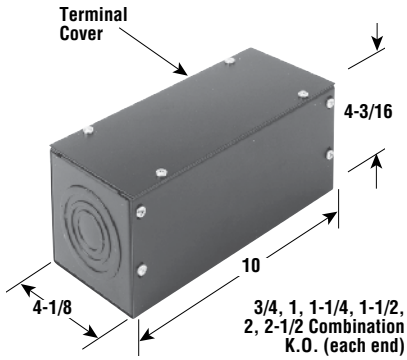
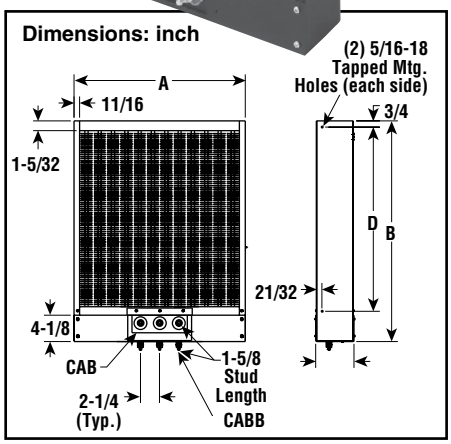
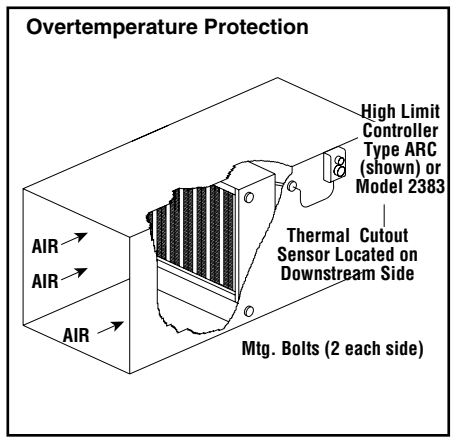
LOW TEMPERATURE AIR DUCT HEATERS

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 ⅜" 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.

FinstripElements,ExclusiveConstruction—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

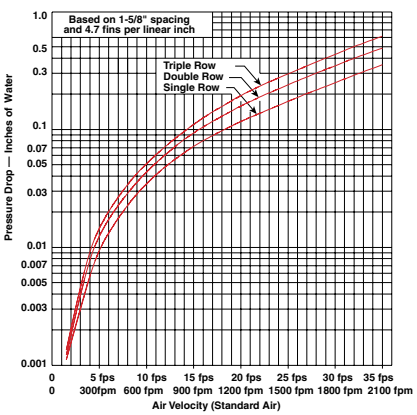
Selection Heater Size — Refer to Technical section for examples on determining kW requirements. For quick estimating purposes, the following formula may be used for air at standard conditions:

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

MaximumWorkTemperatures—TypeCAB 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.



LOW TEMPERATURE AIR DUCT HEATERS

CAB and CABB Styles

To Order

kW	Volts	Phase	Amps/ Circ.	No. Circ.	No. Elem.	inches A	inches B	inches D	Rust-Resisting Iron Sheath Temperatures to 750°F Model No.	Chrome Steel Sheath Temperatures to 950°F Model No.	Wt. (lb)
CAB—Side Terminals (26 W/in²)											
6	120	1	50	1	6	10¾	15⅞	11½	**CAB-62/120**	**CAB-611/120**	25
6	208	1	28.9	1	6	10¾	15⅞	11½	**CAB-62/208**	**CAB-611/208**	25
6	240	1	25	1	6	10¾	15⅞	11½	**CAB-62/240**	**CAB-611/240**	25
6	480	1	12.5	1	6	10¾	15⅞	11½	**CAB-62/480**	**CAB-611/480**	25
6	208	3	16.7	1	6	10¾	15⅞	11½	**CAB-62/208/3P**	**CAB-611/208/3P**	25
6	240	3	14.5	1	6	10¾	15⅞	11½	**CAB-62/240/3P**	**CAB-611/240/3P**	25
6	480	3	7.2	1	6	10¾	15⅞	11½	**CAB-62/480/3P**	**CAB-611/480/3P**	25
12	208	1	57.7	1	9	15⅜	18½	14⅛	**CAB-122/208**	**CAB-1211/208**	35
12	240	1	50	1	9	15⅜	18½	14⅛	**CAB-122/240**	**CAB-1211/240**	35
12	480	1	25	1	9	15⅜	18½	14⅛	**CAB-122/480**	**CAB-1211/480**	35
12	208	3	33.4	1	9	15⅜	18½	14⅛	**CAB-122/208/3P**	**CAB-1211/208/3P**	35
12	240	3	28.9	1	9	15⅜	18½	14⅛	**CAB-122/240/3P**	**CAB-1211/240/3P**	35
12	480	3	14.5	1	9	15⅜	18½	14⅛	**CAB-122/480/3P**	**CAB-1211/480/3P**	35
15	208	1	72.1	1	9	15⅜	21⅝	17¼	**CAB-152/208**	**CAB-1511/208**	40
15	240	1	62.5	1	9	15⅜	21⅝	17¼	**CAB-152/240**	**CAB-1511/240**	40
15	480	1	31.3	1	9	15⅜	21⅝	17¼	**CAB-152/480**	**CAB-1511/480**	40
15	208	3	41.7	1	9	15⅜	21⅝	17¼	**CAB-152/208/3P**	**CAB-1511/208/3P**	40
15	240	3	36.1	1	9	15⅜	21⅝	17¼	**CAB-152/240/3P**	**CAB-1511/240/3P**	40
15	480	3	18.1	1	9	15⅜	21⅝	17¼	**CAB-152/480/3P**	**CAB-1511/480/3P**	40
20	208	3	55.6	1	12	20⅛	21⅝	17¼	**CAB-202/208**	**CAB-2011/208**	55
20	240	3	48.2	1	12	20⅛	21⅝	17¼	**CAB-202/240**	**CAB-2011/240**	55
20	480	3	24.1	1	12	20⅛	21⅝	17¼	**CAB-202/480**	**CAB-2011/480**	55
25	208	3	69.5	1	12	20⅛	26⅛	21¾	**CAB-252/208**	**CAB-2511/208**	65
25	240	3	60.2	1	12	20⅛	26⅛	21¾	**CAB-252/240**	**CAB-2511/240**	65
25	480	3	30.1	1	12	20⅛	26⅛	21¾	**CAB-252/480**	**CAB-2511/480**	65
30	480	3	18.1	2	18	29½	21⅝	17¼	—	**CAB-3011/480**	75
40	208	3	55.6	2	18	29½	27⅜	23	**CAB-402/208**	**CAB-4011/208**	90
40	240	3	48.2	2	18	29½	27⅜	23	**CAB-402/240**	**CAB-4011/240**	90
40	480	3	24.1	2	18	29½	27⅜	23	**CAB-402/480**	**CAB-4011/480**	90
50	208	3	69.5	2	18	29½	33⅛	28¾	**CAB-502/208**	**CAB-5011/208**	110
50	240	3	60.2	2	18	29½	33⅛	28¾	**CAB-502/240**	**CAB-5011/240**	110
50	480	3	30.1	2	18	29½	33⅛	28¾	**CAB-502/480**	**CAB-5011/480**	110
75	208	3	69.5	3	27	44⅞	42⅛	37¾	**CAB-752/208**	**CAB-7511/208**	200
75	240	3	60.2	3	27	44⅞	42⅛	37¾	**CAB-752/240**	**CAB-7511/240**	200
75	480	3	30.1	3	27	44⅞	42⅛	37¾	**CAB-752/480**	**CAB-7511/480**	200
100	208	3	92.6	3	27	44⅞	47½	43⅜	**CAB-1002/208**	**CAB-10021/208**	220
100	240	3	80.3	3	27	44⅞	47½	43⅜	**CAB-1002/208**	**CAB-10021/208**	220
100	480	3	40.1	3	27	44⅞	47½	43⅜	**CAB-1002/480**	**CAB-10021/480**	220
CABB—Bottom Terminals (26 W/in²)											
6	240	3	14.5	1	6	10¾	15⅞	11½	—	**CABB-611/240**	25
6	480	3	7.2	1	6	10¾	15⅞	11½	—	**CABB-611/480**	25
12	208	3	33.4	1	9	15⅜	18½	14⅛	—	**CABB-1211/208**	35
12	240	3	28.9	1	9	15⅜	18½	14⅛	—	**CABB-1211/240**	35
12	480	3	14.5	1	9	15⅜	18½	14⅛	—	**CABB-1211/480**	35
20	480	3	24.1	1	12	20⅛	21⅝	17¼	—	**CABB-2011/480**	55
25	480	3	30.1	1	12	29½	26⅛	21¾	**CABB-252/480**	**CABB-2511/480**	65
40	480	3	24.1	2	18	29½	27⅜	23	**CABB-402/480**	**CABB-4011/480**	90
50	480	3	30.1	2	18	29½	33⅛	28¾	**CABB-502/480**	**CABB-5011/480**	110
75	480	3	30.1	3	27	44⅞	42⅛	37¾	**CABB-752/480**	**CABB-7511/480**	200
100	480	3	40.1	3	27	44⅞	47½	43⅜	—	**CABB-10021/480**	220

Ordering Examples: CAB-611/120, *chrome steel sheath heater, 6 kW, 120V.*
CAB-252/480, *rust-resisting iron sheath heater, 25 kW, 480V.*

Free Area for Air Flow

Model No.	Square Feet	Model No.	Square Feet
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		

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.

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