18	29½	33%	28%	CAB-502/240	2940	CAB-5011/240	3395	110
50	480	3	30.1	2	18	29½	33%	28%	CAB-502/480	2940	CAB-5011/480	3395	110
75	208	3	69.5	3	27	44⅞	42%	37%	CAB-752/208	4395	CAB-7511/208	4745	200
75	240	3	60.2	3	27	44⅞	42%	37%	CAB-752/240	4395	CAB-7511/240	4745	200
75	480	3	30.1	3	27	44⅞	42%	37%	CAB-752/480	4395	CAB-7511/480	4745	200
100	208	3	92.6	3	27	44⅞	47½	43%	CAB-1002/208	5640	CAB-10021/208	5900	220
100	240	3	80.3	3	27	44⅞	47½	43%	CAB-1002/208	5640	CAB-10021/208	5900	220
100	480	3	40.1	3	27	44⅞	47½	43%	CAB-1002/480	5640	CAB-10021/480	5900	220
CABB — Bottom Terminals (26 W/in ²)													
6	240	3	14.5	1	6	10%	15%	11½	—	—	CABB-611/240	795	25
6	480	3	7.2	1	6	10%	15%	11½	—	—	CABB-611/480	795	25
12	208	3	33.4	1	9	15%	18½	14%	—	—	CABB-1211/208	1170	35
12	240	3	28.9	1	9	15%	18½	14%	—	—	CABB-1211/240	1170	35
12	480	3	14.5	1	9	15%	18½	14%	—	—	CABB-1211/480	1170	35
20	480	3	24.1	1	12	20%	21%	17%	—	—	CABB-2011/480	1889	55
25	480	3	30.1	1	12	29%	26%	21%	CABB-252/480	1875	CABB-2511/480	2251	65
40	480	3	24.1	2	18	29½	27%	23	CABB-402/480	2370	CABB-4011/480	2762	90
50	480	3	30.1	2	18	29½	33%	28%	CABB-502/480	3020	CABB-5011/480	3473	110
75	480	3	30.1	3	27	44⅞	42%	37%	CABB-752/480	4475	CABB-7511/480	4826	200
100	480	3	40.1	3	27	44⅞	47½	43%	CABB-1002/480	5715	CABB-10021/480	5989	220

Ordering Example: CAB-252/480 is a rust-resisting iron sheath heater, 25 kW, 480 Volt, \$1790.

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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