

# MCC

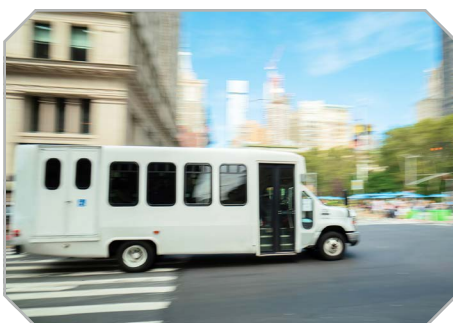


**Mobile Climate Control**

[mcc-hvac.com](http://mcc-hvac.com)

## AFTERMARKET HVAC PRODUCT GUIDE

Heavy Duty Vehicle Applications







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# V. Split System Air Conditioning



## Evaporator **EM-1**

A high performance free blow evaporator capable of covering a broad range of applications, the EM-1's low profile makes it an attractive compliment to commercial or school bus interiors. Advanced engineering, incorporating transverse blower technology, delivers a high volume of evenly dispersed conditioned air for total passenger comfort regardless of one's location in the vehicle. The service friendly design allows easy access for removal, cleaning, and/or replacement of the reusable air filter.

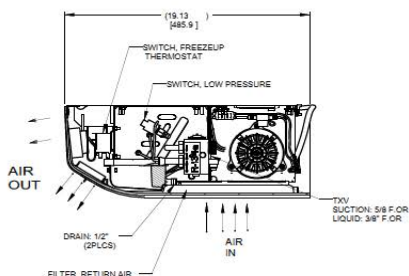


### Features

- Transverse blower technology
- New extreme long life motors
- Available for front and rear ceiling mount
- Galvanized steel frame
- State of the art enhanced coil
- Attractive plastic cover available in two colors

### Benefits

- Provides uniform air flow across the slanted coil which increases evaporator performance and efficiency.
- Lowest noise levels and maximum air throw
- Offers unparalleled 10,000 hours usage
- Flexible to fit any application
- Strength and durability
- Maximum capacity and efficiency



## Technical Data

Cooling capacity	60000 Btu/hr (15.1 kW) IMACA <sup>[1]</sup>
	27000 Btu/hr (6.8 kW) ARI <sup>[2]</sup>
Max amperage requirement	27 A @ 13.5 V dc (High Speed) Voltage
Air flow	709 CFM (1205 m³/hr) <sup>[3]</sup>
Refrigerant	R134a
Length	41.25 (1048 mm)
Width	19.13 (486 mm)
Height	7.73 (196 mm)
Weight	59 lbs (27 kg)
Condensate drain connection	½ (12.7 mm) O.D (dual drains)
Cover color	Snow White or Dove Gray

[2] ARI conditions: 95°F (35°C) / 80°F (27°C) / 50% RH

[3] Airflow is tested at super high speed with cover and louvers.

[5] Airflow is tested at super high speed with cover and louvers fully installed, 0° static, 15.5 VDC

## Evaporator **EM-2**

A high performance free blow evaporator well suited for mid-sized commercial, or Type- A school bus applications. The EM-2's low profile makes it an attractive compliment to any vehicle's interior. The advanced engineering of transverse blower technology delivers a high volume of evenly dispersed conditioned air for total passenger comfort regardless of one's location in the vehicle. The service friendly design allows easy access for removal, cleaning, and/or replacement of the reusable air filter.

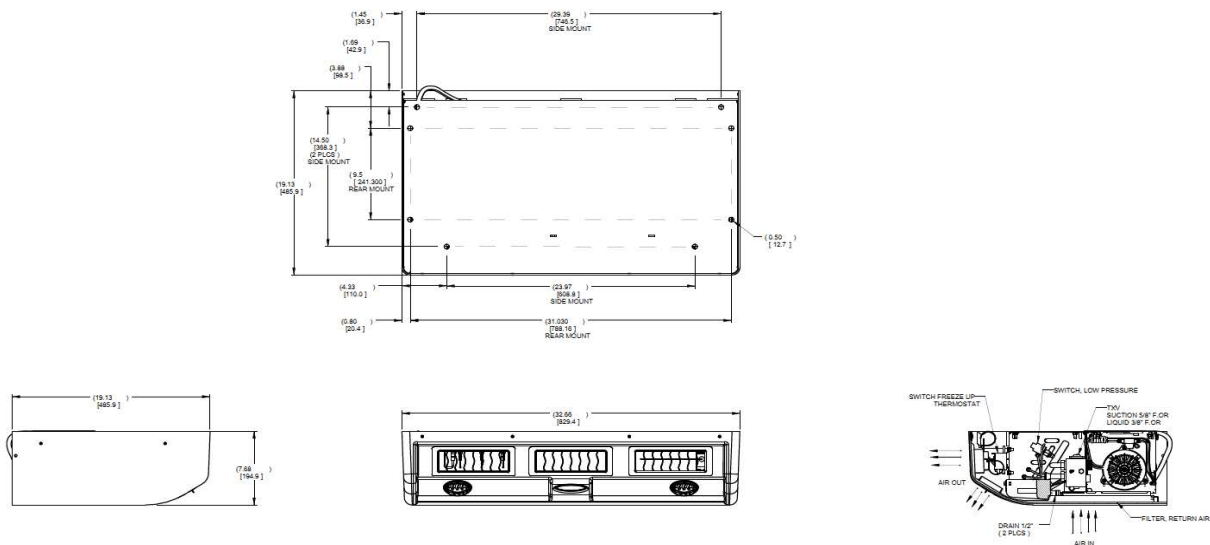


### Features

- Transverse blower technology
- New extreme long life motors
- Available for front and rear ceiling mount
- Galvanized steel frame
- State of the art enhanced coil
- Attractive plastic cover available in two colors

### Benefits

- Provides uniform air flow across the slanted coil which increases evaporator performance and efficiency.
- Lowest noise levels and maximum air throw
- Offers unparalleled 10,000 hours usage
- Flexible to fit any application
- Strength and durability
- Maximum capacity and efficiency



## Technical Data

Cooling capacity	45000 Btu/hr (11.4 kW) IMACA <sup>[1]</sup>
	18500 Btu/hr (4.7 kW) ARI <sup>[2]</sup>
Max amperage requirement	27 A @ 13.5 V dc (High Speed) Voltage
Air flow	552 CFM (938 m <sup>3</sup> /hr) <sup>[3]</sup>
Refrigerant	R134a
Length	32.66 (829 mm)
Width	19.13 (486 mm)
Height	7.68 (195 mm)
Weight	50 lbs (22 kg)
Condensate drain connection	½ (12.7 mm) O.D (dual drains)
Cover color	Snow White or Dove Gray

[1] IMACA conditions: 100°F (38°C) / 90°F (32°C) / 50% RH

[2] ARI conditions: 95°F (35°C) / 80°F (27°C) / 50% RH

[3] Airflow is at tested super high speed with cover and louvers fully installed, 0" static, 13.5 VDC

## Evaporator **EM-3**

A high performance free blow evaporator providing capacity requirements of longer length commercial bus applications, and for use in extreme heat conditions. The EM-3 can be configured in single or dual refrigerant circuits, providing a flexible solution to increased capacity from a single evaporator. The EM-3 is also available with an optional heat function.

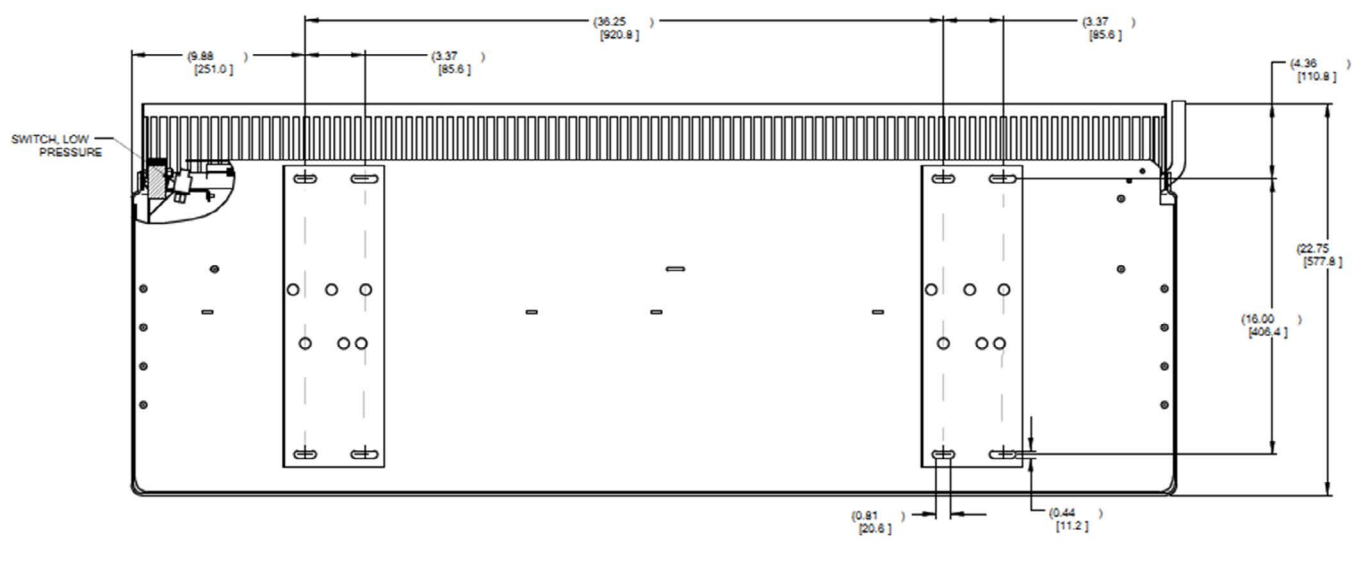


### Features

- Multi speed, high efficiency blowers
- Available for front or rear ceiling mount
- Heavy duty construction with galvanized steel frame and blower housing

### Benefits

- Maximum airflow on high speed
- Flexible to fit any application
- Strength and durability



## Technical Data

Cooling capacity	86000 Btu/hr (21.7 kW) IMACA <sup>[1]</sup>
Heating capacity (Optional Feature)	70000 Btu/hr (17.7 kW)
Air flow	1322 CFM (2247 m <sup>3</sup> /hr) <sup>[2]</sup>
Max amperage requirement	43.9 A @ 13.5 V dc (High Speed) Voltage
Refrigerant	R134a
Length	59.38 (1508 mm)
Width	22.75 (578 mm)
Height	9.9 (251 mm)
Weight	98 lbs (44.5 kg)
Condensate drain connection	5/8" (12.7 mm) O.D (dual drains)
Cover color	Dove Gray

[1] IMACA conditions: 100°F (38°C) / 90°F (32°C) / 50% RH

[2] Airflow is tested at super high speed with cover and louvers fully installed, 0" static, 13.5 VDC



## Evaporator **EM-7**

A high performance free blow evaporator well suited for shorter wheelbase commercial; or paratransit vehicles. It can also be used in applications requiring an increase in overall capacity. The EM-7's low profile and small footprint allow for various placement options while visually blending smoothly within any vehicle's passenger compartment. The service friendly design allows easy access for removal, cleaning, and/or replacement of the reusable air filter.

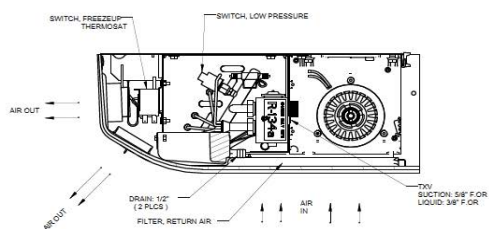
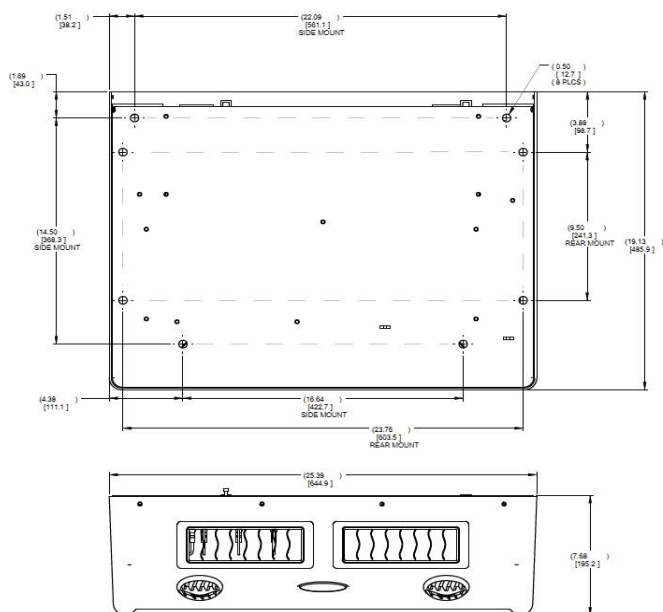


### Features

- Transverse blower technology
- New extreme long life motors
- Available for front and rear ceiling mount
- Galvanized steel frame
- State of the art enhanced coil
- Attractive plastic cover available in two colors

### Benefits

- Provides uniform air flow across the slanted coil which increases evaporator performance and efficiency.
- Lowest noise levels and maximum air throw
- Offers unparalleled 10,000 hours usage
- Flexible to fit any application
- Strength and durability



## Technical Data

Cooling capacity	35000 Btu/hr (8.8 kW) IMACA <sup>[1]</sup> 13700 Btu/hr (3.5 kW) ARI <sup>[2]</sup>
Max amperage requirement	16 A @ 13.5 V dc (High Speed) Voltage
Air flow	376 CFM (640 m <sup>3</sup> /hr) <sup>[3]</sup>
Refrigerant	R134a
Length	25.39 (645 mm)
Width	19.13 (486 mm)
Height	7.68 (195 mm)
Weight	39 lbs (17 kg)
Condensate drain connection	½ (12.7 mm) O.D (dual drains)
Cover color	Snow White or Dove Gray

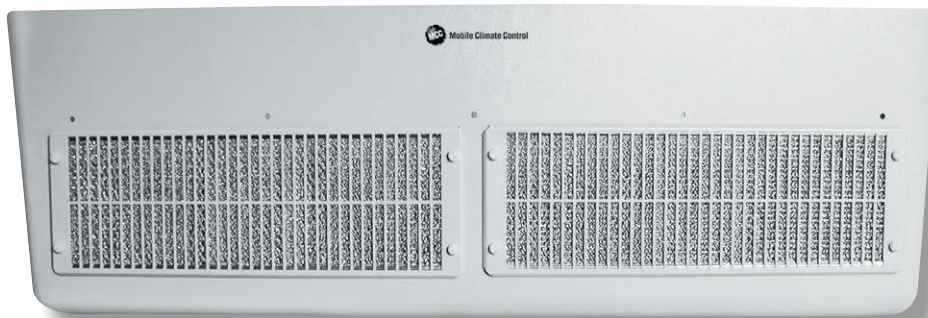
[1] IMACA conditions: 100°F (38°C) / 90°F (32°C) / 50% RH

[2] ARI conditions: 95°F (35°C) / 80°F (27°C) / 50% RH

[3] Airflow is tested at super high speed with cover and louvers fully installed, 0" static, 13.5 VDC

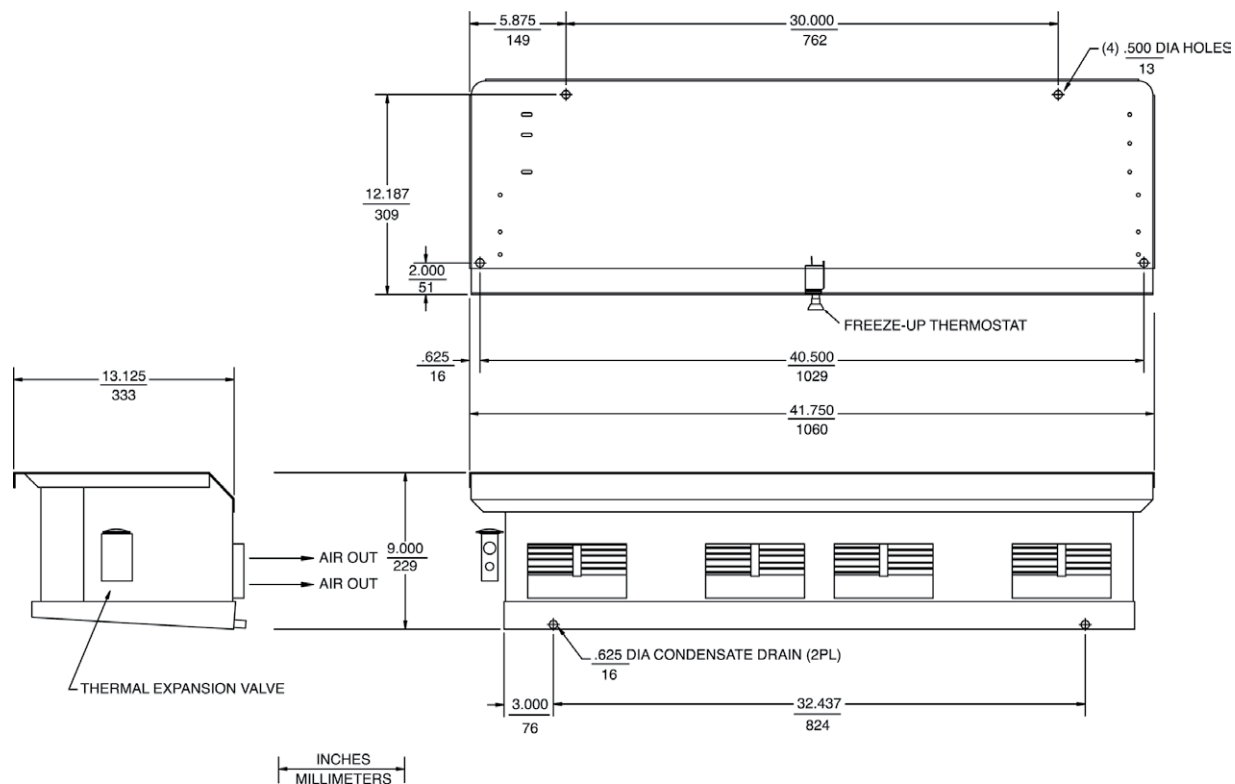
## Evaporator **EM-9**

The EM-9 ceiling mount air conditioning evaporator has also been engineered for maximum serviceability and ease of installation in commercial and school buses. Because the drain pan is part of the basic system, the EM-9 can be completely installed, charged and tested before the cover is put in place, greatly reducing installation time. Simple cover removal provides ready access to all serviceable components. This evaporator is available for ducted applications only up to 35" (889 mm) passenger areas.



### Features

- Heavy duty steel frame is reinforced for added strength
- High volume air flow that delivers performance in to any shape of duct work
- State of the art enhanced coils for maximum cooling capacity and increased efficiency
- Flexible mounted positions offer airflow where you need it
- Three speed blower allows for full air flow adjustment to optimize system to individual cooling preferences
- Unit incorporates coil freeze up protection. The result is increased trouble free compressor life
- Return air filter can be removed and cleaned without removing the unit cover



## Technical Data

Cooling capacity	60000 Btu/hr (17.5 kW) IMACA <sup>[1]</sup>	27000 Btu/hr (8 kW) ARI <sup>[2]</sup>
Air flow	1600 CFM (2718 m <sup>3</sup> /hr)	
Refrigerant	R134a	
Length	41.75" (1060 mm)	
Width	13.125" (333 mm)	
Height	9" (228 mm)	
Weight	85 lbs (38.5 kg)	
Condensate drain connection	½" (12.7 mm) O.D	
Max amperage requirement	37.5 A @ 13.5 V dc (High Speed)	
Voltage	12 or 24 VDC	
Cover color	Snow White or Dove Gray	

[1] IMACA conditions: 100°F (38°C) / 90°F (32°C) / 50% RH

[2] ARI conditions: 95°F (35°C) / 80°F (27°C) / 50% RH

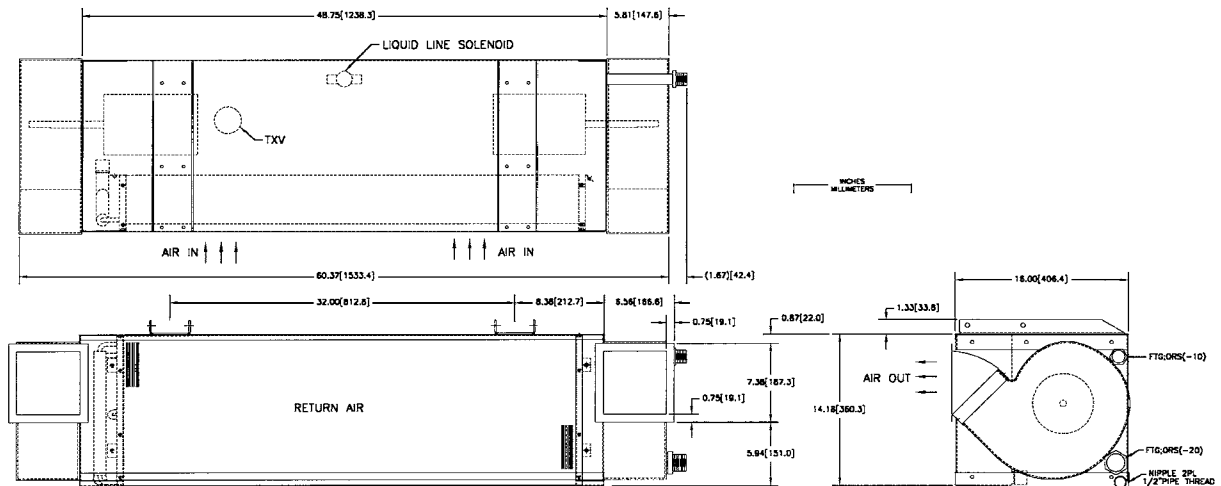
## Evaporator **EM-17**

The EM-17 rear ceiling mount air conditioning evaporator has been specifically engineered for use in vehicles with an overall length of 35 – 40' (1067 – 1219 cm) and which are used in the severest of climates and operating conditions. This unit was designed with the term “heavy duty” in mind; from its long life, large frame, transit style motors, to its own power supply generated by a 24V batteryless alternator, this is the unit that needs to be experienced to be appreciated. It has conquered transit duty school bus applications in the desert, now let it conquer your unique application.



### Features

- Internally enhanced rugged coil design delivers the highest capacity in its class while using R-134a as its refrigerant
- Heavy duty steel frame construction coupled with stainless steel fasteners equal rugged construction
- The highest air volume in its class is generated by two rebuildable 56-series cast frame constructed motors which drive two large diameter metal scroll blower wheels. This is then evenly dispersed through the use of ductwork to provide total passenger comfort
- State of the art electronic controls are incorporated to provide minimum wiring, improved reliability, and maximum protection
- All refrigerant connection points are O-ring for added leak protection and are coupled with hoses constructed to meet or exceed SAE Spec J2064 Type E
- A vinyl-clad steel cover is included in your choice of two colors (snow white or dove gray) which are custom fit to your vehicles unique contours
- A durable aluminum mesh filter is mounted in an easy to service hinged air return grill for minimized service time and maximum operating time



## Technical Data

Cooling capacity	130000 Btu/hr (38 kW) IMACA <sup>[1]</sup>	32760 Btu/hr (9.61 kW) ARI <sup>[2]</sup>
Air flow	2400 CFM (4080 m <sup>3</sup> /hr)	
Refrigerant	R134a	
Length	16" (406.4 mm)	
Width	48.75" (1238.3 mm)	
Height	15.5" (394 mm)	
Weight	196 lbs (89 kg)	
Condensate drain connection	½" (12.7 mm) O.D	
Current draw	57 amps at 27 VDC (Rated @ high speed and ½" static)	
Cooling coil	6 rows deep, galvanized steel tube sheets with internally enhanced 0.4" (9.5 mm) diameter copper tubes expanded into 0.006" (0.15 mm) aluminum fins	
Motors	Fully rebuildable 56 series frame construction capable of a constant duty design life rating of no less than 10000 hours. Motor shafts are a series 300 stainless steel for corrosion resistance. Motors are two speed (hi/low) through use of an external voltage dropping resistor.	
Blowers	Rated at 2060 CFM (3500 m <sup>3</sup> /hr) @ 0.5" (13 mm) static @ 27 volts and dynamical balanced for quiet operation.	
Blower housings	Steel construction coated with a heat-resistant sound dampening foam to aid in noise reduction	
Expansion valve	Externally equalized right angle valve with a replaceable power head and cage assembly. The superheat is factory preset	
Return air filter	Constructed of a durable aluminum mesh rated to pass FMVSS302	

[1] IMACA conditions: 100°F (38°C) / 90°F (32°C) / 50% RH

[2] ARI conditions: 95°F (35°C) / 80°F (27°C) / 50% RH



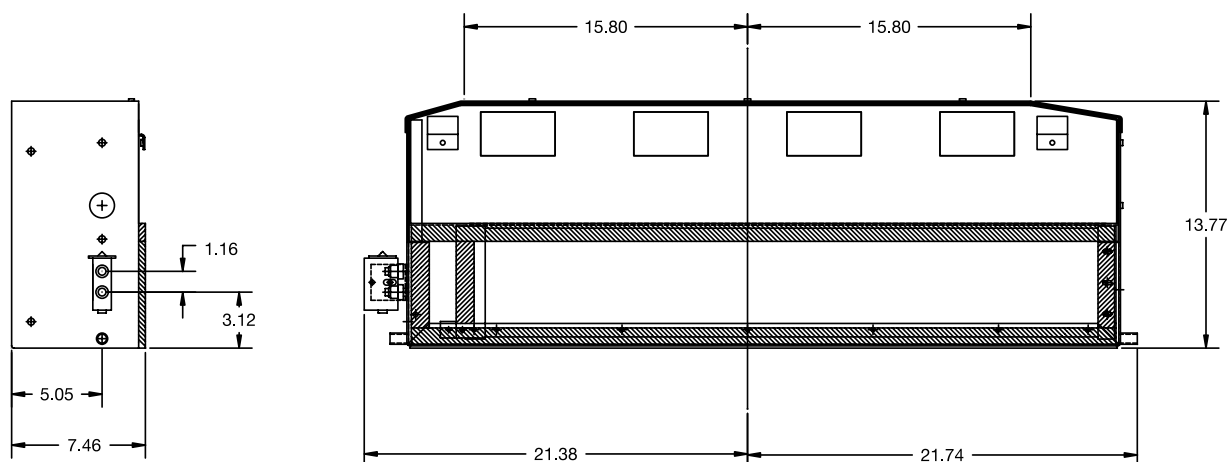
## Evaporator IW-1

A high performance free blow evaporator capable of covering a broad range of applications. The “in-wall” unit is designed to fit within the vehicle bulkhead/cap, providing a “built-in” appearance without being located over a passenger. The sleek molded cover provides directional airflow for maximum passenger comfort while incorporating a service friendly design that allows easy access for removal, cleaning, and/or replacement of the reusable air filter.



### Features

- Lightweight aluminum frame construction
- Flexible mounting configurations for every make of body
- Integrated motor cover panel for ease of service
- State of the art enhanced coils for maximum cooling capacity
- Flush mount installation provides maximum head clearance and clean OEM appearance
- Easy access hinged return air filter provides for reduced service time



## Technical Data

Cooling capacity	55000 Btu/hr (16.11 kW) IMACA <sup>[1]</sup> 27005 Btu/hr (8 kW) ARI <sup>[2]</sup>
Air flow	1600 CFM (2718.42 m <sup>3</sup> /hr)
Refrigerant	R134a
Length	43.12" (1095.2 mm)
Width	7.46" (189.5 mm)
Height	13.77" (349.8 mm)
Weight	50 lbs (22.7 kg)
Condensate drain connection	½" (12.7 mm) OD
Max amperage requirement	23.7 A @ 13.5 V dc (High Speed)
Voltage	12 or 24 VDC
Cover color	Snow White or Dove Gray

[1] IMACA conditions: 100°F (38°C) / 90°F (32°C) / 50% RH

[2] ARI conditions: 95°F (35°C) / 80°F (27°C) / 50% RH

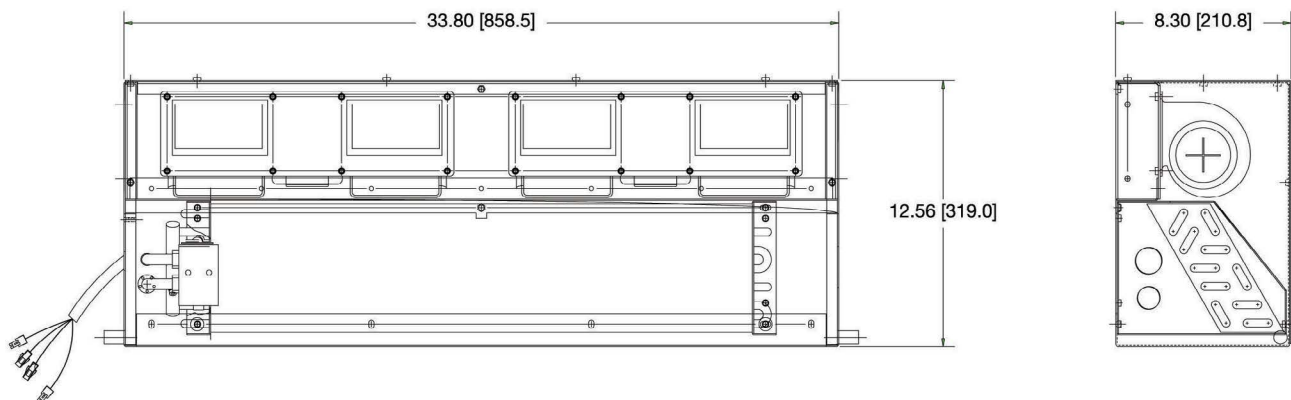
## Evaporator IW-2

A high performance free blow evaporator capable of covering a broad range of applications. The “in-wall” unit is designed to fit within the vehicle bulkhead/cap, providing a “built-in” appearance without being located over a passenger. The sleek molded cover provides directional airflow for maximum passenger comfort while incorporating a service friendly design that allows easy access for removal, cleaning, and/or replacement of the reusable air filter.



### Features

- Lightweight aluminum frame construction
- Flexible mounting configurations for every make or body
- Integrated motor cover panel for ease of service
- State of the art enhanced coils for maximum cooling capacity
- Flush mount installation provides maximum head clearance and clean OEM appearance
- Easy access return air filter provides for reduced service time



## Technical Data

Cooling capacity	45000 Btu/hr (13.2 kW) IMACA <sup>[1]</sup>	18500 Btu/hr (5.42 kW) ARI <sup>[2]</sup>
Air flow	800 CFM (1359.2 m <sup>3</sup> /hr)	
Refrigerant	R134a	
Length	33.8" (858.5 mm)	
Width	8.30" (211 mm)	
Height	12.56" (319 mm)	
Weight	45 lbs (20.41 kg)	
Condensate drain connection	½" (12.7 mm) OD	
Max amperage requirement	23.7 A @ 13.5 V dc (High Speed)	
Voltage	12 or 24 VDC	
Cover color	Snow White or Dove Gray	

[1] IMACA conditions: 100°F (38°C) / 90°F (32°C) / 50% RH

[2] ARI conditions: 95°F (35°C) / 80°F (27°C) / 50% RH

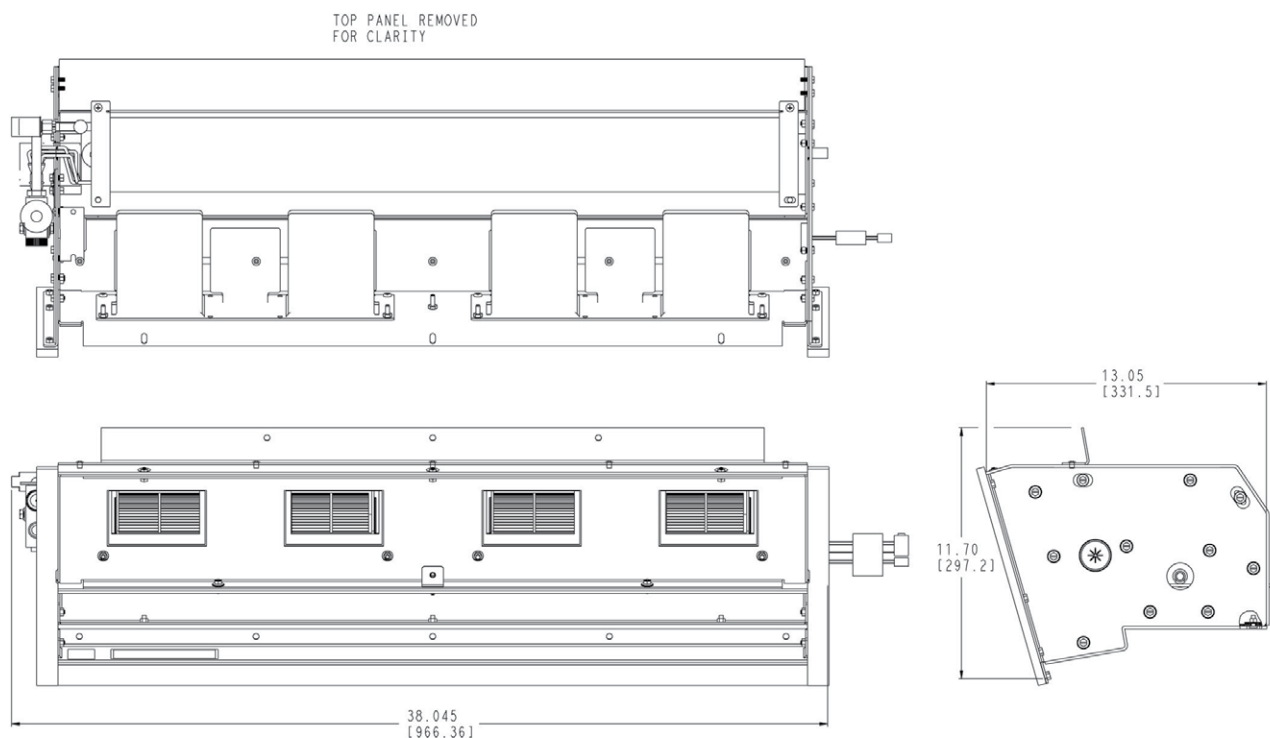
## Evaporator **IW-4**

The IW-4 unit frees up the front bulkhead of Thomas Built Buses C2 conventional buses. The IW-4 evaporator can also be matched with other MCC components to provide a complete air conditioning system that meets your exact vehicle size, operating mode and climate.



### Features

- Lightweight aluminum frame construction
- Integrated motor cover panel for ease of service
- Enhanced coils for maximum cooling capacity
- Easy access return air filter helps to reduce service time
- Drop in one piece construction simplifies installation time and provides maximum head clearance with a clean OEM appearance



## Technical Data

Cooling capacity	55000 Btu/hr (16.1 kW) IMACA <sup>[1]</sup>	28450 Btu/hr (8.33 kW) ARI <sup>[2]</sup>
Air flow	1500 CFM (2548.5 m <sup>3</sup> /hr)	
Refrigerant	R134a	
Length	38.10" (967.7 mm)	
Width	13.64" (346.5 mm)	
Height	10.30" (261.6 mm)	
Weight	40 lbs (18.1 kg)	
Condensate drain connection	½" (12.7 mm) OD	
Max amperage requirement	23.7 A @ 13.5 V dc (High Speed)	
Voltage	12 or 24 VDC	
Cover color	Snow White or Dove Gray	

[1] IMACA conditions: 100°F (38°C) / 90°F (32°C) / 50% RH

[2] ARI conditions: 95°F (35°C) / 80°F (27°C) / 50% RH



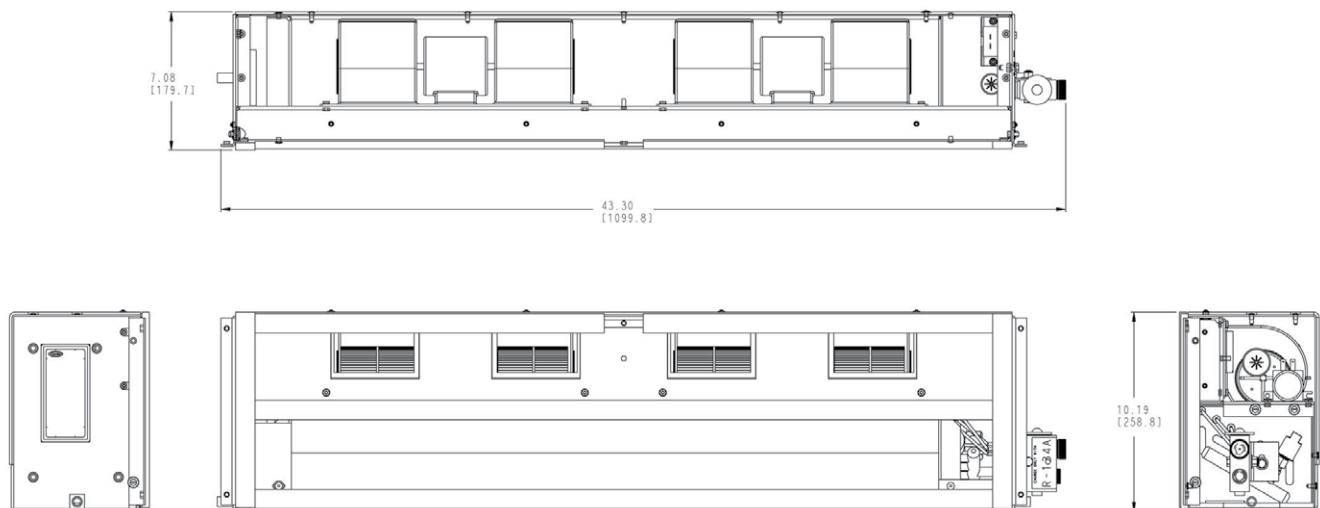
## Evaporator IW-10

A high capacity, high performance, free blow evaporator within the smallest amount of space. At close to three inches shorter than most bulkhead applicable evaporators, the IW-10 is the ideal choice when working within limited space such as over windows/windshields, and entry/exit doors. The sleek molded cover provides directional airflow for maximum passenger comfort and incorporates a maintenance friendly return air filter.



### Features

- Lightweight aluminum construction
- Flexible mounting configurations
- Enhanced coils for maximum cooling capacity
- Easy access return air filter helps to reduce service time
- Flat or formed ABS cover
- Covers available in white or gray
- Flush mount installation provides maximum head clearance and a clean OEM appearance



## Technical Data

Cooling capacity	55000 Btu/hr (16.1 kW) IMACA <sup>[1]</sup>	20580 Btu/hr (6.87 kW) ARI <sup>[2]</sup>
Air flow	1300 CFM (2208.7 m <sup>3</sup> )	
Refrigerant	R134a	
Length	43.30" (1100 mm)	
Width	7.00" (177.8 mm)	
Height	10.19" (25.9 mm)	
Weight	32 lbs (14.5 kg)	
Condensate drain connection	½" (12.7 mm) OD	
Max amperage requirement	23.7 A @ 13.5 V dc (High Speed)	
Voltage	12 or 24 VDC	
Cover color	Snow White or Dove Gray	

[1] IMACA conditions: 100°F (38°C) / 90°F (32°C) / 50% RH

[2] ARI conditions: 95°F (35°C) / 80°F (27°C) / 50% RH

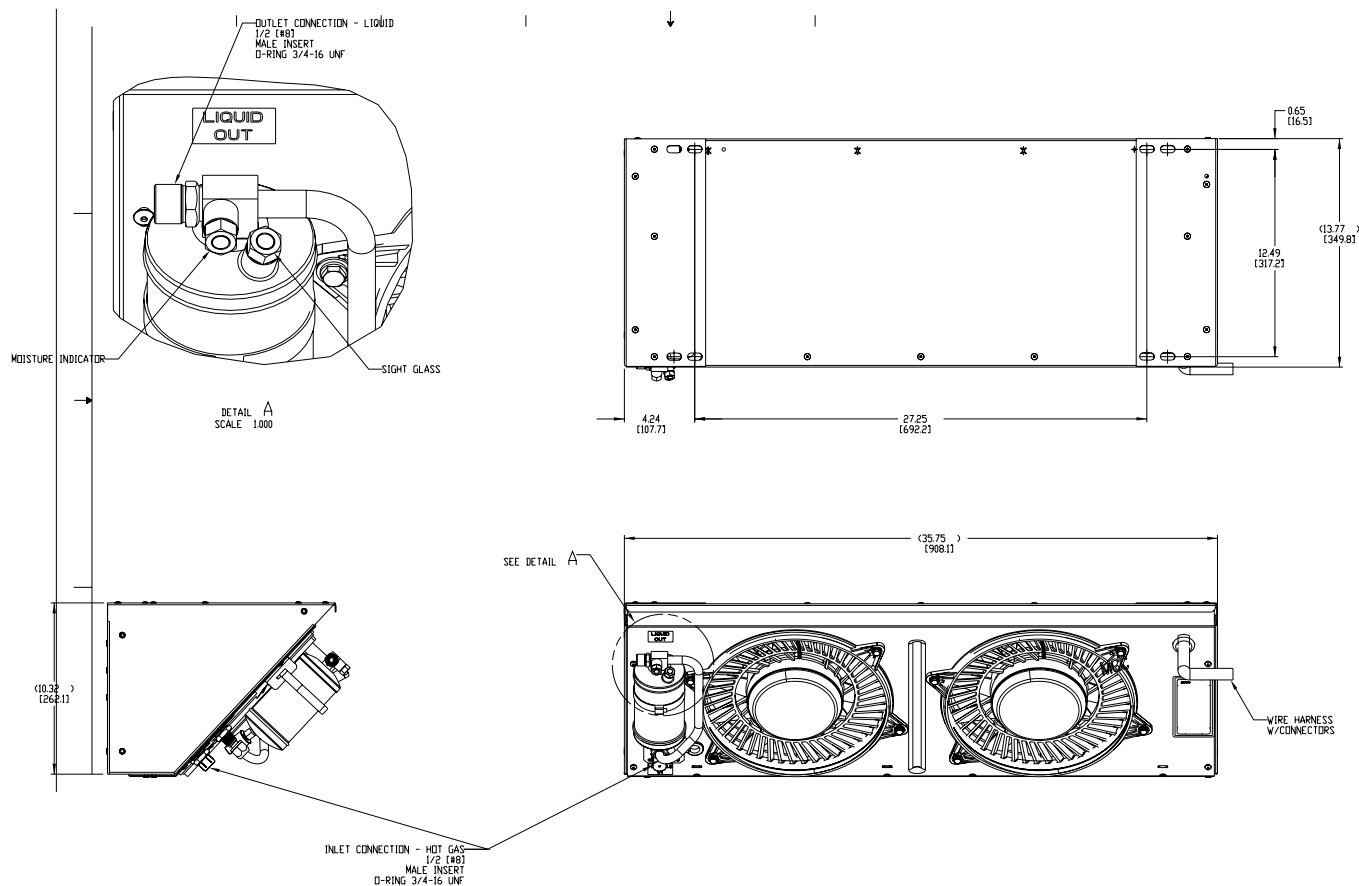
## Condenser CM-2

A highly efficient, skirt mounted condenser that provides industry leading performance and durability. The heat-fused, powder coated, steel constructed chassis is built to withstand harsh, rugged, outdoor conditions. The large volume fans channel air through the coil, while angularly exhausting the hot air downward, preventing the use of hot air in the recirculation process. The MCC exclusive design allows the sealed unitized fan to be easily serviced, without any cover/panel removal. The pioneering micro-channel heat exchanger allows for greater heat transfer efficiency, resulting in enhanced cooling, reducing compressor stress, and promotes overall system longevity.



### Features

- Slim Line CM-2 cabinet is constructed using rugged, powder coated, steel construction
- Zinc coated for added durability and corrosion protection.
- Integrated high pressure safety switch as standard equipment
- Unitized motor/fan package increases service access and decreases service time
- Winter protection package
- Skirt mount or component mount air inlet grill
- 12V or 24V operation
- Stackable kit available
- Plug-n-Play connectors on unit and fan motor provide for ease of installation and motor service
- Incorporated single piece receiver/dryer and system moisture indicator reduced possible leak joints



## Technical Data

Capacity	60000 Btu/hr (17.58 kW) IMACA <sup>[1]</sup>
Air flow	900 CFM (1529 m <sup>3</sup> /hr)
Condenser coil	Advanced technology Micro Channel Heat Exchanger (MCHX)
Condenser fans	Unitized, low-profile, axial-flow type propeller fans balanced for quiet, vibration-free operation with finger guard
Fan motors	Totally enclosed, pancake-style, permanent-magnet type with extended-life, permanently lubricated bearings
Max amperage requirement	14 amps @ 13.5 VDC; 7 amps @ 27.0 VDC
Safety controls	High refrigerant pressure cut-out 400 psi (28 bar); cut-in 300 psi (21 bar)
Receiver filter dryer	16 in <sup>3</sup> (262 cm <sup>3</sup> ), 1/2" (#8) Male Insert O-Ring (MIOR)
Weight	45 lbs (20.5 kg)
Available color	Midnight black

[1] IMACA conditions: 100°F (38°C) / 90°F (32°C) / 50% RH

## Condenser CM-3

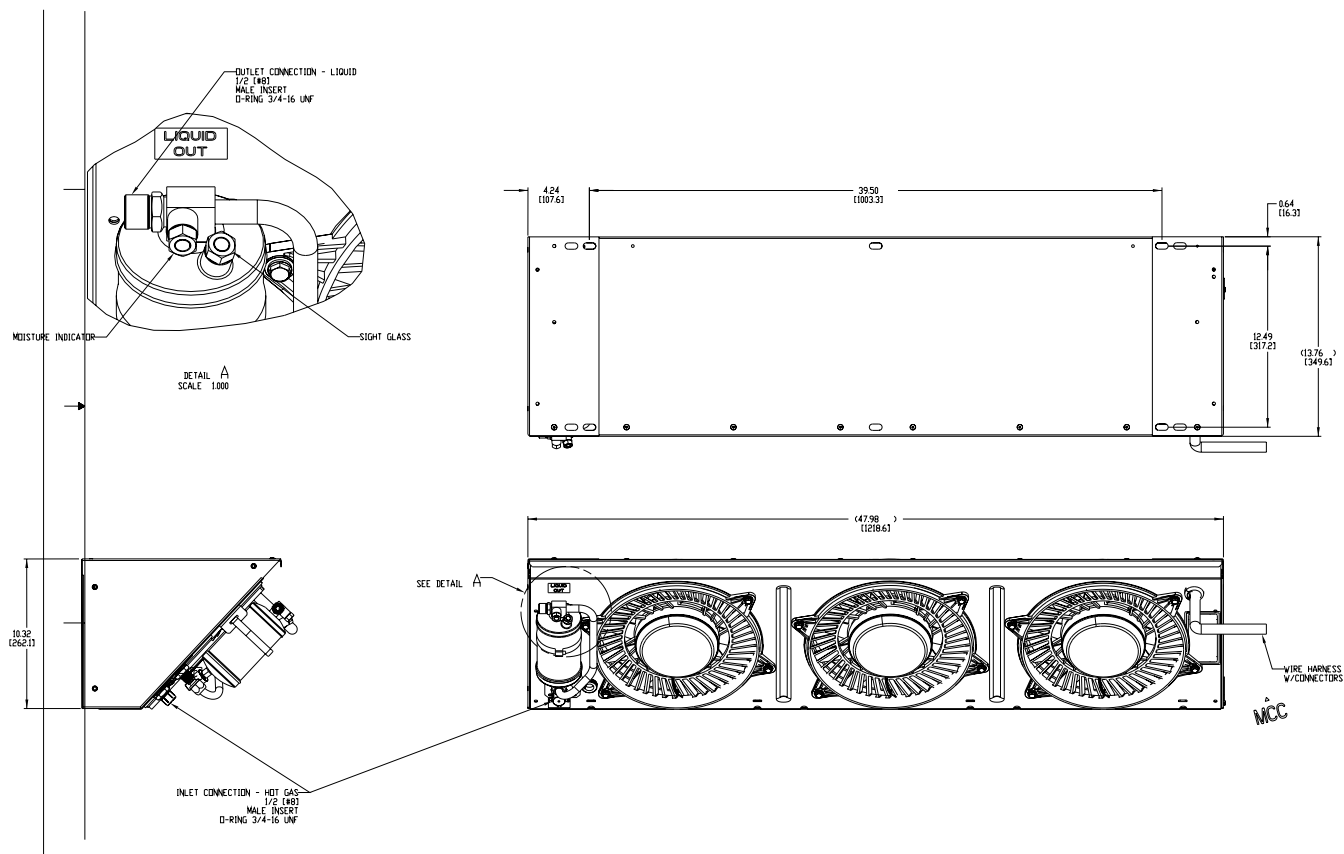
A highly efficient, skirt mounted condenser that provides industry leading performance and durability. The heat-fused, powder coated, steel constructed chassis is built to withstand harsh, rugged, outdoor conditions. The large volume fans channel air through the coil, while angularly exhausting the hot air downward, preventing the use of hot air in the recirculation process. The MCC exclusive design allows the sealed unitized fan to be easily serviced, without any cover/panel removal. The pioneering micro-channel heat exchanger allows for greater heat transfer efficiency, resulting in enhanced cooling, reducing compressor stress, and promotes overall system longevity.



### Features

- Micro channel all aluminum coil design for unmatched-heat transfer
- Zink coated for added durability and corrosion protection
- Rugged coated steel construction
- Integrated high pressure safety switch as standard equipment
- Unitized motor/fan package increases service access and decreases service time
- Winter protection package
- Skirt mount or component mount air inlet grill
- 12V or 24V operation
- Stackable kit available
- Incorporated single piece receiver/dryer and system moisture indicator reduced possible leak joints
- Plug-n-Play connectors on unit and fan motor provide for ease of installation and motor service

## Slim Line Series **Condenser CM-3**



### Technical Data

Capacity	80000 Btu/hr (23.44 kW) IMACA <sup>[1]</sup>
Air flow	1350 CFM (2294 m <sup>3</sup> /hr)
Condenser coil	Advanced technology micro channel heat exchanger (MCHX)
Condenser fans	Unitized, low profile, axial flow vector fans balanced for quiet, vibration free operation with finger guard
Fan motors	Totally enclosed, pancake style, permanent-magnet type with extended life, permanently lubricated bearings
Max amperage requirement	21 amps @ 13.5 VDC; 11.5 amps @ 27.0 VDC
Safety controls	High refrigerant pressure cut-out 400 psi (28 bar); cut-in 300 psi (21 bar)
Receiver filter dryer	16 in <sup>3</sup> (262 cm <sup>3</sup> ), 1/2" [#8] Male Insert O-Ring (MIOR)
Weight	51 lbs (23.2 kg)
Available color	Midnight black

[1] IMACA conditions: 100°F (38°C) / 90°F (32°C) / 50% RH



## Condenser **CM-14**

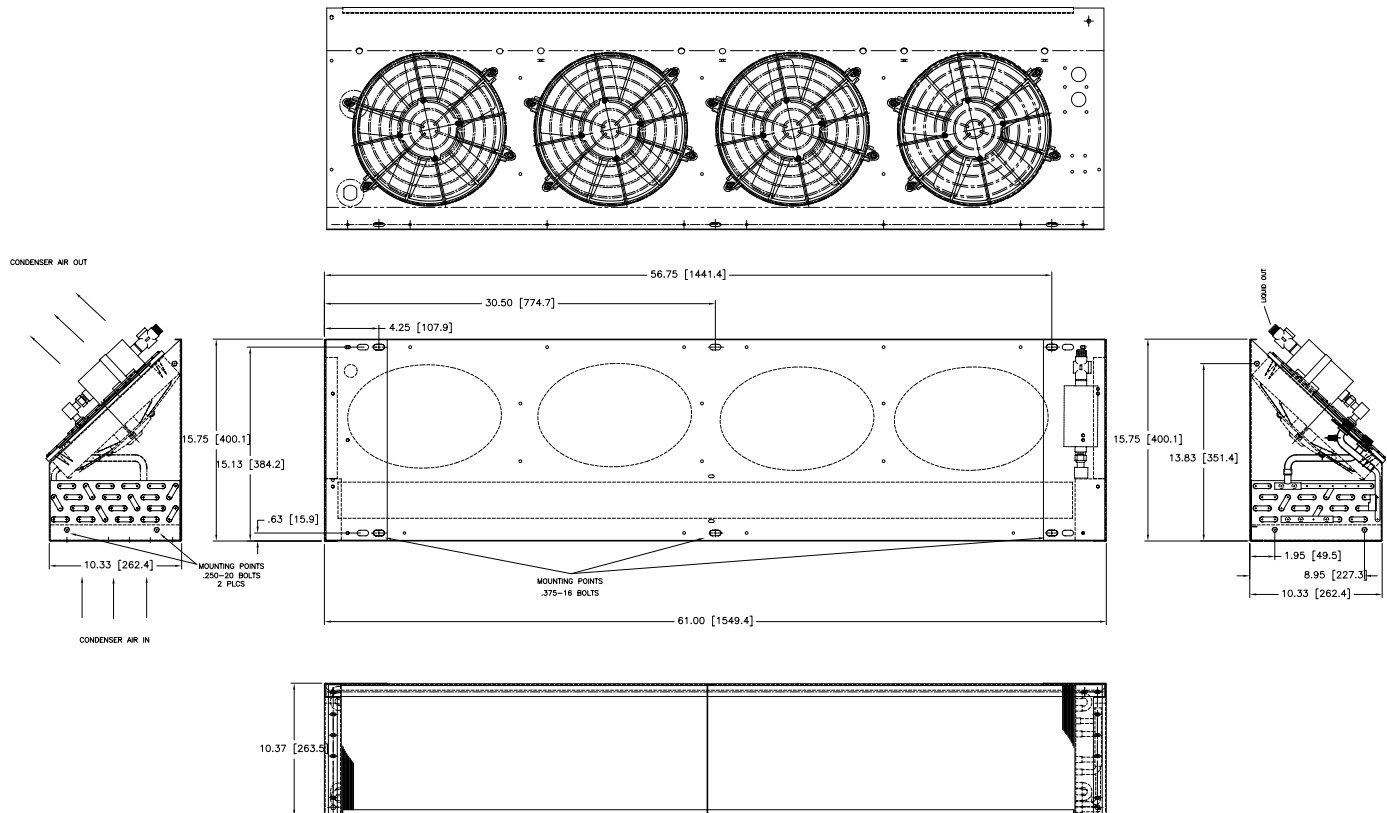
A highly efficient, skirt mounted condenser that provides industry leading performance and durability. The heat-fused, powder coated, steel constructed chassis is built to withstand harsh, rugged, outdoor conditions. The large volume fans channel air through the coil, while angularly exhausting the hot air downward, preventing the use of hot air in the recirculation process. The MCC exclusive design allows the sealed unitized fan to be easily serviced, without any cover/panel removal. The pioneering micro-channel heat exchanger allows for greater heat transfer efficiency, resulting in enhanced cooling, reducing compressor stress, and promotes overall system longevity.



### Features

- Enhanced Copper Tube and Aluminium fin coil design for unmatched heat transfer coil
- Zinc coated for added durability and corrosion protection
- Rugged coated steel construction
- Integral high pressure switch eliminates high-side compressor cycling
- Unitized motor/fan package increases service access and decreases service time
- Winter protection package
- Incorporated single piece combination filter drier and sight glass with system moisture indicator reduces possible leak joints
- Skirt mount or component mount air inlet grill
- 12 V or 24 V operation
- Stackable kit available
- Plug-n-play connectors on unit and fan motor provide for ease of installation and motor service

## Condenser **CM-14**



### Technical Data

Capacity	107000 Btu/hr (31.35 kW) IMACA <sup>[1]</sup>
Air flow	3200 CFM (5437 m³/hr)
Condenser coil	Four rows deep, patented, internally enhanced copper tubes expanded into aluminum fins
Condenser fans	Unitized, low-profile, axial-flow vector fans balanced for quiet, vibration-free operation with finger guard
Fan motors	Totally enclosed, pancake style, permanent magnet type with extended life permanently lubricated bearings
Max amperage requirement	29 amps @ 13.5 VDC; 26 amps @ 27.0 VDC
Safety controls	High refrigerant pressure cut-out 400 psi (28 bar); cut-in 300 psi (21 bar)
Receiver filter dryer	16 in³ (262 cm³)
Weight	95 lbs (43.1 kg)
Available color	Midnight Black

[1] IMACA conditions: 100°F (38°C) / 90°F (32°C) / 50% RH

## Roof Mount Condenser **CR-410**

Our CR-410 high capacity roof mount condenser has been engineered for use in commercial, light transit and school bus applications. This unit is the perfect combination of sleek, low profile European styling and American innovation. It has rugged thermoplastic polyolefin (TPO) cover shrouds and lightweight aluminum structure, while allowing complete service access without cover removal. The highly adjustable mounting rails are designed to attach this unit to any exterior roof radius without leaving visible gaps between the roof and unit cover.

MCC's innovative introduction of the roof mount condenser series to the North American bus market has given body builders the opportunity to free up skirt mounting space for a variety of options including compressed natural gas (CNG) tanks, wheelchair lifts and luggage compartments, while maintaining an aerodynamic exterior appearance to the vehicle. Our CR-410 roof mount condenser is the solution to road salt damage.

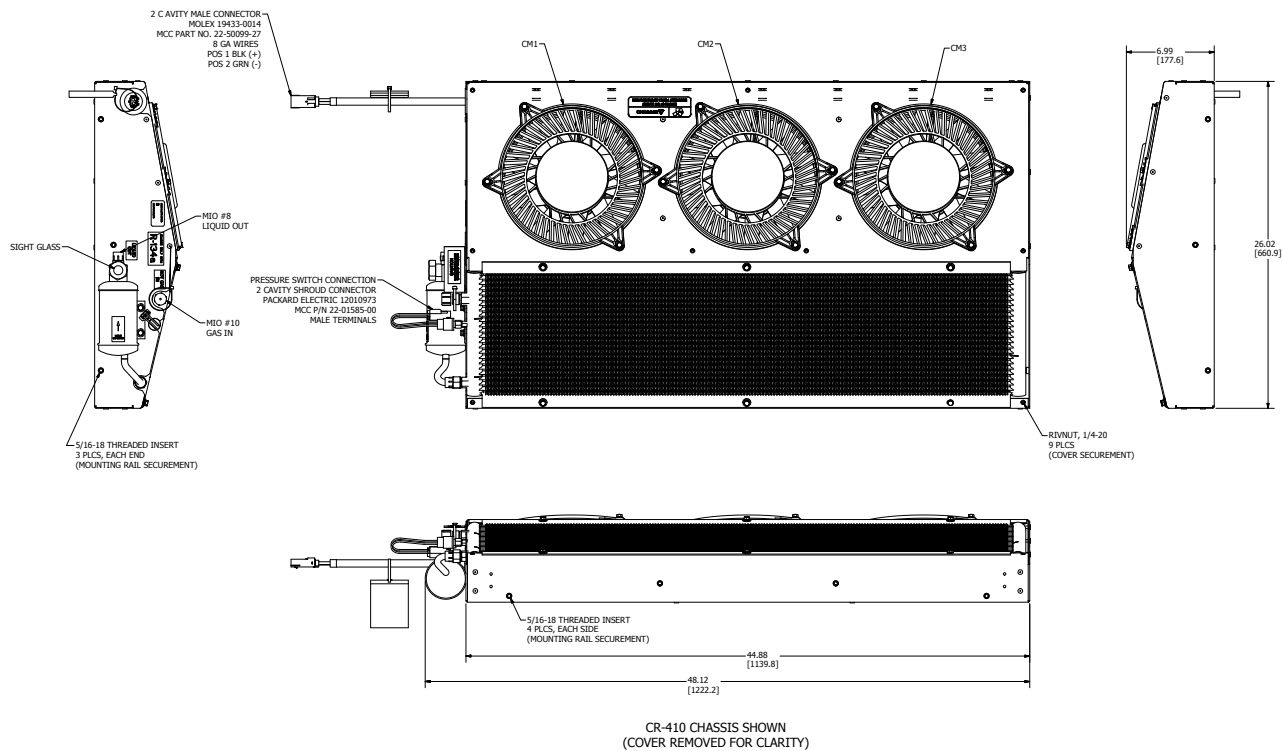


### Features

- Designed for use with R134a Refrigerant
- Utilizes micro channel aluminum coil
- Thermoplastic Polyolefin (TPO) plastic cover
- Multiple unit configurations available
- Heavy gauge aluminum frame
- Exterior visible sight glass and moisture indicator without cover removal
- O-Ring refrigerant connections
- Multiple available options and upgrades

### Benefits

- Lower cost, less weight, environmentally friendly
- Improved performance/ efficiency, reduced weight, reduced refrigerant charge, increased compressor life
- Durable, lightweight, flexible, UV resistant housing
- Allows unit to be used in various mounting applications and on various body types/ roof contours
- Corrosion resistant, lightweight base
- Ability to view for service/ maintenance purposes while saving time
- Reduced risk of refrigerant leaks
- Brushless fan motors, branch and winter guard kits just to name a few



## Technical Data

Capacity	82000 Btu/hr (24 kW) IMACA <sup>[1]</sup> 57000 Btu/hr (16.7 kW) ARI <sup>[2]</sup>
Air flow	1680 CFM (2854 m <sup>3</sup> /hr)
Condenser coil	Advanced technology micro channel heat exchanger (MCHX)
Condenser fans	Low-profile, axial flow type propeller fans balanced for quiet, vibration free operation with finger guard.
Fan motors	Totally enclosed low profile permanent-magnet 4-pole brushed motors with extended life lubricated sealed bearings.
Max amperage requirement	21 amps @ 13.5 VDC; 11 amps @ 24 VDC
Safety controls	High refrigerant pressure cut out 400 psi (28 bar), cut in 300 psi (21 bar)
Filter dryer	16 in <sup>3</sup> (262 cm <sup>3</sup> )
Weight	58 lbs (26.3 kg)
Available color	White

[1] IMACA conditions: 100°F (38°C) / 90°F (32°C) / 50% RH

[2] ARI conditions: 95°F (35°C) / 80°F (27°C) / 50% RH

## Roof Mount Condenser **CR-430**

# Roof mount Air-conditioning condenser module

The CR-430 roof mounted condenser module has been designed to meet the demanding and varied needs of the global HVAC market. The CR-430, with its attractive, lightweight, and low profile design, provides improved condensing performance, reliability, and ease of installation, as compared to its predecessors. The all steel powder coated cabinet construction provides unparalleled strength and reliability, while the attractive TPO, cover with integrated stainless steel grills, helps keep the weight down without sacrificing functionality or reliability. The system utilizes MCC's signature micro-channel heat exchanger (MCHX) coil technology that delivers maximum capacity through improved heat transfer performance.

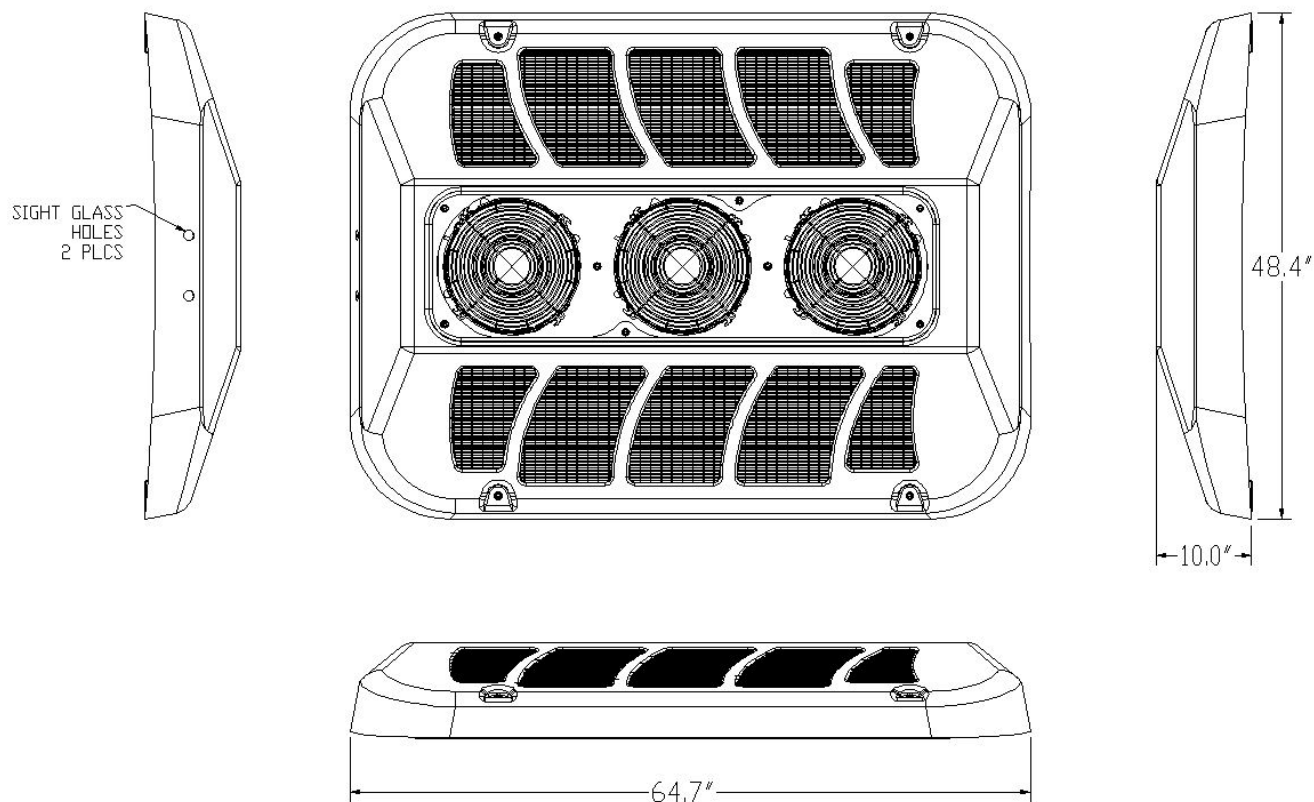


### Features

- Designed for use with R134a Refrigerant
- Utilizes Micro Channel Condenser Coil (MCHX)
- Powder coated galvanized steel frame
- TPO plastic cover
- Large capacity receiver tank(s) w/sight glass
- Large capacity filter drier(s) (30 cu.in.)
- Single loop version includes single liquid line service valve
- Service-ability/Install friendly
- Multiple unit configurations available
- Available options and upgrades

### Benefits

- Lower cost, less system weight, environmentally friendly
- Improved performance/efficiency, reduced weight, reduced refrigerant charge
- Increased strength and durability
- Durable, lightweight, flexible, UV resistant
- Increases charge holding capacity for system variation, ease of charge with easy to view sight glass
- Improved system reliability, cleaner dryer refrigerant and refrigerant oil
- Allows for low side pump down for ease of service
- Unit was design with install- ability and service ability in mind
- Allow unit to be used in various applications and climates
- Brushless fans, branch guards, etc



## Technical Data

Condensing capacity	137,000 Btu/hr (37kW) Modeled Max Capacity Condition <sup>[1]</sup>
Air flow	3-Fan: 3500 CFM (5950 m <sup>3</sup> /h) 2-Fan: 2400 CFM (4100 m <sup>3</sup> /h)
Refrigerant	R134a
Current	3-Fan: 47 A at 13.5 Vdc / 31 A at 27.5 Vdc 2-Fan: 31 A at 13.5 Vdc / 21 A at 27.5 Vdc
Weight	160lbs (72.5 kg)
Dimensions (LWH)	64.7" x 10" x 48.4"

[1] Max Capacity: Air in 100°F/50%RH, refrigerant 140°F DST/170°F, refig exit. 0°F Sub-Cool



# V. Convectors

## Convector **UC-1**

# All the heat you need in one light and compact convector

Combining modern design and high capacity, the UC-1 single pipe convector is the lightest in MCC's product range and small enough to fit in tight spaces. The UC-1 Convector is built around a single pipe made of aluminum or copper. This means the convector is very compact and requires a small mounting footprint.

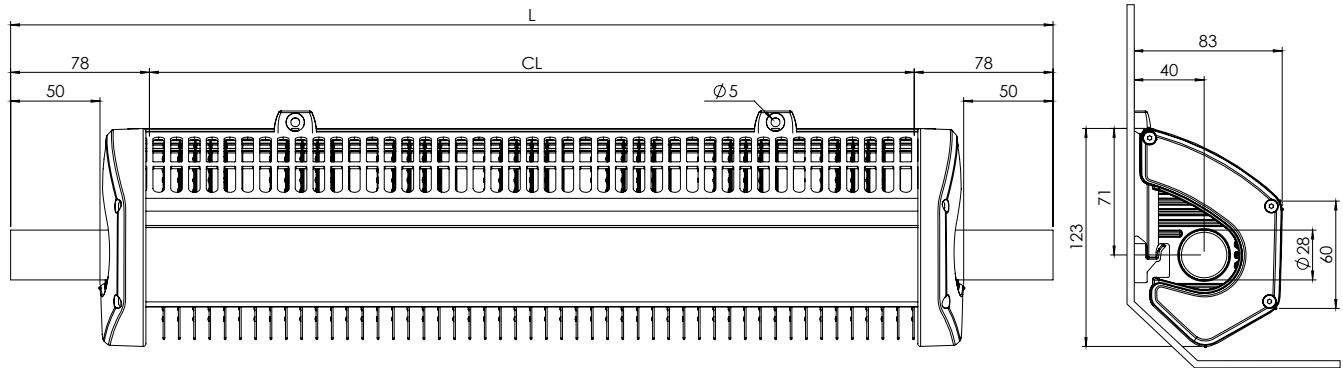


### Features

- Suitable for heating in buses and coaches
- Designed for vehicles with water glycol based heating systems
- Quiet and draft free heating
- Maintenance free
- Single pipe for compact design
- Shaped to fit reinforced wall structures



## Convector **UC-1**



Face is shaped for reinforced wall structure

Dimensions in mm

### Technical Data

Heat output	1604 Btu/hr (0.47 kW) $Q_{60}^{[1]}$	2661 Btu/hr (0.78 kW) $Q_{100}^{[1]}$
Piping	Copper or aluminium $\varnothing 1.1"$ (28 mm) for hose connection	
Weight	Copper 14 lbs/ft (1.93 kg/m) , aluminium 12 lbs/ft (1.71 kg/m)	
Maximum length	197" (5 m)	
Color	Silver anodized aluminium	
	Please contact your MCC representative for more details	

[1] The  $Q_x$  value stands for the power in kW emitted from a unit length (1 m) of the convector at a temperature difference between coolant inlet and room air equal to the subscript (x) .

## Convector P-90

# Highly efficient and comfortable bus heating

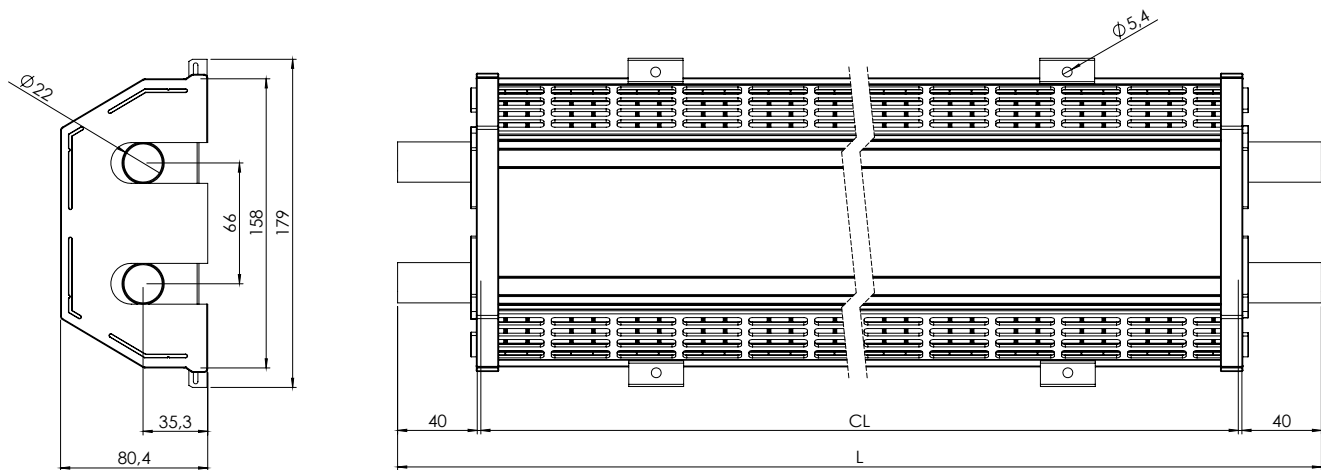
The Convector P-90 is based on a twin copper pipe system that supplies efficient heat in a space saving design. Can be used as a stand alone unit or part of a complete heating system. Transition pieces are available to accommodate bulk heads, wheel wells and doors.



### Features

- Suitable for heating buses, coaches and other vehicles
- Designed for vehicles with water/glycol heating systems
- Quiet and draft free heating
- Maintenance free
- Robust design
- Twin pipe design for optimized heat output

## Convector P-90



Dimensions in mm

### Technical Data

Heat output	1880 Btu/hr (0.55 kW) $Q_{60}^{[1]}$	3347 Btu/hr (0.98 kW) $Q_{100}^{[1]}$
Piping	Copper Ø 0.8" (22 mm)	
Weight	25 lbs/ft (3.14 kg/m)	
Maximum length	197" (5 m)	
Color	Silver anodized aluminium	
	Please contact your MCC representative for more details	

[1] The  $Q_x$  value stands for the power in kW emitted from a unit length (1 m) of the convector at a temperature difference between coolant inlet and room air equal to the subscript (x) .

## Convector P-20

# Compact design for small spaces

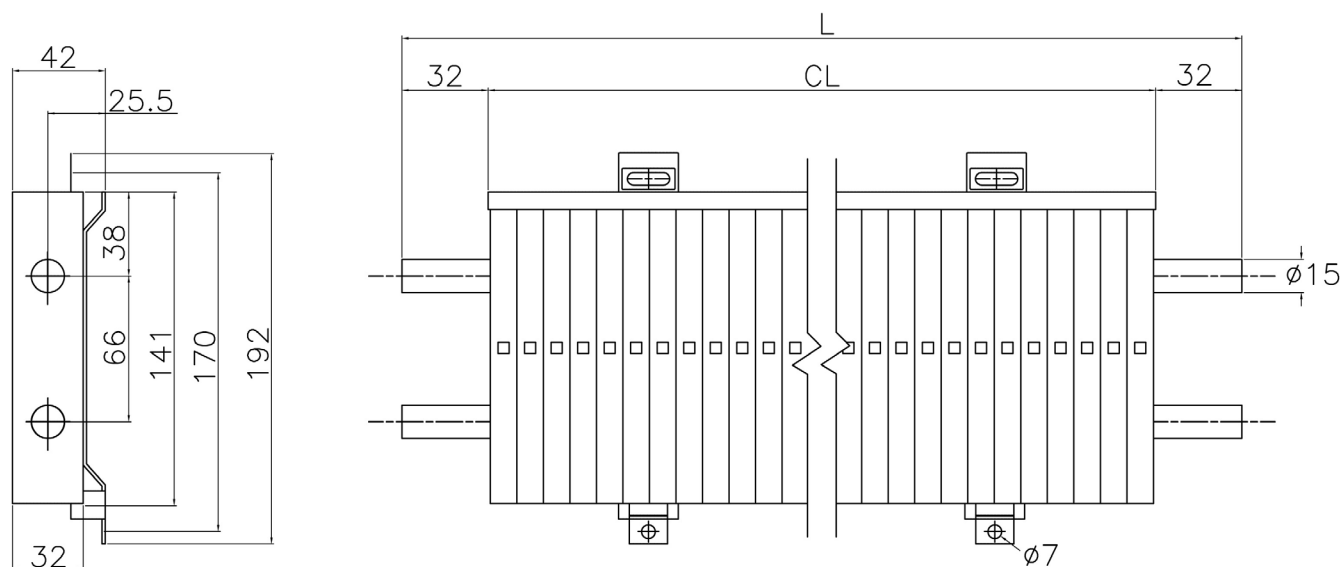
The Convector P-20 is designed for use in small spaces such as boats, caravans, bus sleeping cabins and driver compartments. The P-20 distributes heat uniformly, creating a comfortable environment with gentle air flow. The advantage with the P-20 convector, is of course, its small footprint which make maintenance and installation simple.



### Features

- Suitable for heating in buses, minivans, caravans, mobile homes and marine applications
- Designed for vehicles with water/glycol heating systems
- Quiet and draft free heating
- Maintenance free
- Very compact design
- Twin pipe design for optimized heat output

## Convector P-20



### Technical Data

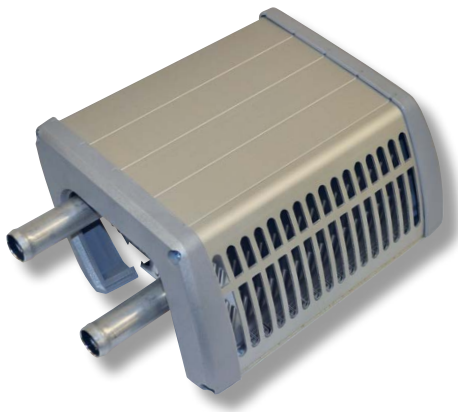
Output	Heat output 384 W/m $Q_{60}^{[1]}$ (640 W/m $Q_{100}^{[1]}$ )
Piping	Copper or aluminum Ø 15 mm
Weight	Copper 1.54 kg/m, aluminium 1.31 kg/m
Flow rate	0.30 l/m
Depth	32 mm
Height	141 mm
Lengths	250, 500, 750, 1000 mm
Fins	Anodized aluminium

[1] The  $Q_x$  value stands for the power in kW emitted from a unit length (1m) of the convector at a temperature difference between coolant inlet and room air equal to the subscript (x).

## Convector **UC-9**

# High heat output at a low weight

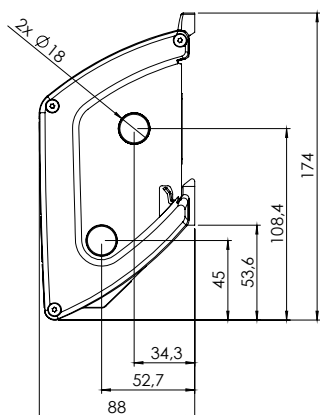
The new UC-9 provides efficient heating in a compact design. This convector has been specially designed to deliver maximum heat output. It is designed to fit in buses with reinforced wall structure and comes with the necessary hardware to make installation easy.



### Features

- Designed to heat buses, coaches and marine applications
- Suitable for vehicles with water/glycol based heating systems
- High output
- Light and compact
- Quiet and draft free heating
- Maintenance free
- Twin pipe for optimized heat output
- Shaped to fit reinforced wall structure

# Convector **UC-9**



Dimensions in mm

## Technical Data

Heat output	2091 Btu/hr (0.61 kW) Q <sub>60</sub>	3467 Btu/hr (1 kW) Q <sub>100</sub> [1]
Piping	Copper Ø 0.7" (18 mm) + aluminium with hose connections	
Weight	Copper 2.6 kg/m, aluminium 2.34 kg/m	
Maximum length	197" (5 m)	
Color	Silver anodized aluminium	
	Please contact your MCC representative for more details	

[1] The  $Q_x$  value stands for the power in kW emitted from a unit length (1 m) of the convector at a temperature difference between coolant inlet and room air equal to the subscript (x) .

## Convector P-200

# Efficient bus heating

The P-200 offers efficient heating and can be integrated with the Whisper 200 family. The P-200 is a twin pipe design made of copper or aluminum that carries glycol based coolant through the convector. This coil can provide up to as much as 714W/m of heat.

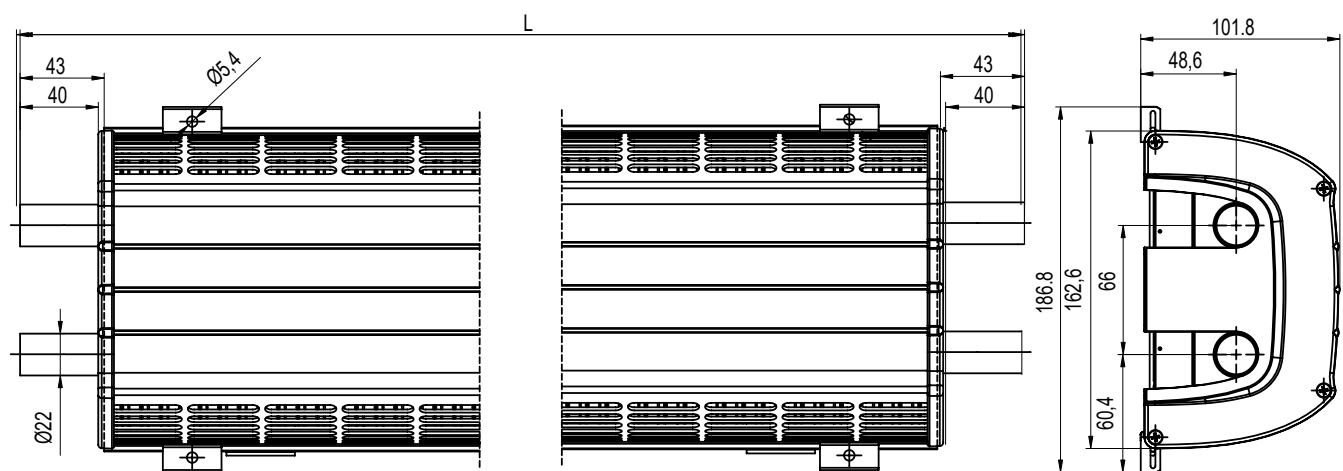


### Features

- Suitable for heating buses, coaches where highly efficient heating is required
- Designed for vehicles with water/glycol based heating systems
- High output
- Quiet and draft free heating
- Maintenance free
- Fully compatible with Whisper 200 heaters



## Convector P-200



Dimensions in mm

### Technical Data

Heat output	2436 Btu/hr (0.71 kW) $Q_{60}^*$	4060 Btu/hr (1.2 kW) $Q_{100}^*$
Piping	Copper or aluminum Ø 0.8" (22 mm)	
Weight	Copper 27 lbs/ft (3.71 kg/m) , aluminium 24 lbs/ft (3.34 kg/m)	
Maximum lengths	197" (5 m)	
Color	Silver anodized aluminium	
	Please contact your MCC representative for more details	

\* The  $Q_x$  value stands for the power in kW emitted from a unit length (1 m) of the convector at a temperature difference between coolant inlet and room air equal to the subscript (x) .

## Power Convector **PC-500**

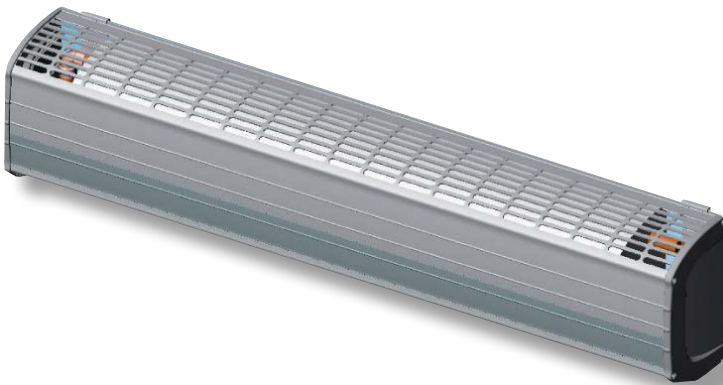
# Even temperature distribution, small footprint, numerous layout options and easy to install

PC-500 (power convector) is a patented “crossover” product featuring the benefits of a normal convector and that of a fan assisted heating unit. The PC-500 has three operating modes:

**Normal convector mode,** (free-flow) warm air rises naturally (convection) from the unit.

**Fan half-speed mode,** (forced-air) draws the air from the top of the unit through the fins and out to the floor. Once on the floor the warm air mixes and rises to the top.

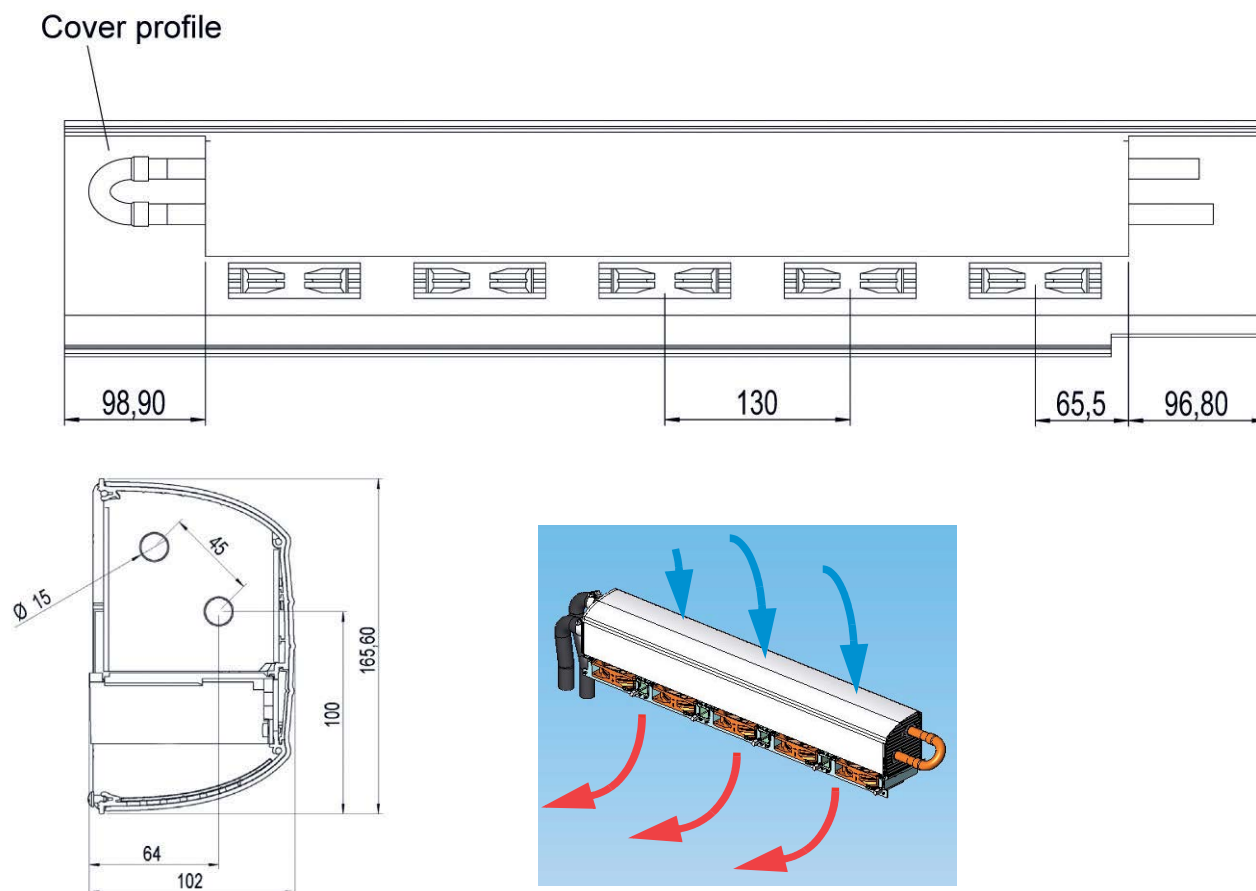
**Fan full-speed mode,** (forced-air) gives instant heating results by taking maximum heat from the PC 500 and distributing this air all over the floor.



## Features

- Ideal for buses, coaches and other vehicles
- Designed to work in any climate region
- Can be ordered with one fan (10"/250 mm unit) up to 15 fans (236"/6 m unit)
- Available both 12V and 24V versions
- Covers can be easily removed for maintenance
- Max number of PC-500 in series 3 units connection
- Multiple fans can be mounted according to customer's heating specifications

## Power Convector PC-500



Note: Dimensions in mm only.

### Technical Data

	Fan Mode – One meter section, 5 fans	Radiant Mode – One meter section
Heat output	10236 Btu/hr (3kW) $Q_{60}^{[1]}$ 16378 Btu/hr (4.8 kW) $Q_{100}^{[1]}$	1587 Btu/hr (0.46 kW) $Q_{60}^{[1]}$ 2423 Btu/hr (0.71 kW) $Q_{100}^{[1]}$
Piping <sup>[2]</sup>	Ø 0.59" (15 mm)	Ø 0.59" (15 mm)
Weight Copper	9.5 lbs (4.3 kg)	8 lbs (3.7 kg)
Weight Aluminium	8.5 lbs (3.9 kg)	7 lbs (3.3 kg)
Maximum length	197" (5 m)	197" (5 m)
Color	Silver anodized aluminium	Silver anodized aluminium
	Please contact your MCC representative for more details	

[1] The Qx value stands for the power in kW emitted from a unit length (1m) of the convector at a temperature difference between coolant inlet and room air equal to the subscript (x).

[2] Custom piping may be available



# III. Heaters

## Compact under seat heater T12-12807

# Robust, Light weight and Cost Competitive Heater

Compact under seat heater with all aluminum heater core designed for low pressure and low coolant flow, suited for all climates and vehicles. Can also be filled as a stand alone unit for multiple placements. This low cost multi-functional heater will suit all budgets.

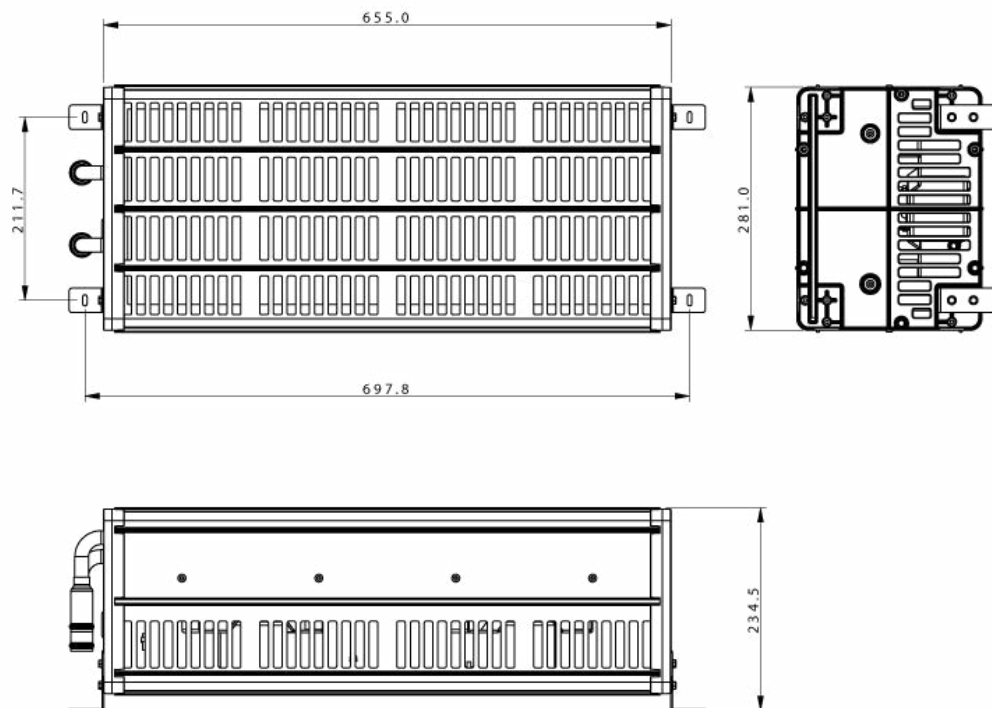


### Features

- Simple compact design
- Copper/Aluminum heater core
- Single or multi pack use
- Available in 12 and 24 vdc
- Connection in minutes
- Brush or brushless motors

### Benefits

- Light weight
- Adapts to any application
- Many configurations possible due to flexible design
- Simple installation
- Low cost



## Technical Data

Heating capacity @ max	60000 Btu/hr (17.6 kW)	70000 Btu/hr option with higher output motor
Length	27.4" (697.8mm)	
Width	11" (281mm)	
Height	9.2" (234.5mm)	
Weight	15 lbs (6.8 kg)	
Fans	2 fan	
Current Draw (Max)	16.5 amps at 13.5 VDC	

Hose Connection: 1" OD

Conditions: Ambient temperature 0°F, Glycol temperature 150°F, Glycol-water 50-50, Coolant flow rate 8 GPM

## Compact under seat Heater T12-12809

### Robust, Light weight and Cost Competitive Heater

Compact under seat heater with all aluminum heater core designed for low pressure and low coolant flow, suited for all climates and vehicles. Can be filled as a stand alone unit for multiple placements. This low cost multi-functional heater will suit all budgets.

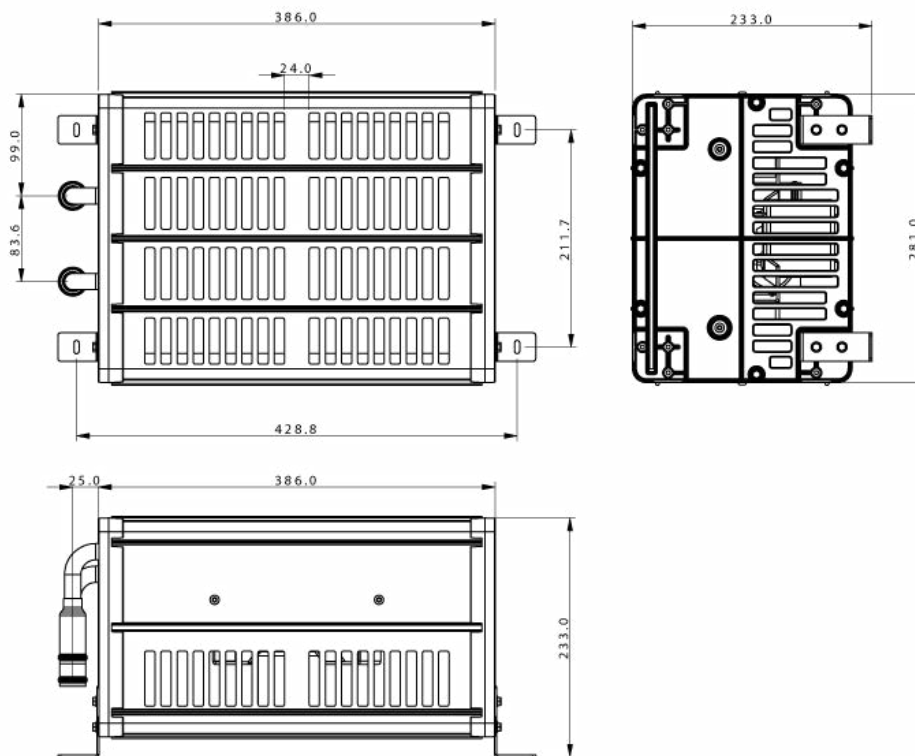


#### Features

- Simple compact design
- Copper/Aluminum heater core
- Single or multi pack use
- Available in 12 and 24 vdc
- Connection in minutes
- Brush or brushless motors

#### Benefits

- Light weight
- Adapts to any application
- Many configurations possible due to flexible design
- Simple installation
- Low cost



## Technical Data

Heating capacity @ max	35000 Btu/hr (10.3 kW)	45000 Btu/hr option with higher output motor
Length	16.8" (428.8mm)	
Width	11" (281mm)	
Height	9.1" (233mm)	
Weight	15 lbs (6.8 kg)	
Fans	1 fan	
Current Draw (Max)	8 amps at 13.5 VDC	

Hose Connection: 1" OD

[1] Conditions: Ambient temperature 0°F, Glycol temperature 150°F, Glycol-water 50-50, Coolant flow rate 8 GPM



## Compact under seat heater T12-12811

### Robust, Light weight and Cost Competitive Heater

Compact under seat heater with all aluminum heater core designed for low pressure and low coolant flow, suited for all climates and vehicles. Can be filled as a stand alone unit for multiple placements. This low cost multi-functional heater will suit all budgets.

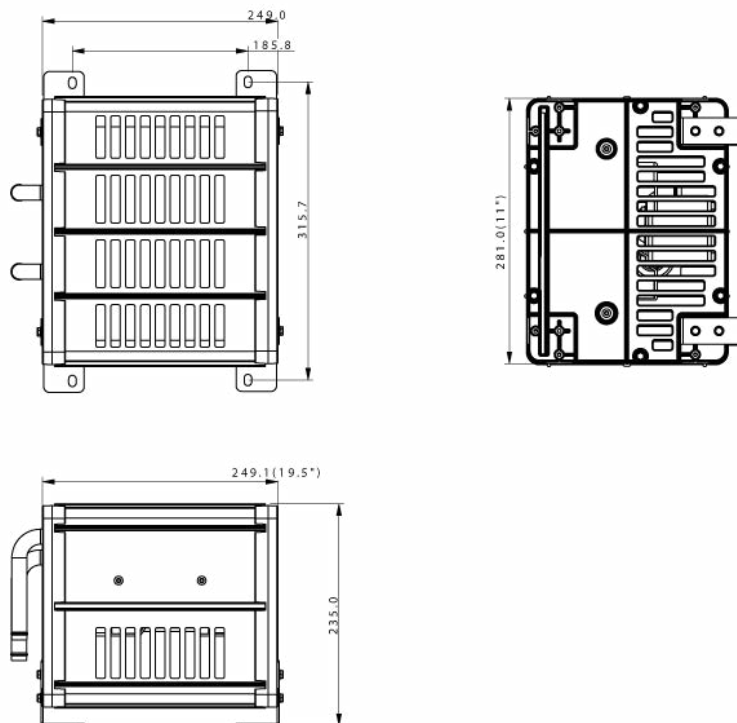


#### Features

- Simple compact design
- All aluminum heater core
- Single or multi pack use
- Available in 12 and 24 vdc
- Connection in minutes
- Brush or brushless motors

#### Benefits

- Light weight
- Adapts to any application
- Many configurations possible due to flexible design
- Simple installation
- Low cost



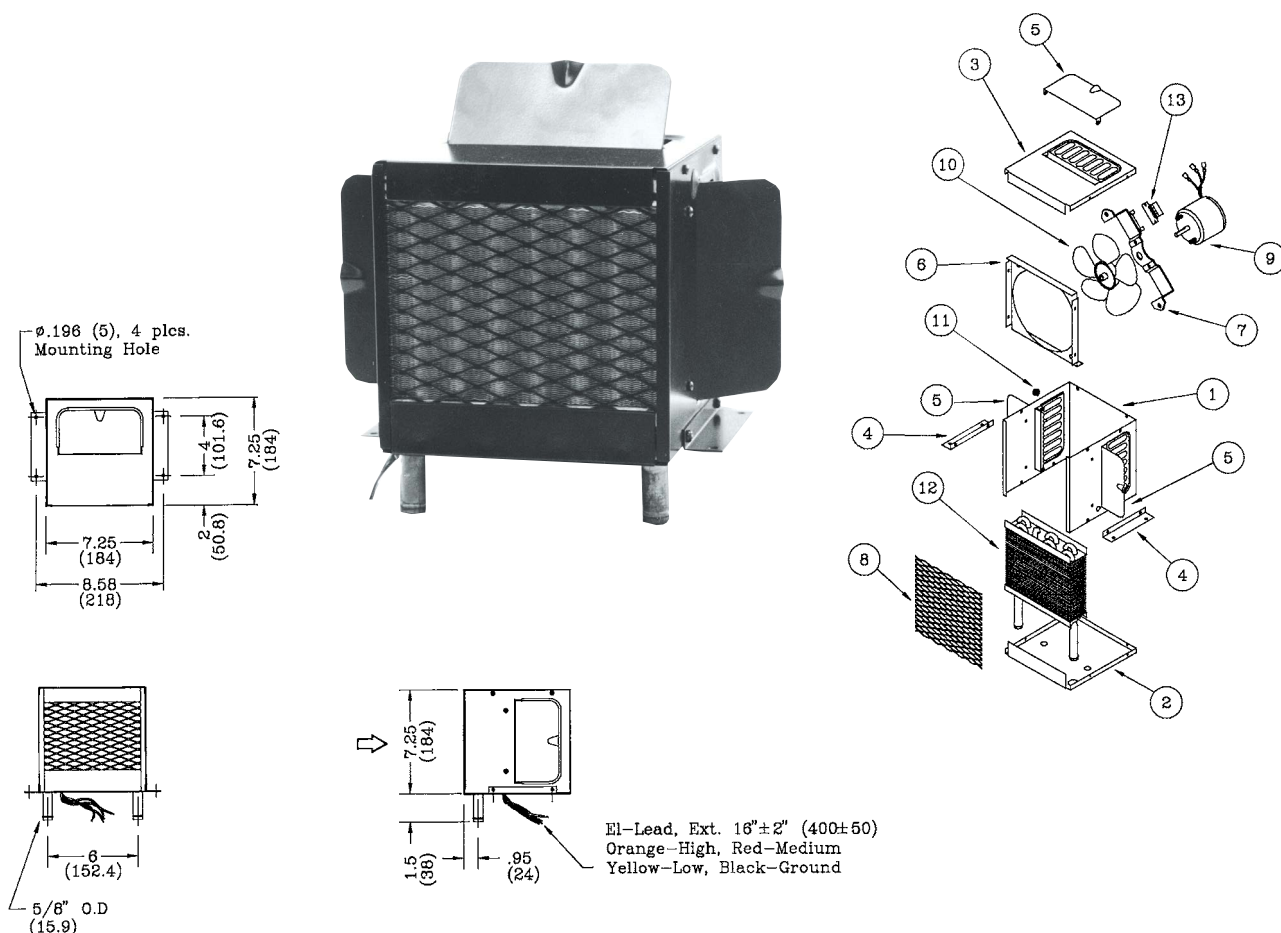
## Technical Data

Heating capacity @ max	25000 Btu/hr (7.3 kW)	30000 BTU/hr option with higher output motor
Length	9.8" (249mm)	
Width	12.4" (315.7mm)	
Height	9.2" (235mm)	
Weight	15 lbs (6.8 kg)	
Fans	1 fan	
Current Draw (Max)	6.7 amps at 13.5 VDC	

Hose Connection: 5/8" OD

Conditions: Ambient temperature 0°F, Glycol temperature 150°F, Glycol-water 50-50, Coolant flow rate 8 GPM

## Fan Heater **Model 201**



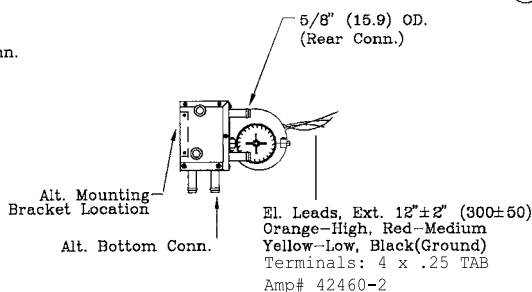
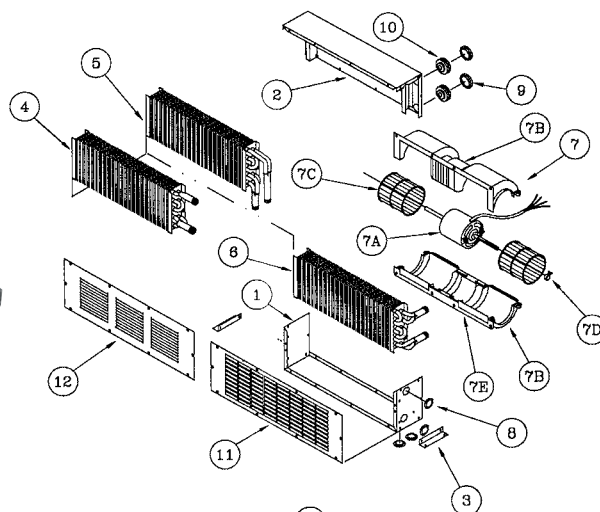
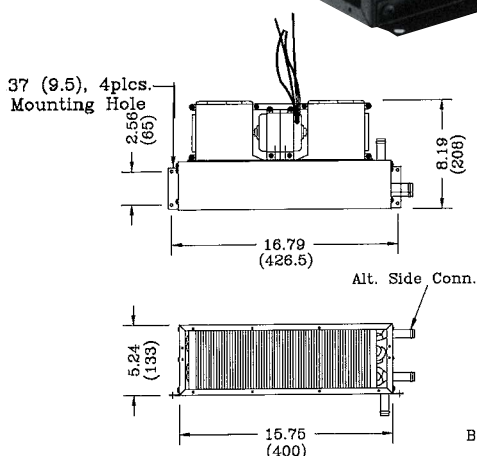
### Part Descriptions: Specifications

Part No.		No.	Part No.	Description	No.	Part No.	Description	
12-0103	Heater 12V	1	24-0135	Casing	8	24-0172	Coil Protector	
12-0102	Heater 24V	2	24-0136	Cover	9	25-0105	Motor 12V	
Specifications		3	24-0137	Cover		25-0107	Motor 24V	
		4	24-0133	Mounting Bracket	10	25-0023	Fan	
	Heating	-13500 Btu/hr (3960 W)	5	23-0009	Door (3 Pcs.)	11	28-0014	Grommet
	Air Flow	-185 CFM (315 m³/h)	6	24-0138	Venturi	12	22-0042	Heater Coil
	Current	-5.8 Amps/12V	7	24-0113	Motor Bracket	13	25-0095	Resistor
		-2.9 Amps/24V						
Weight	-7.5 lbs. (3.4 kg)							
3-Speed operated motor.								

### Features

The compact design of the 201 is ideal for dash or under seat mounting. Air is delivered to sides of unit and can be controlled by air doors.

## Blower Heater Model 202



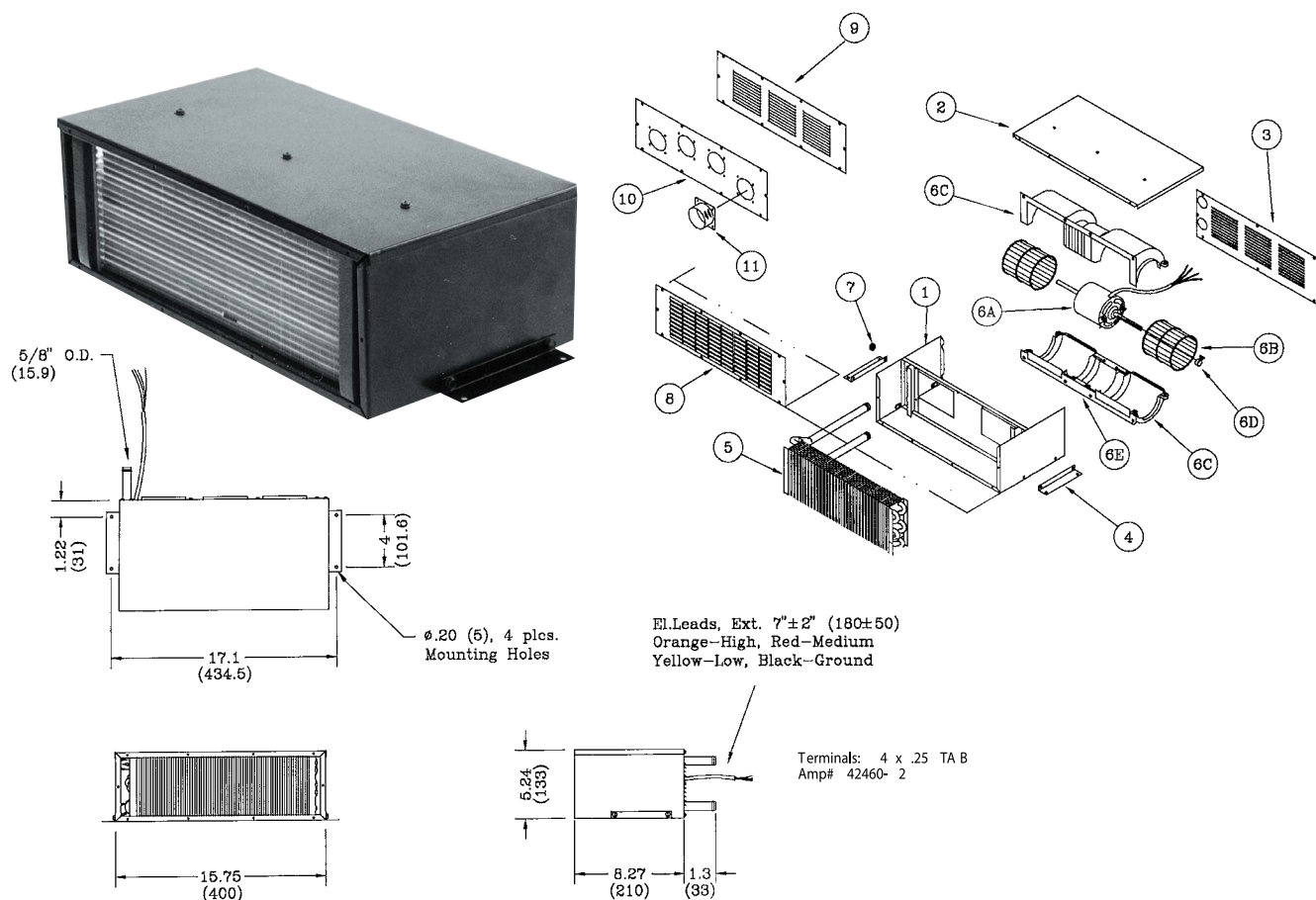
### Part Descriptions: Specifications

Part No.		No.	Part No.	Description	No.	Part No.	Description
12-0203	Heater 12V - Rear Conn.	1	24-0009	Casing	7D	25-0022	Clip
12-0213	Heater 12V - Side Conn.	2	24-0008	Cover	7E	25-0020	Motor Tape
12-0204	Heater 24V - Rear Conn.	3	24-0012	Mounting Bracket	8	28-0010	Snap-in Plug
12-0214	Heater 24V - Side Conn.	4	22-0014	Heater Coil	9	28-0013	Snap-in Plug
12-0293	Heater 12V - Bottom Conn.			(Side Conn.)	10	28-0005	Grommet
<b>Specifications</b>		5	22-0021	Heater Coil			(Rear Conn.)
				(Bottom Conn.)	11	24-0060	Grill
Heating	- 24700 Btu/hr (7240 W)	6	22-0024	Heater Coil	12	24-0045	Grill
Air Flow	- 295 CFM (500 m³/h)			(Rear Conn.)	13	24-0066	Front (4 x 2" HA)
Current	- 12 Amps/12V	7	15-0503	Blower Assy. 12V		24-0067	Front (4 x 2 1/2" HA)
	- 6 Amps/24V		15-0504	Blower Assy. 24V	14	23-0110	Hose Adapter 2"
Weight	- 9 lbs. (4 kg)	7A	25-0070	Motor 12V		23-0125	Hose Adapter 2 1/2"
3-Speed motor.			25-0075	Motor 24V	<b>Items 11-14 are optional and have to be ordered separately.</b>		
		7B	25-0017	Blower Housing			
		7C	25-0021	Blower Wheel			

### Features

The 202 offers flexible installation options to fit a wide range of applications. Can be ducted for defrost capabilities.

## Blower Heater **Model 205**



### Part Descriptions: Specifications

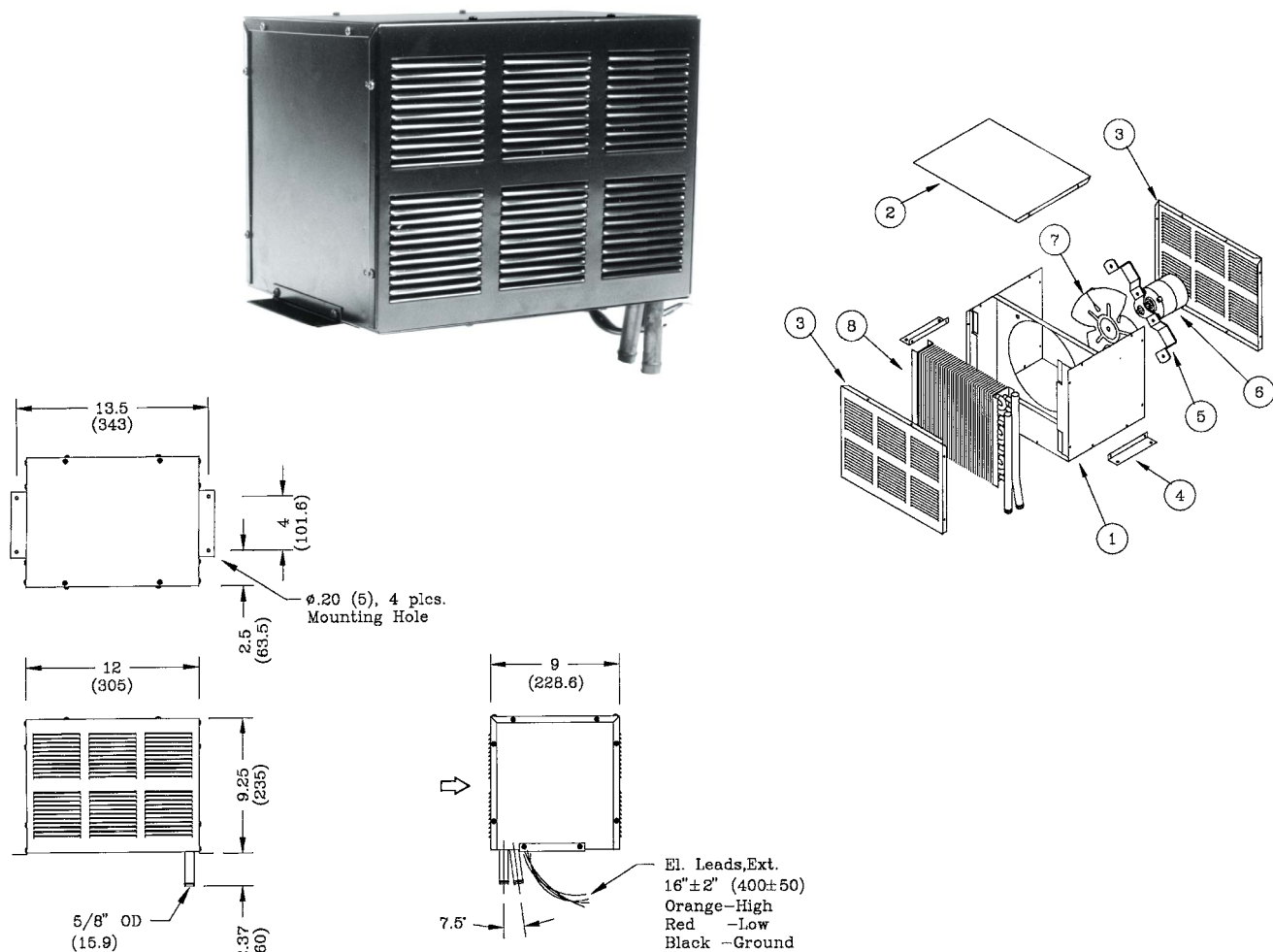
Part No.		No.	Part No.	Description	No.	Part No.	Description
12-0503	Heater 12V	1	24-0225	Casing	7	28-0014	Grommet
12-0504	Heater 24V	2	24-0226	Cover	8	24-0060	Grill
		3	24-0199	Grill	9	24-0045	Grill
		4	24-0133	Mounting Bracket	10	24-0066	Front (4 x 2"HA)
		5	22-0060	Heater Coil		24-0067	Front (4 x 2 1/2"HA)
		6	15-0503	Blower Assy. 12V	11	23-0110	Hose Adapter 2"
			15-0504	Blower Assy. 24V		23-0125	Hose Adapter 2 1/2"
		6A	25-0070	Motor 12V			
			25-0075	Motor 24V			
		6B	25-0021	Blower Wheel			
		6C	25-0017	Blower Housing			
		6D	25-0022	Clip			
		6E	25-0020	Motor Tape			

Items 8-11 are optional and have to be ordered separately.

### Features

A more heavy duty option than the 202. The 205 offers the same installation flexibility.

## Fan Heater **Model 209**



### Part Descriptions: Specifications

Part No.	
12-0903	Heater 12V
12-0904	Heater 24V

#### Specifications

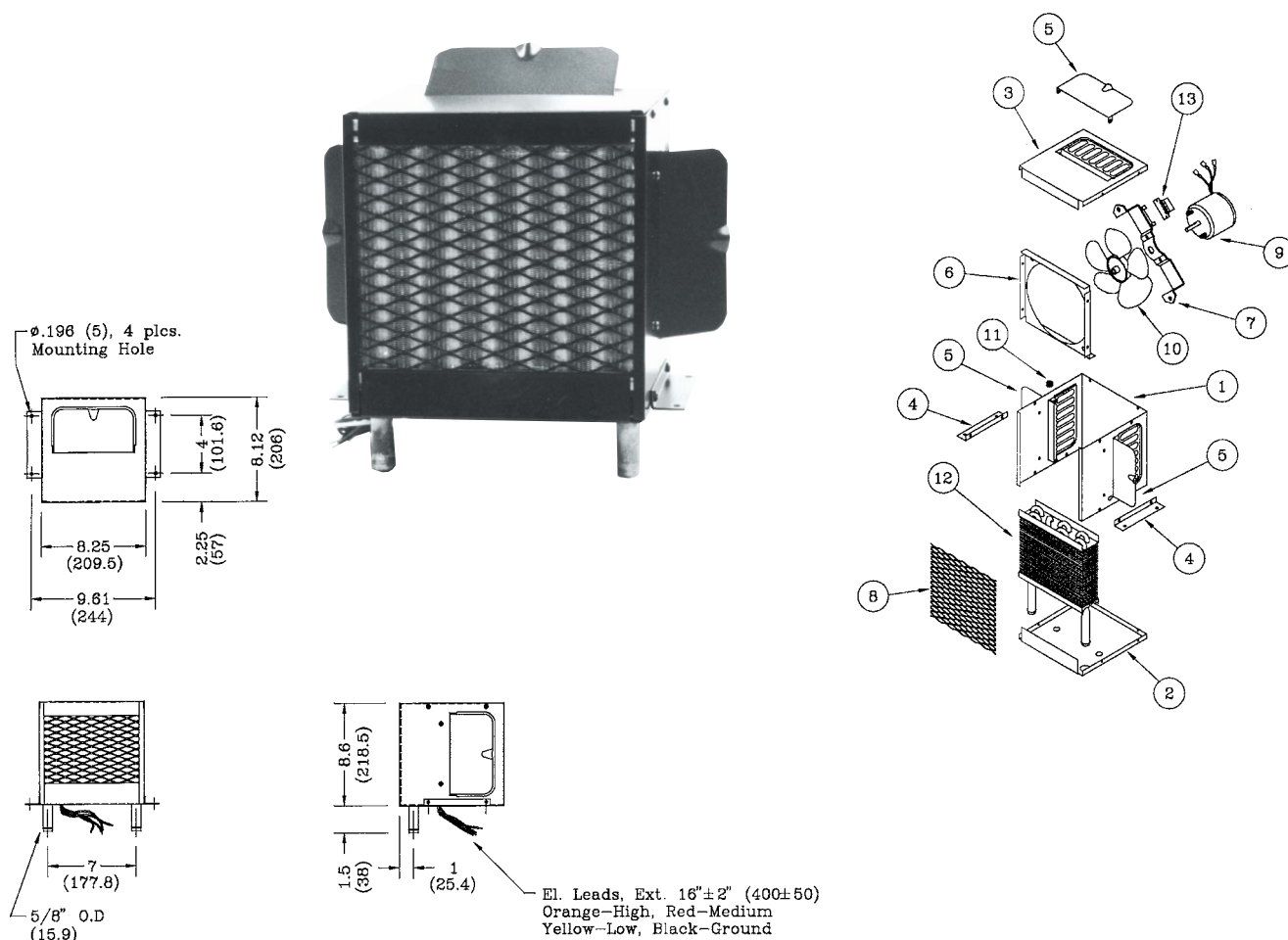
Heating	- 32000 Btu/hr (9380 W)
Air Flow	- 350 CFM (595 m <sup>3</sup> /h)
Current	- 12 Amps/12V - 6 Amps/24V
Weight	- 25.5 lbs. (11.5 kg)
2-Speed motor.	

No.	Part No.	Description
1	24-0353	Casing
2	24-0354	Cover
3	24-0355	Grill
4	24-0133	Mounting Bracket
5	24-0223	Motor Bracket
6	25-0344	Motor 12V
	25-0107	Motor 24V
7	25-0121	Fan C.W. (8")
8	22-0029	Heater Coil

### Features

High capacity design can be used as auxiliary heater for bus, or as stand alone cab heater.

## Fan Heater **Model 211**



### Part Descriptions: Specifications

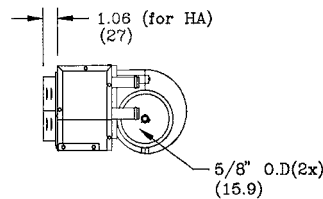
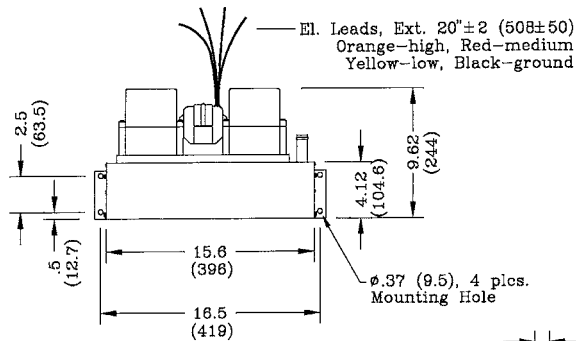
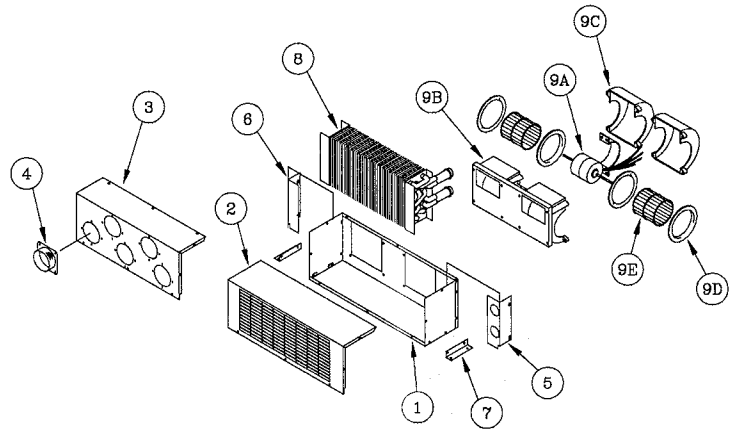
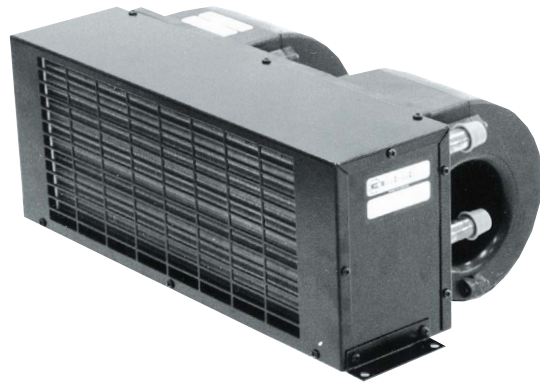
Part No.	No.	Part No.	Description	No.	Part No.	Description
12-1103 Heater 12V	1	24-0140	Casing	9	25-0105	Motor 12V
12-1104 Heater 24V	2	24-0142	Cover		25-0107	Motor 24V
<b>Specifications</b>	3	24-0143	Cover	10	25-0023	Fan
	4	24-0133	Mounting Bracket	11	28-0014	Grommet
	5	23-0009	Door (3 Pcs.)	12	22-0023	Heater Coil
	6	24-0141	Venturi	13	25-0095	Resistor
	7	24-0113	Motor Bracket			
Heating -21000 Btu/hr (6150 W)	8	24-0171	Coil Protector			
Air Flow -265 CFM (450 m <sup>3</sup> /h)						
Current -5.8 Amps/12V						
-2.9 Amps/24V						
Weight -9 lbs. (4 kg)						
3-Speed motor.						

### Features

Similar design as our popular 201. The 211 offers a higher quality heater with controllable air doors.



## Blower Heater **Model 212**



### Part Descriptions: Specifications

Part No.		No.	Part No.	Description	No.	Part No.	Description
12-1203	Heater 12V (w.24-0056)	1	24-0055	Casing	9	15-1513	Blower Assy. 12V
12-1204	Heater 24V (w.24-0056)	2	24-0056	Cover		15-1514	Blower Assy. 24V
12-1223	Heater 12V (w.24-1011) &	3	24-1011	Cover (5 HA's)	9A	25-0053	Motor 12V, 3-Speed
12-1224	Heater 24V (w.23-0125) (5x)	4	23-0125	Hose Adapter 2 1/2"		25-0076	Motor 24V, 3-Speed
		5	24-0057	Coil Bracket	9B	25-0048	Blower Housing
		6	24-0058	Coil Bracket	9C	25-0348	Housing Top
		7	24-0012	Mounting Bracket	9D	25-0060	Venturi
		8	22-0090	Heater Coil	9E	25-0200	Blower Wheel
						25-0022	Clip (B.W.)

#### Specifications

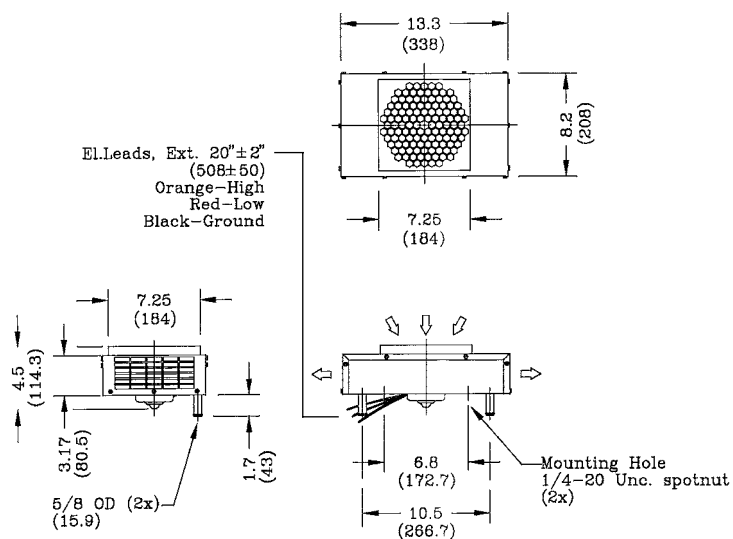
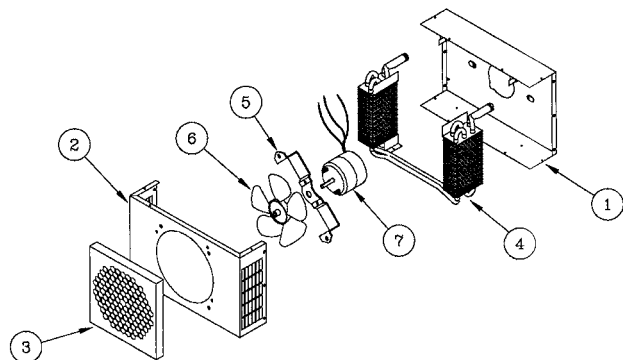
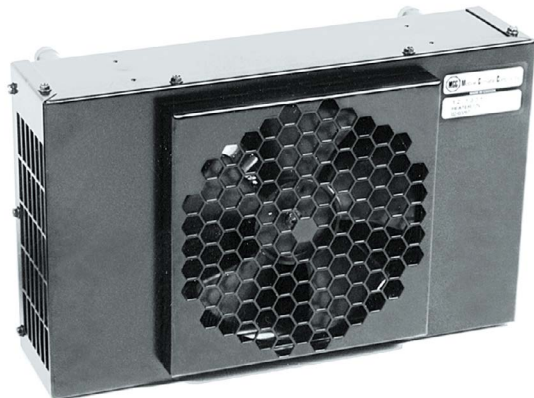
Heating	-36000 Btu/hr (10550 W)
Air Flow	-400 CFM (680 m <sup>3</sup> /h)
Current	-14 Amps/12V
	-8 Amps/24V
Weight	-12 lbs. (5.5 kg)
3-Speed motor.	

### Features

A higher capacity heater than the 202 and 205, the 212 equipped with hose adapters offers installation flexibility for defrosting and cab ducting requirements.



## Fan Heater **Model 213**



### Part Descriptions: Specifications

Part No.	
12-1301	Heater 12V
12-1302	Heater 24V

#### Specifications

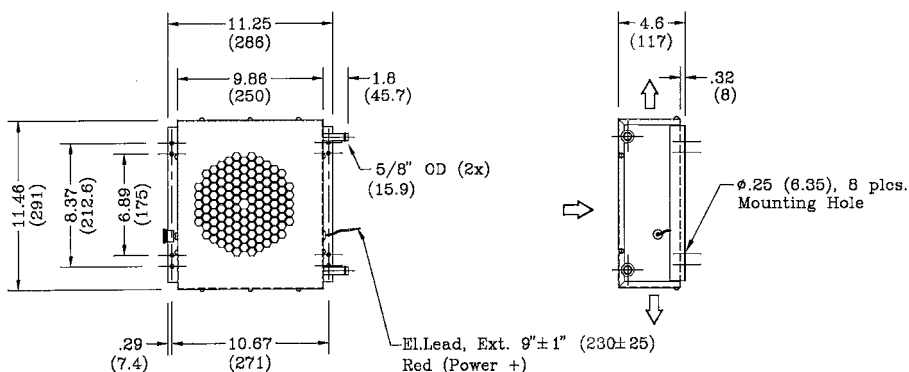
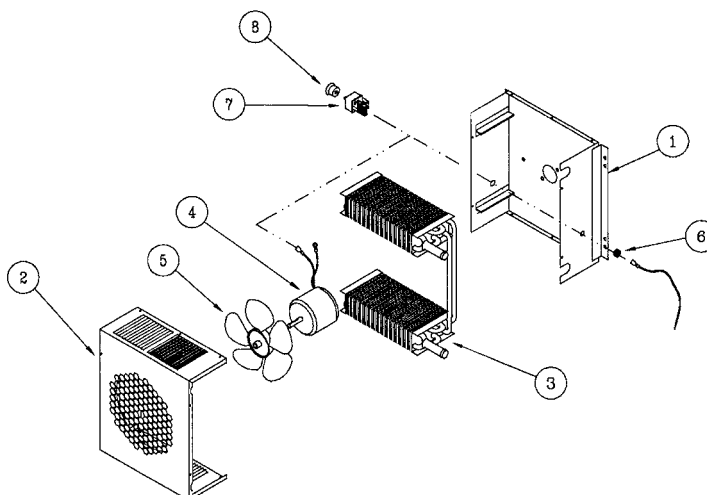
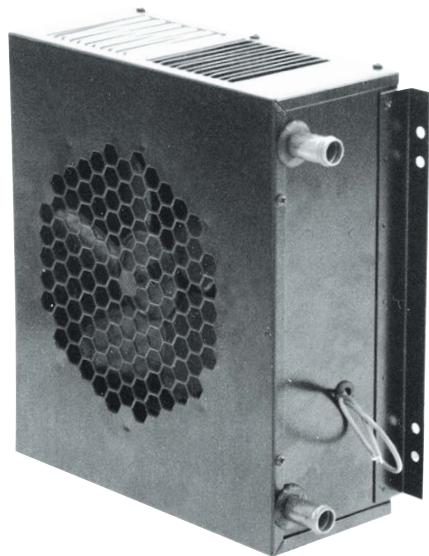
Heating	-12500 Btu/hr (3660 W)
Air Flow	-150 CFM (255 m³/h)
Current	- 5.8 Amps/12V - 2.9 Amps/24V
Weight	- 7 lbs. (3.2 kg)
2-Speed motor.	

No.	Part No.	Description
1	24-1120	Casing
2	24-1121	Cover
3	25-1122	Fan Guard
4	22-0196	Heater Coil
5	24-0110	Motor Bracket
6	25-0023	Fan
7	25-0105	Motor 12V
	25-0107	Motor 24V

### Features

Slim design allows for mounting in tight spots. Can be wall mounted with heater connectors exiting the back of the unit.

## Fan Heater **Model 214**



### Part Descriptions: Specifications

Part No.	
12-1411	Heater 12V
12-1412	Heater 24V

#### Specifications

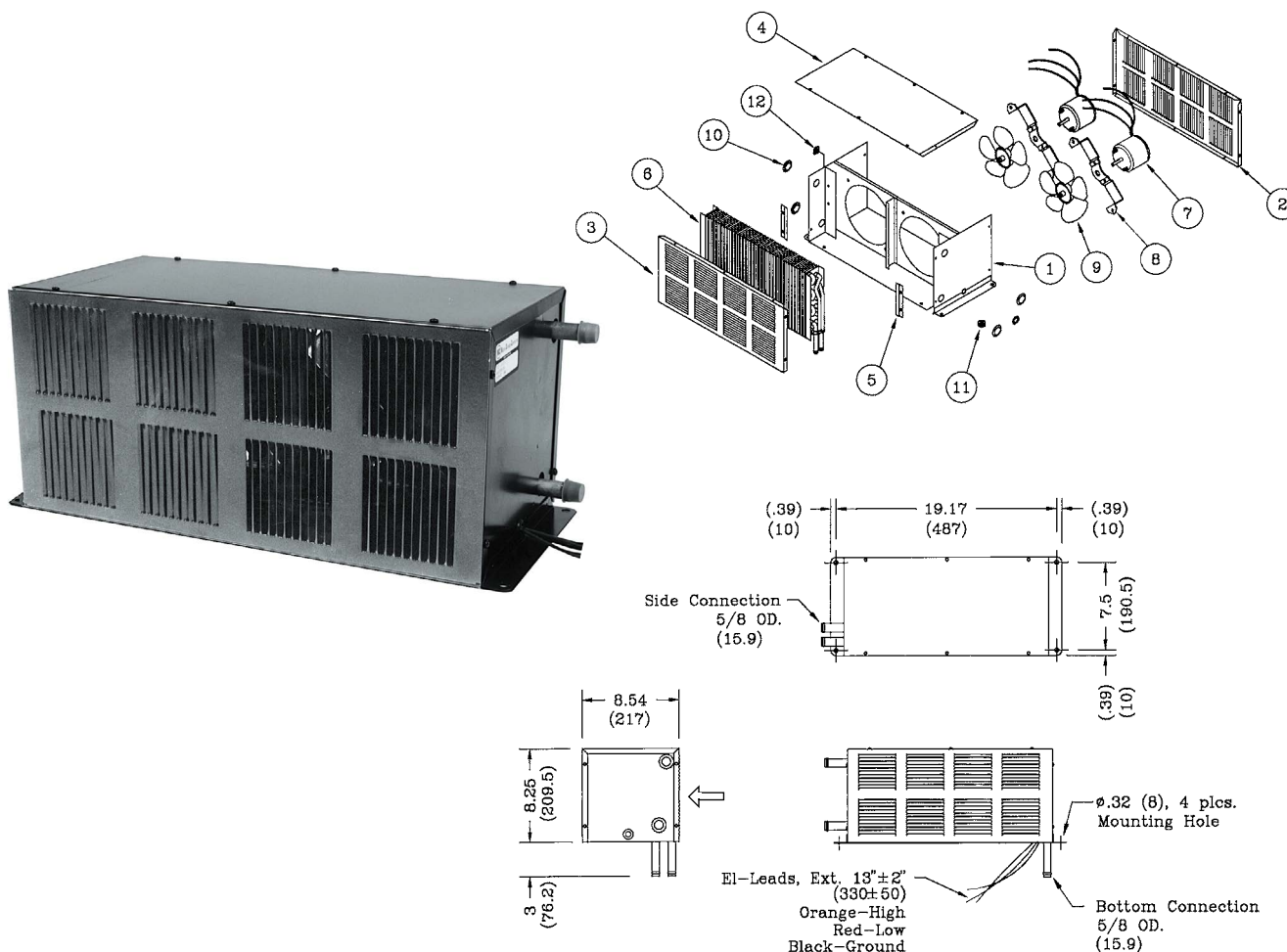
Heating	-18500 Btu/hr (5420 W)
Air Flow	-175 CFM (300 m <sup>3</sup> /h)
Current	-4.4 Amps/12V
	-2.2 Amps/24V
Weight	-9 lbs. (4 kg)
3-Speed motor and internally grounded.	

No.	Part No.	Description
1	24-0042	Casing
2	24-0043	Cover
3	22-0073	Heater Coil
4	25-0039	Motor 12V
	25-0043	Motor 24V
5	25-0015	Fan
6	28-0014	Grommet
7	25-0028	Switch
8	25-0067	Knob

### Features

With a larger capacity than the 213, the 214 offers flexible mounting solutions for wall mount situations. Fittings exit the side of the 214.

## Fan Heater **Model 216**



### Part Descriptions: Specifications

Part No.		No.	Part No.	Description	No.	Part No.	Description
12-1601	Heater 12V -R.H.C.	1	24-0130	Casing	7	25-0105	Motor 12V
12-1602	Heater 24V -R.H.C.	2	24-0131	Grill (Inlet)		25-0107	Motor 24V
12-1621	Heater 12V -B.C.	3	24-0132	Front (Outlet)	8	24-0110	Motor Bracket
12-1622	Heater 24V -B.C.	4	24-0105	Cover	9	25-0023	Fan
Specifications		5	24-0146	Coil Support	10	28-0010	Snap-in Plug
			24-0162	Coil Support (B.C.)	11	28-0004	Grommet
			24-0163	Coil Support (B.C.)	12	28-0011	Snap-in Plug
		6	22-0038	Heater Coil			
Heating	-42000 Btu/hr (12300 W)		22-0039	Heater Coil (B.C.)			
Air Flow	-500 CFM (850 m³/h)						
Current	-11.6 Amps/12V						

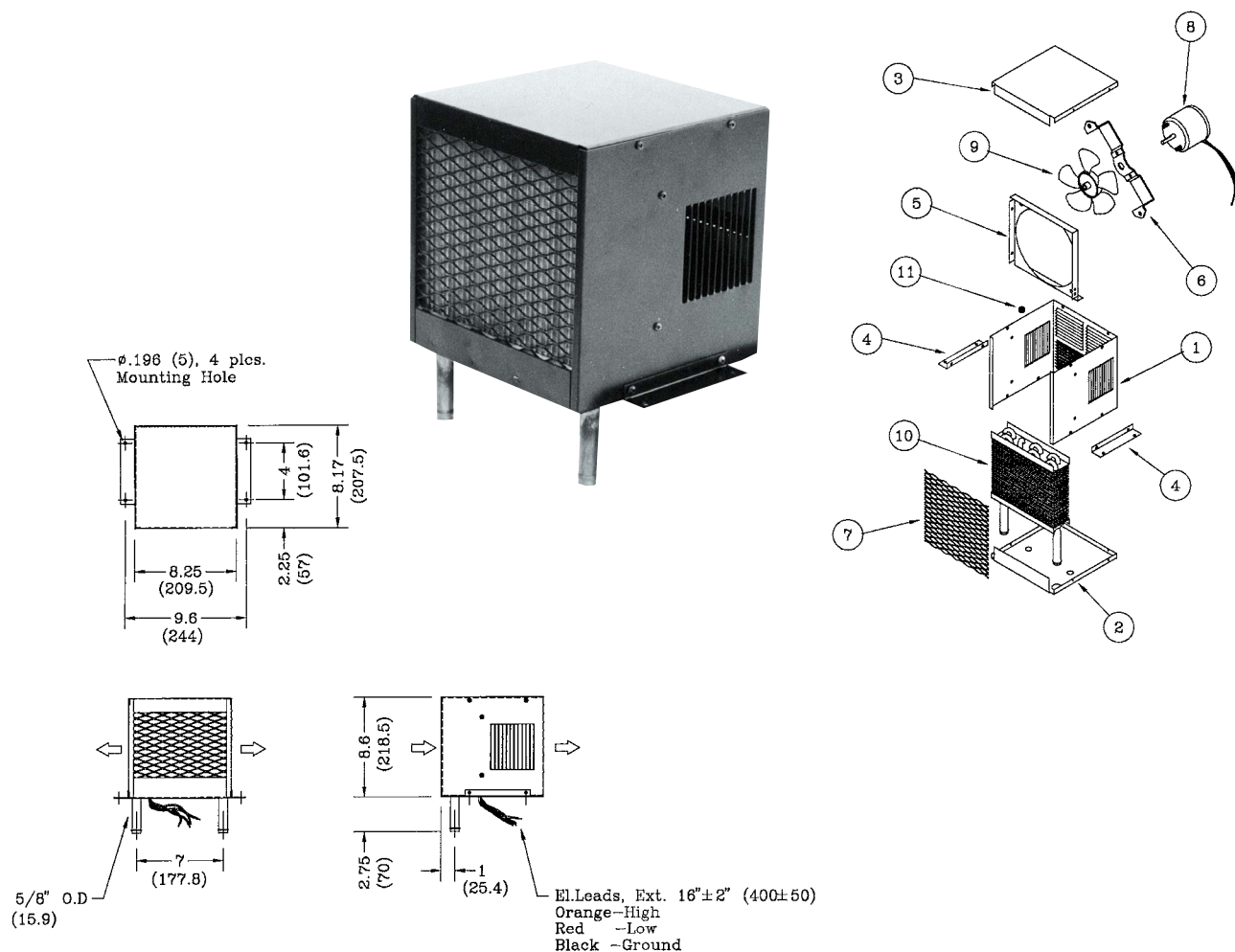
#### Specifications

Heating	-42000 Btu/hr (12300 W)
Air Flow	-500 CFM (850 m <sup>3</sup> /h)
Current	-11.6 Amps/12V -5.8 Amps/24V
Weight	-18.5 lbs. (8.4 kg)
2-Speed motor.	

#### Features

High capacity heating solution for buses, fire trucks and truck bodies. The 216 delivers maximum performance for large capacity heating requirements.

## Fan Heater **Model 222**



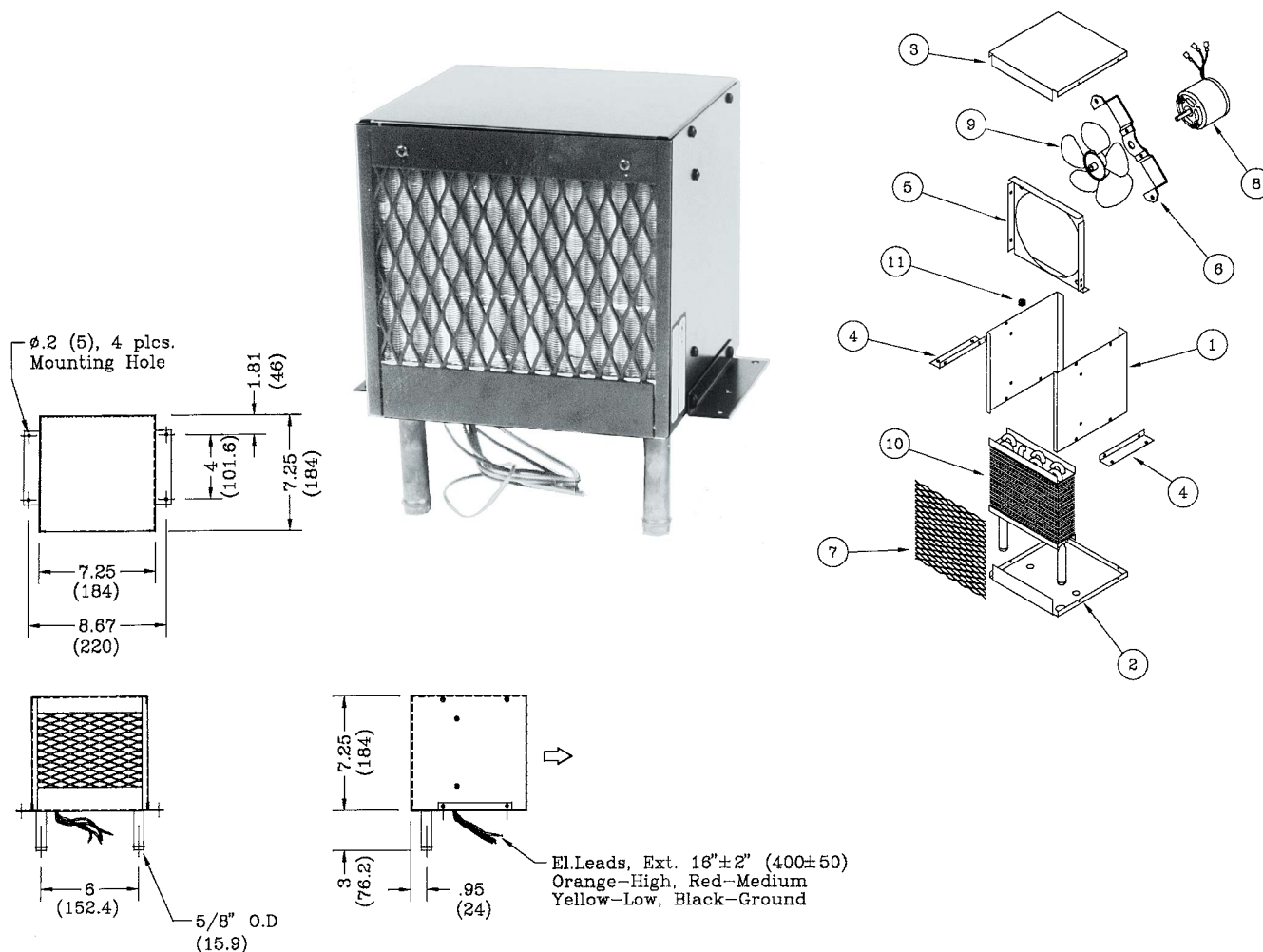
### Part Descriptions: Specifications

Part No.		No.	Part No.	Description
12-2251	Heater 12V	1	24-0167	Casing
12-2252	Heater 24V	2	24-0142	Cover
<b>Specifications</b>		3	24-0161	Cover
Heating	-21000 Btu/hr (6150 W)	4	24-0133	Mounting Bracket
Air Flow	-265 CFM (450 m <sup>3</sup> /h)	5	24-0141	Venturi
Current	-5.8 Amps/12V	6	24-0110	Motor Bracket
	-2.9 Amps/24V	7	24-0171	Coil Protector
Weight	-9 lbs. (4 kg)	8	25-0105	Motor 12V
2-Speed motor.			25-0107	Motor 24V
		9	25-0023	Fan
		10	22-0033	Heater Coil
		11	28-0014	Grommet

### Features

The compact design of the 222 is ideal for dash or under seat mounting.

## Fan Heater **Model 226**



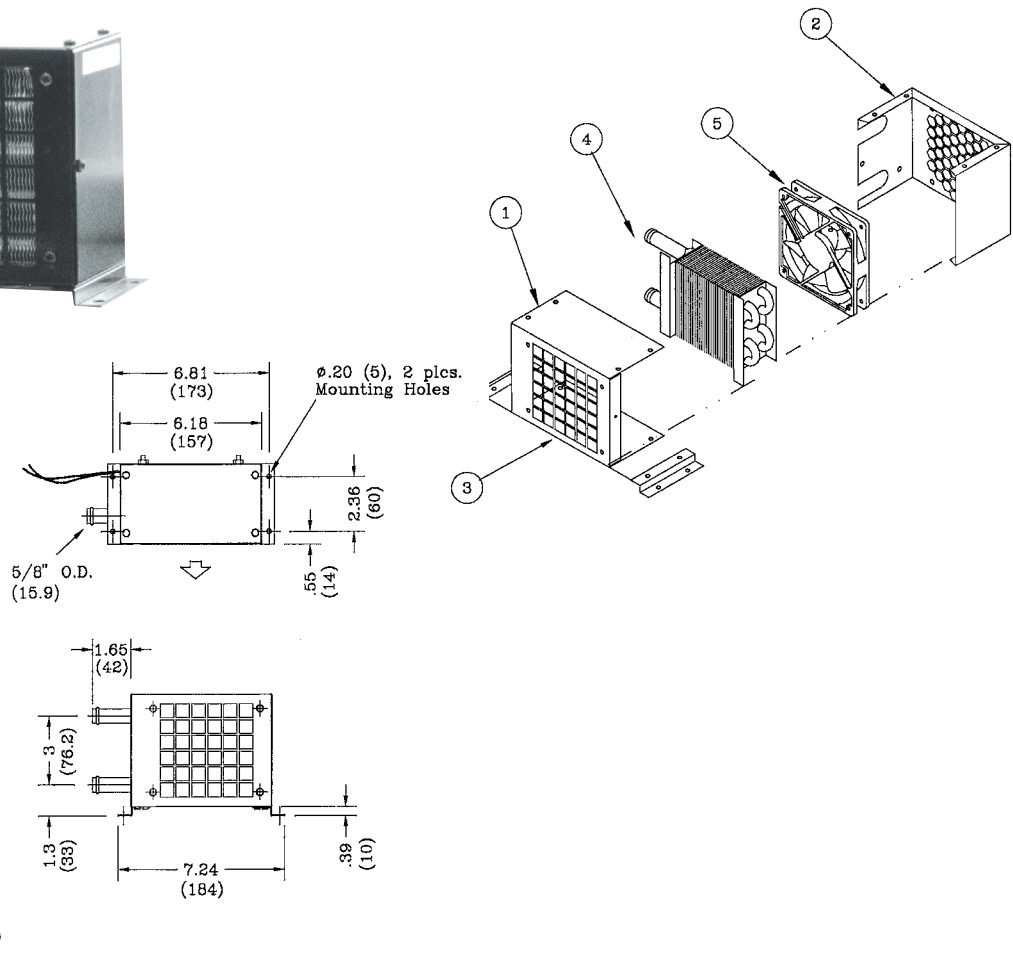
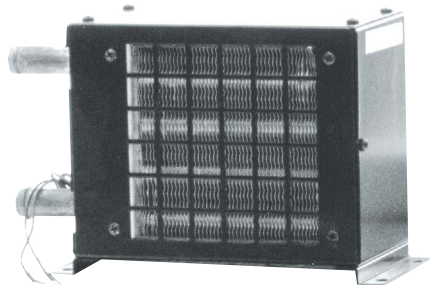
### Part Descriptions: Specifications

Part No.	No.	Part No.	Description
12-2611	1	24-0173	Heater 12V
	2	24-0136	Side Plate
	3	24-0160	Cover
	4	24-0133	Cover
	5	24-0138	Mounting Bracket
	6	24-0110	Venturi
	7	24-0172	Motor Bracket
	8	25-0105	Coil Protector
	9	25-0023	Motor 12V
	10	22-0052	Fan
	11	28-0014	Heater Coil
			Grommet

### Features

The 226 was designed to offer flexible mounting and deliver air directly out front of the heater.

## Low Amp Heater **Model 234**



### Part Descriptions: Specifications

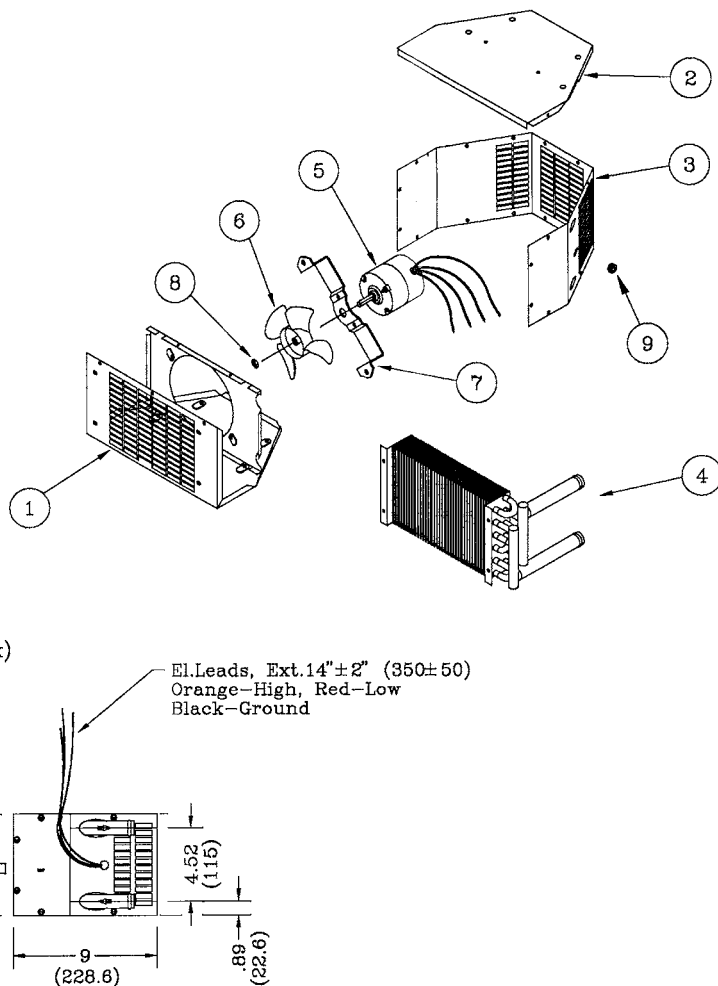
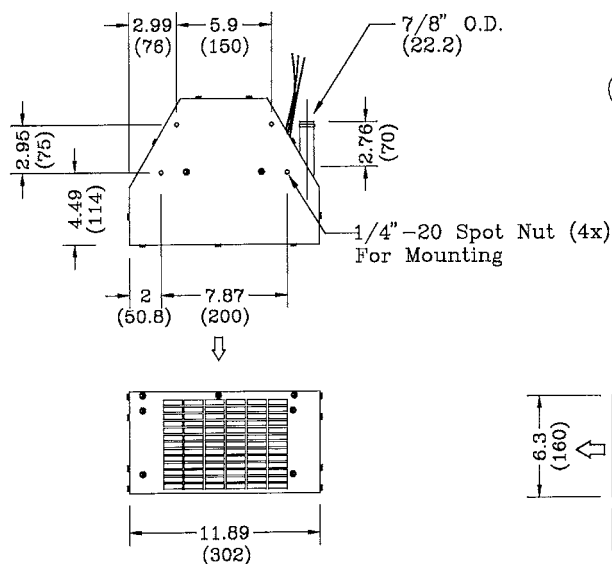
Part No.		No.	Part No.	Description
12-3421	Heater 12V	1	24-1105	Casing (Front)
12-3422	Heater 24V	2	24-1106	Casing (Rear)
<b>Specifications</b>		3	24-1107	Mounting Bracket
		4	24-0041	Heater Coil
		5	25-0172	Fan 12V
Heating	- 3425 Btu/hr (1000 W)		25-0244	Fan 24V
Air Flow	- 60 CFM (102 m <sup>3</sup> /h)			
Current	- 0.35 Amps/12V			
	- 0.18 Amps/24V			
Weight	- 3 lbs. (1.36 kg)			

### Features

The low amp current of the 234HD allows for mounting in applications such as motor homes, where an auxiliary heater is required.



## Fan Heater **Model 238**



### Part Descriptions: Specifications

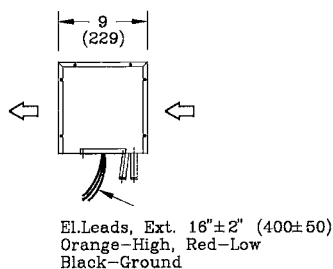
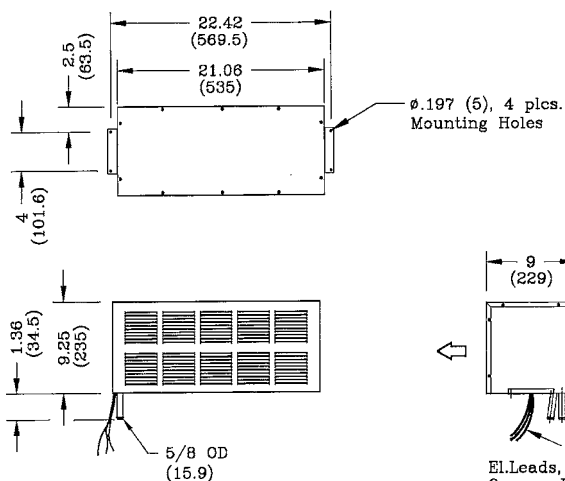
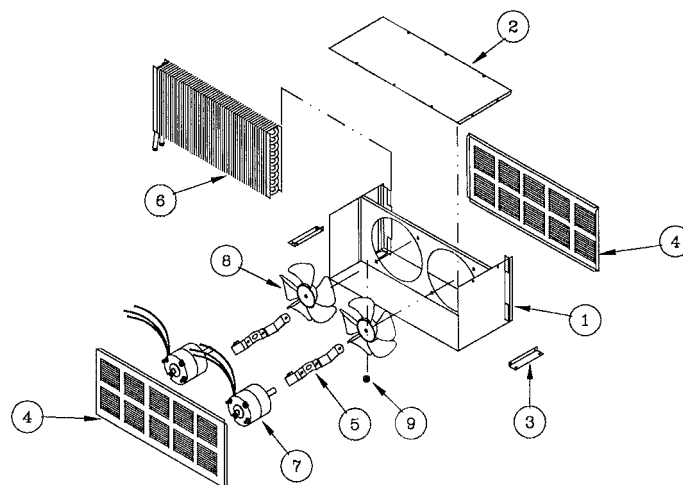
Part No.	
12-3811	Heater 12V
12-3812	Heater 24V
Specifications	
Heating	-22500 Btu/hr (6600 W)
Air Flow	-250 CFM (425 m³/h)
Current	-4 Amps/12V -2 Amps/24V
Weight	-11.5 lbs. (5.2 kg)
2-Speed motor.	

No.	Part No.	Description
1	24-0147	Casing
2	24-0148	Top Cover
3	24-0149	Side Cover
4	22-0110	Heater Coil
5	25-0105	Motor 12V
	25-0107	Motor 24V
6	25-0041	Fan
7	25-0110	Motor Bracket
8	29-0039	Retaining Ring
9	28-0014	Grommet

### Features

The 238 is ideal for underseat mounting. Air is disbursed to the front of the unit.

## Fan Heater **Model 239**



### Part Descriptions: Specifications

Part No.	
12-3903	Heater 12V
12-3904	Heater 24V

#### Specifications

Heating	- 64000 Btu/hr (18760 W)
Air Flow	- 800 CFM (1360 m³/h)
Current	- 13 Amps/12V - 6.5 Amps/24V
Weight	- 25 lbs. (11.3 kg)
2-Speed motor.	

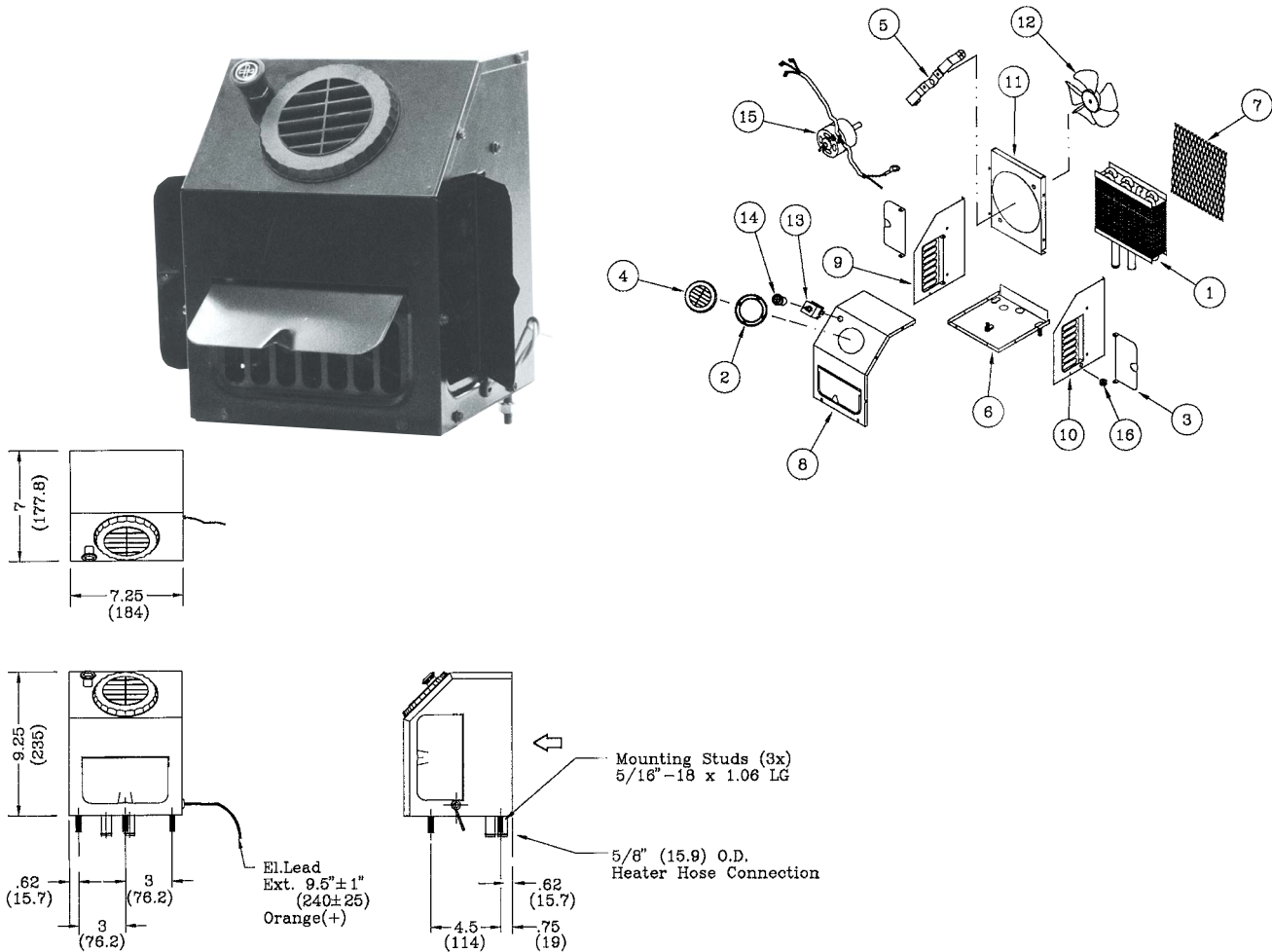
No.	Part No.	Description
1	24-0356	Casing
2	24-0357	Cover
3	24-0133	Mounting Bracket
4	24-0358	Grill
5	24-0223	Motor Bracket
6	22-0030	Heater Coil
7	25-0344	Motor 12V
	25-0107	Motor 24V
8	25-0121	Fan (8" C.W.)
9	28-0004	Grommet

### Features

The 239 is our largest capacity fan heater - ideal for buses and other large capacity requirements.



## Fan Heater Model 245



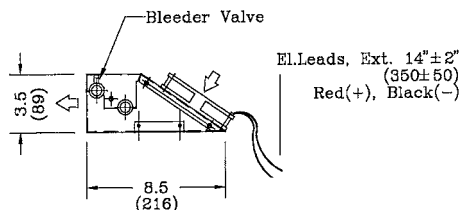
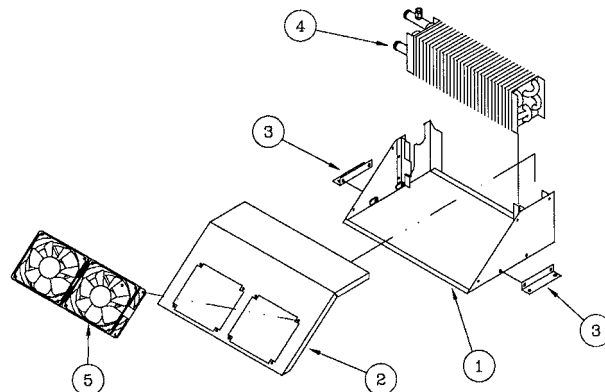
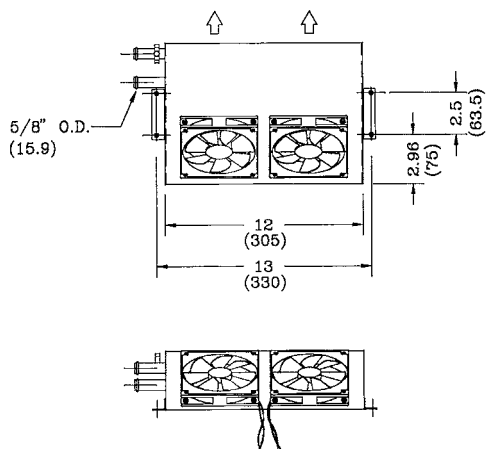
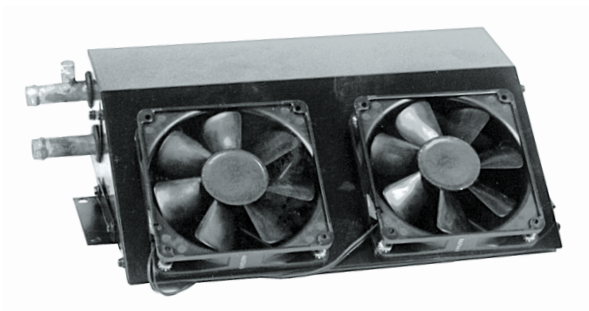
### Part Descriptions: Specifications

Part No.		No.	Part No.	Description	No.	Part No.	Description
12-4503	Heater 12V	1	22-0140	Heater Coil	10	24-0893	Side (R)
12-4504	Heater 24V	2	23-0048	Adapter	11	24-0894	Venturi
<b>Specifications</b>		3	23-0009	Door	12	25-0023	Fan (6.6" C.C.W.)
Heating	-20000 Btu/hr (5860 W)	4	23-0045	Louver	13	25-0029	Switch
Air Flow	-265 CFM (450 m <sup>3</sup> /h)	5	24-0110	Motor Bracket	14	25-0067	Knob
Current	-5.8 Amps/12V	6	24-0175	Base	15	25-0105	Motor 12V
	-2.9 Amps/24V	7	24-0890	Coil Protector		25-0107	Motor 24V
Weight	-8.5 lbs. (3.8 kg)	8	24-0891	Cover	16	28-0014	Grommet
2-Speed motor.		9	24-0892	Side (L)			
Heater is internally grounded.							

### Features

The 245 offers the ability to control fan speed with a control on the box. Ideal for auxiliary heaters or small cab applications.

## Low Amp Heater **Model 247**



### Part Descriptions: Specifications

Part No.	
12-4701	Heater 12V
12-4702	Heater 24V

#### Specifications

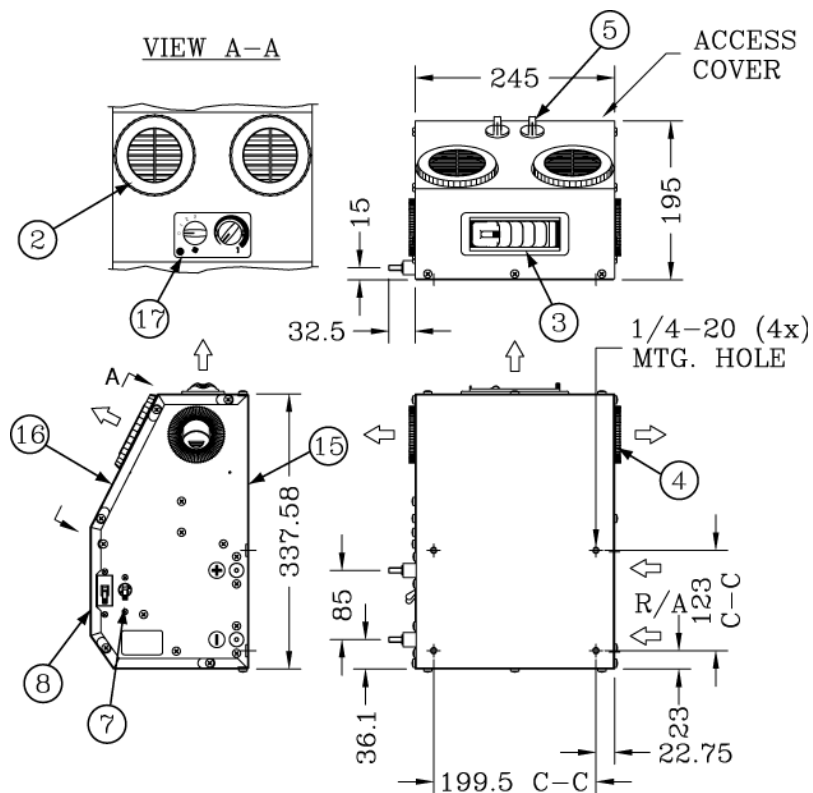
Heating	-8700 Btu/hr (2550 W)
Air Flow	-130 CFM (220 m <sup>3</sup> /h)
Current	-0.70 Amps/12V -0.35 Amps/24V
Weight	-6.1 lbs. (2.8 kg)
1-Speed motor.	

No.	Part No.	Description
1	24-1114	Casing
2	24-1115	Cover
3	24-0012	Mounting Bracket
4	22-0171	Heater Coil
5	25-0172	Fan 12V
	25-0144	Fan 24V

### Features

The 247 is another option for low amp heater requirements.

## Fan Heater **Electric Model 290N** (North America only)



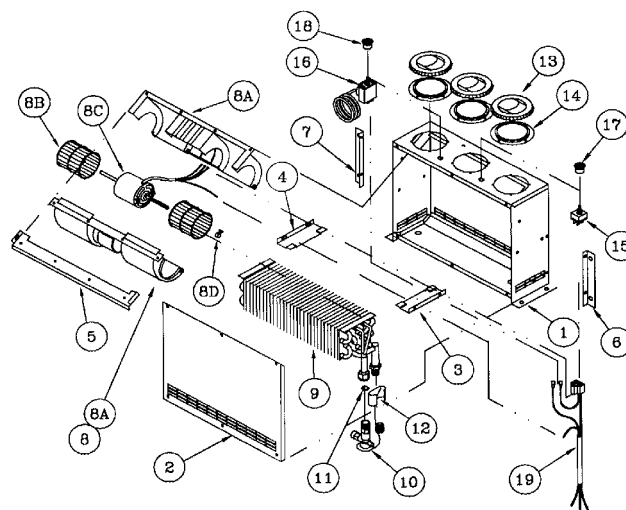
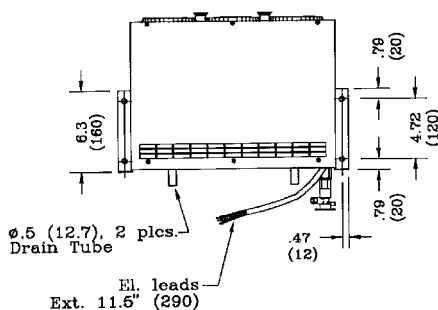
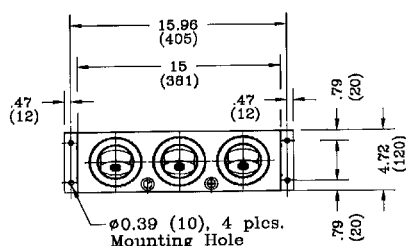
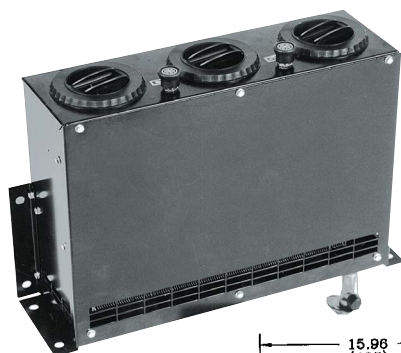
### Part Descriptions: Specifications

Specifications		No.	Part No.	Description	No.	Part No.	Description
Heating	2kW (36V)	3	23-0145	Louver	11	25-1204	Contactor
	1.6kW (48V)	4	23-0171	Louver	12	25-1373	Resistor 10Ω (12-9038)
Air flow	220 CFM (339.8m3/h)	5	25-0435	Knob	13	25-1760	Resistor 4Ω (12-9050)
	55A (36V)	6	25-1160	Heater Element 48V	14	25-1761	Resistor 2.5Ω (12-9038/12-9050)
Current	42A (48V)	6	25-1169	Heater Element 36V	15	24-4796	Casing Stainless Steel
Weight	18 lbs. (8.16kg)	7	25-1372	Circuit Breaker 8A/80V	16	24-4797	Cover Stainless Steel
		8	25-1481	Circuit Breaker 50A/80V	17	28-0722	Overlay
		8	25-2459	Circuit Breaker 60A/80V	Items 1,6,10 to 14 are not shown		



# V. Compact AC

## Air Conditioner **Model 301**



5/8"-18 Male (OR #8)  
7/8"-14 Male (OR #10)  
Refr. Hose Connection

### El. Connection

Orange-Power(+)  
Black-Ground(-)  
White-To pressure switch/  
compressor  
Blue -To condenser/relay  
(if fan condenser)

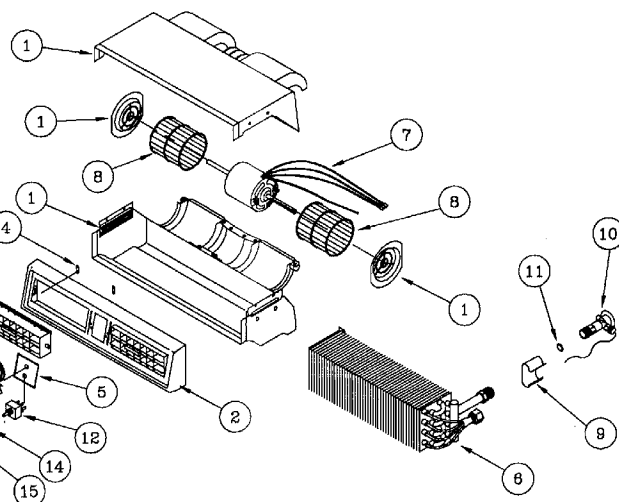
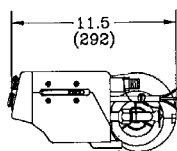
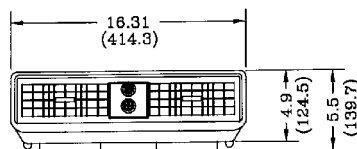
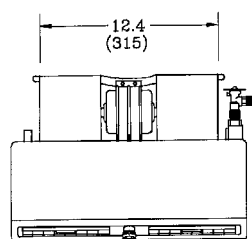
## Part Descriptions: Specifications

Part No.		No.	Part No.	Description	No.	Part No.	Description
13-0121	Air Conditioner 12V	1	24-1584	Casing	8D	25-0022	Clip
13-0122	Air Conditioner 24V	2	24-1585	Cover	9	21-0276	Evaporator Coil
Specifications		3	24-1586	Coil Bracket (R)	10	26-0162	Expansion Valve
		4	24-1587	Coil Bracket (L)	11	27-0602	O-Ring #8
		5	24-1588	Blower Support	12	26-0006	Bulb Clamp
		6	24-1941	Mounting Bracket (R)	13	23-0005	Louver
Cooling	-15700 Btu/hr (4600 W)	7	24-1942	Mounting Bracket (L)	14	23-0048	Adapter
Air Flow	-200 CFM (340 m³/h)	8	15-0503	Blower 12V	15	25-0029	Blower Switch
Current	-13 Amps/13.5V		15-0504	Blower 24V	16	25-0045	Thermostat
	-6.5 Amps/27V	8A	25-0017	Blower Housing	17	25-0067	Knob
Weight	-19 lbs. (8.6 kg)	8B	25-0021	Blower Wheel	18	25-0068	Knob
Casing made of 18GA (1.25mm) Cold Rolled Steel and finished in black semi-gloss epoxy powder coat.		8C	25-0070	Motor 12V	19	25-0586	Wiring Harness
			25-0076	Motor 24V			

## Features

The 301 is a compact air conditioner that is ideal for small cabs. It can be wall mounted or used as a stand alone floor mount.

## Air Conditioner **Model 302**



El. leads, Ext. 16±2  
(400±50)  
White -from Thermostat  
Orange -Power  
Black-Ground

0.5 (12.7) OD, 2 plcs.  
Drain Tube

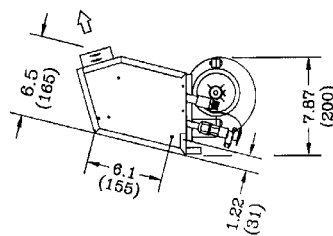
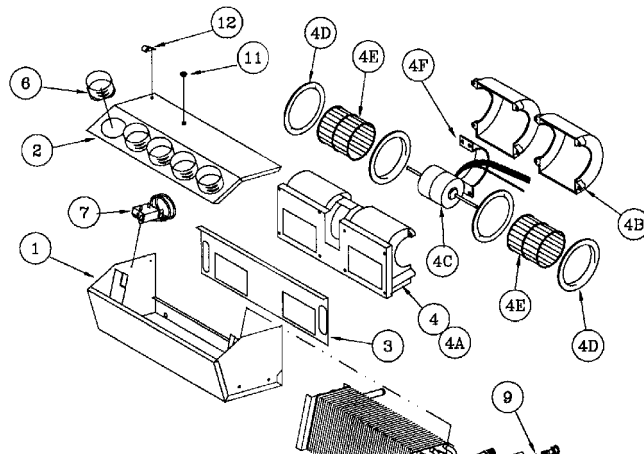
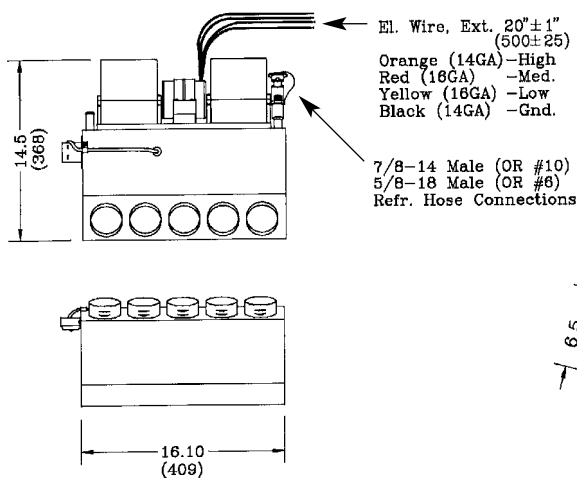
### Part Descriptions: Specifications

Part No.		No.	Part No.	Description	No.	Part No.	Description
13-0221	Air Conditioner 12V	1	28-0001	Case	9	26-0006	Bulb Clamp
13-0222	Air Conditioner 24V	2	28-0002	Bezel	10	26-0162	Expansion Valve
<b>Specifications</b>		3	23-0011	Louver	11	27-0602	O-Ring #8
Cooling	-17950 Btu/hr (5260 W)	4	23-0028	Louver Strip	12	25-0029	Switch
Air Flow	-250 CFM (425 m³/h)	5	25-0032	Switch Plate	13	25-0030	Thermostat
Current	-11 Amps/13.5V	6	21-0003	Evaporator Coil	14	25-0059	Nut Cover
	-5.5 Amps/27V	7	25-0677	Motor 12V	15	25-0067	Knob
Weight	-9 lbs. (4 kg)		25-0678	Motor 24V	16	25-0068	Knob
3-Speed motor.		8	25-0021	Blower Wheel	17	25-0679	Wiring Harness (Not Shown)

### Features

The 302 is a compact unit that can be ducted to deliver air flow where desired. Ideal for dash or compartment mounting.

## Heater-Air Conditioner **Model 306**



### Part Descriptions: Specifications

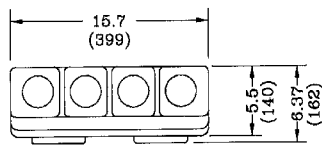
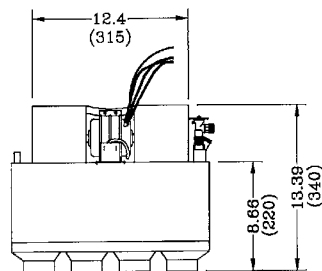
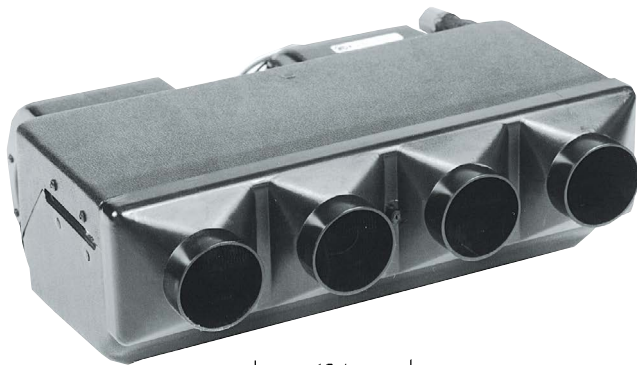
Part No.		No.	Part No.	Description	No.	Part No.	Description	
13-0651	Heater-AC 12V	1	24-0035	Casing	4E	25-0200	Blower Wheel	
13-0652	Heater-AC 24V	2	24-0404	Cover	4F	25-0271	Motor Mount	
Specifications		3	24-0497	Blower Plate	5	21-0005	Combo Coil	
		4	15-1513	Blower 12V	6	23-0038	Hose Adapter 2 1/2"	
	Heating	-33000 Btu/hr (9675 W)		15-1514	Blower 24V	7	25-0069	Thermostat
	Cooling	-22500 Btu/hr (6685 W)	4A	25-0048	Blower Housing	8	26-0162	Expansion Valve
	Air Flow	-400 CFM (680 m³/h)	4B	25-0348	Housing Top	9	27-0602	O-Ring #8
Current	-14 Amps/13.5V	4C	25-0053	Motor 12V	10	26-0006	Bulb Clamp	
	-7 Amps/27V		25-0076	Motor 24V	11	28-0021	Snap-in Plug	
Weight	-19 lbs. (8.6 kg)	4D	25-0060	Venturi	12	29-0139	Half Clamp 5/16"	

Casing made of 18GA (1.25mm) Cold Rolled Steel and finished in black semi-gloss epoxy powder coat.

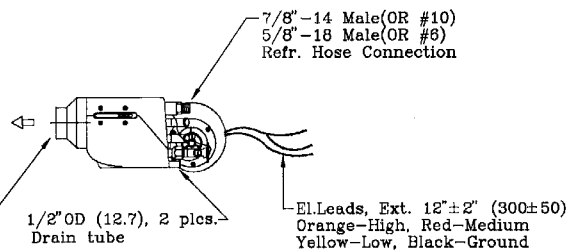
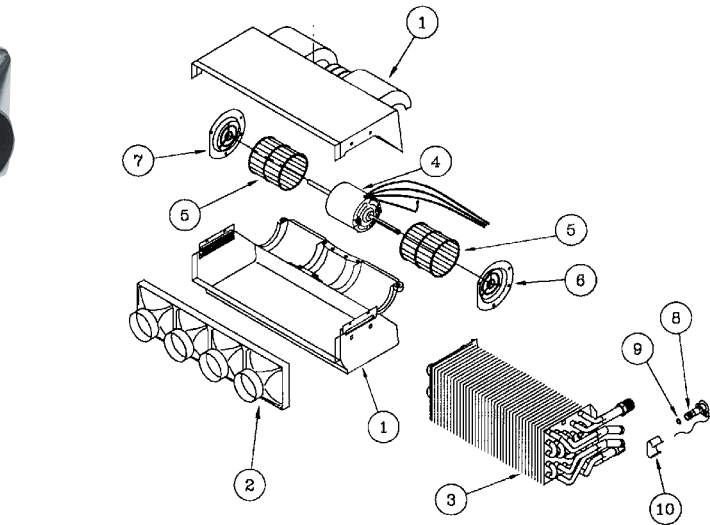
### Features

The 306 is ideal for under seat or dash mounting. It's high performance capacity can handle most cab requirements. It can also be used in limousine applications.

## Heater-Air Conditioner **Model 309**



Air Outlet 2 1/2" (4x)



### Part Descriptions: Specifications

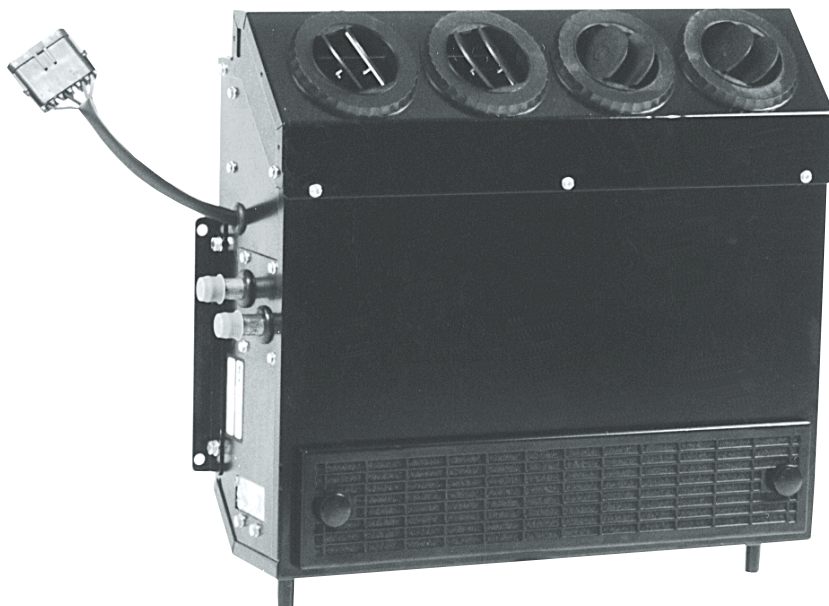
Part No.		No.	Part No.	Description	No.	Part No.	Description
13-0953	Heater-AC 12V	1	28-0016	Case	6	28-0019	Venturi (R)
13-0954	Heater-AC 24V	2	28-0006	Bezel	7	28-0020	Venturi (L)
<b>Specifications</b>		3	21-0012	Combo Coil	8	26-0162	Expansion Valve
		4	25-0070	Motor 12V	9	27-0602	O-Ring #8
Heating	-20200 Btu/hr (5920 W)		25-0076	Motor 24V	10	26-0006	Bulb Clamp
Cooling	-15100 Btu/hr (4425 W)	5	25-0021	Blower Wheel			
Air Flow	-310 CFM (530 m³/h)						
Current	-11 Amps/13.5V						
	-5.5 Amps/27V						
Weight	-10.5 lbs. (4.8 kg)						
3-Speed motor.							
Casing made of ABS.							

### Features

The 309 is a compact unit that can be ducted to deliver air flow where desired. Ideal for dash or compartment mounting.



# Heater-Air Conditioner **Model 310**



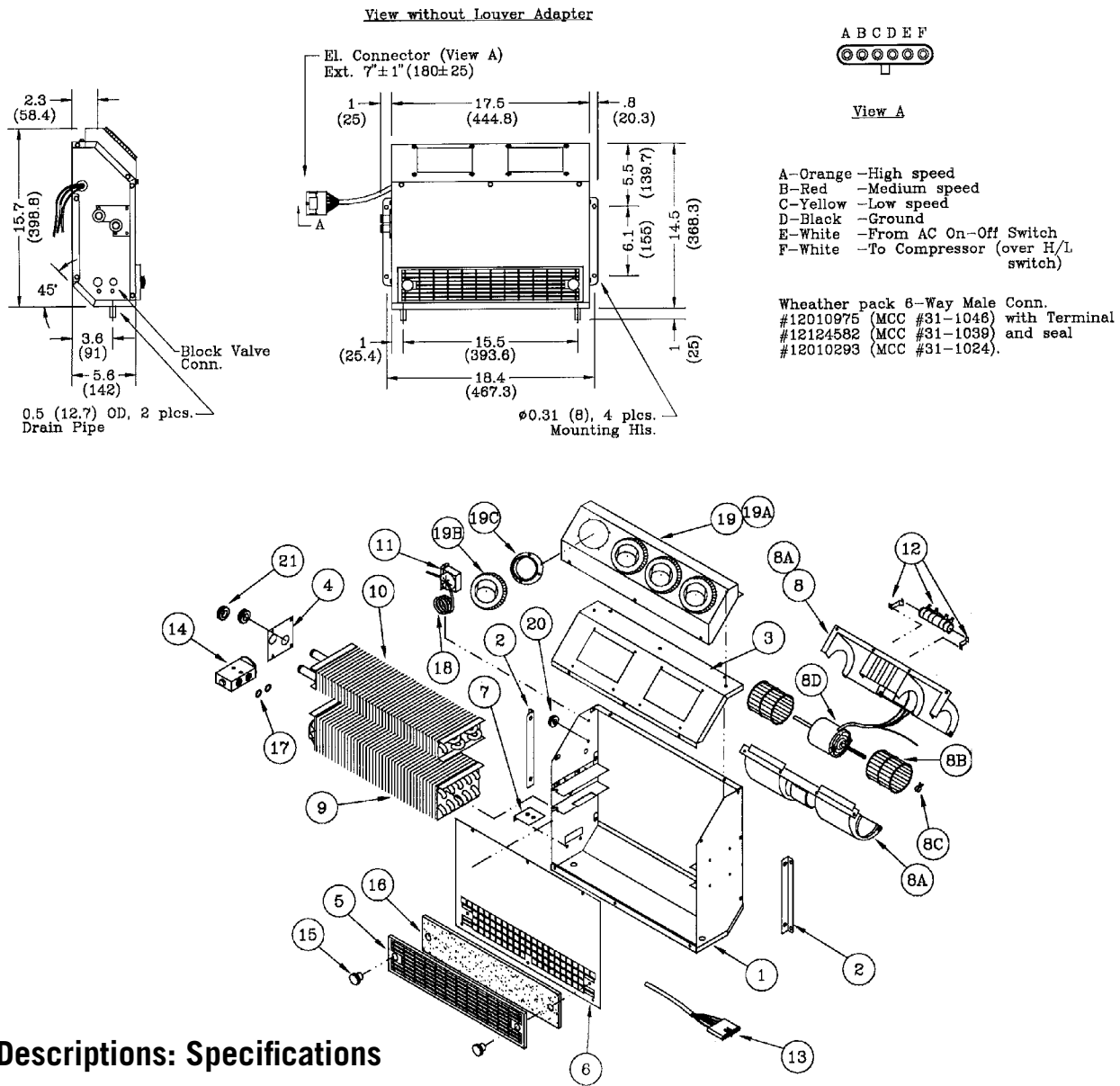
## Part Descriptions: Specifications

Part No.		Specifications		
13-1003	Heater-AC 12V	Heating	-25500 Btu/hr (7480 W)	Made of 18GA (1.25mm) Cold Rolled Steel and finished in black semi-gloss epoxy powder coat.
13-1004	Heater-AC 24V	Cooling	-19775 Btu/hr (5800 W)	
13-1023	Air Conditioner 12V	Air Flow	-300 CFM (510 m³/h)	
13-1024	Air Conditioner 24V	Current	-12 Amps/13V	
13-1090	Plenum Assy.		-6 Amps/27V	Pictured with optional cover (item 19) installed.
	Incl.19A, 19B, 19C	Weight	-27.3 lbs. (12.4 kg)	

## Features

The 310 is a compact unit that can be used as a free blowing or ducting unit to direct air around the cab. A remote mount control panel is required for this system.

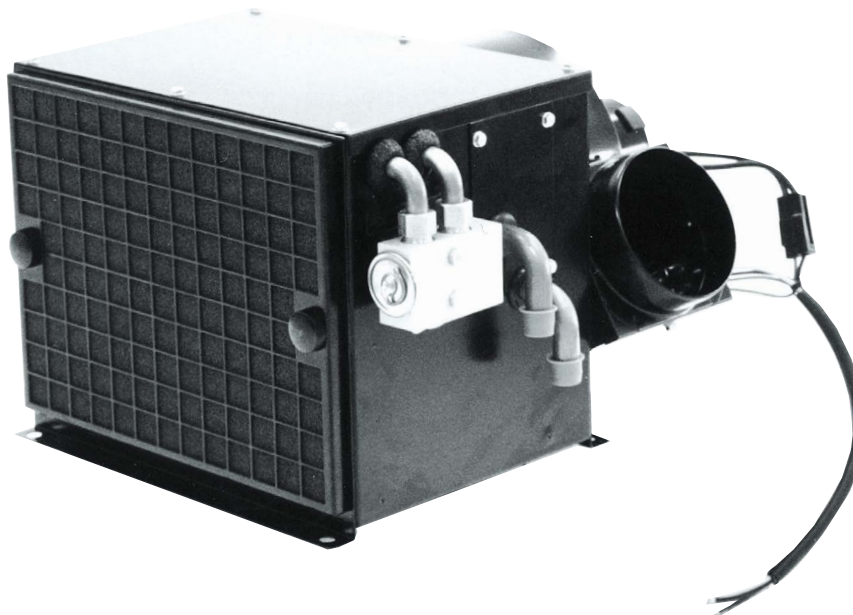
## Dimension Profiles



## Part Descriptions: Specifications

No.	Part No.	Description	No.	Part No.	Description	No.	Part No.	Description
1	24-2124	Casing	8B	25-0021	Blower Wheel	15	26-0263	Knurled Knob
2	24-2125	Mounting Bracket	8C	25-0022	Clip	16	26-0399	Air Filter
3	24-2126	Blower Plate	8D	25-0228	Motor 12V	17	27-0602	O-Ring
4	24-2166	Cover Plate		25-0298	Motor 24V	18	28-0031	PVC Hose
5	24-2167	Grill	9	21-0364	Evaporator	19	13-1090	Plenum Assy.
6	24-2168	Front Cover	10	22-0319	Heater Coil			Inc. 19A, B, C.
7	24-2211	Expansion Valve Bkt.	11	25-0069	Thermostat	19A	24-2396	Plenum
8	15-0551	Blower 12V	12	25-0601	Resistor 12V	19B	23-0005	Louver
	15-0552	Blower 24V		25-0602	Resistor 24V	19C	23-0048	Adapter
8A	25-0017	Blower Housing	13	25-0664	Wiring Harness	20	28-0004	Grommet
			14	26-0190	Block Valve	21	28-0009	Grommet

## Heater-Air Conditioner **Model 316**



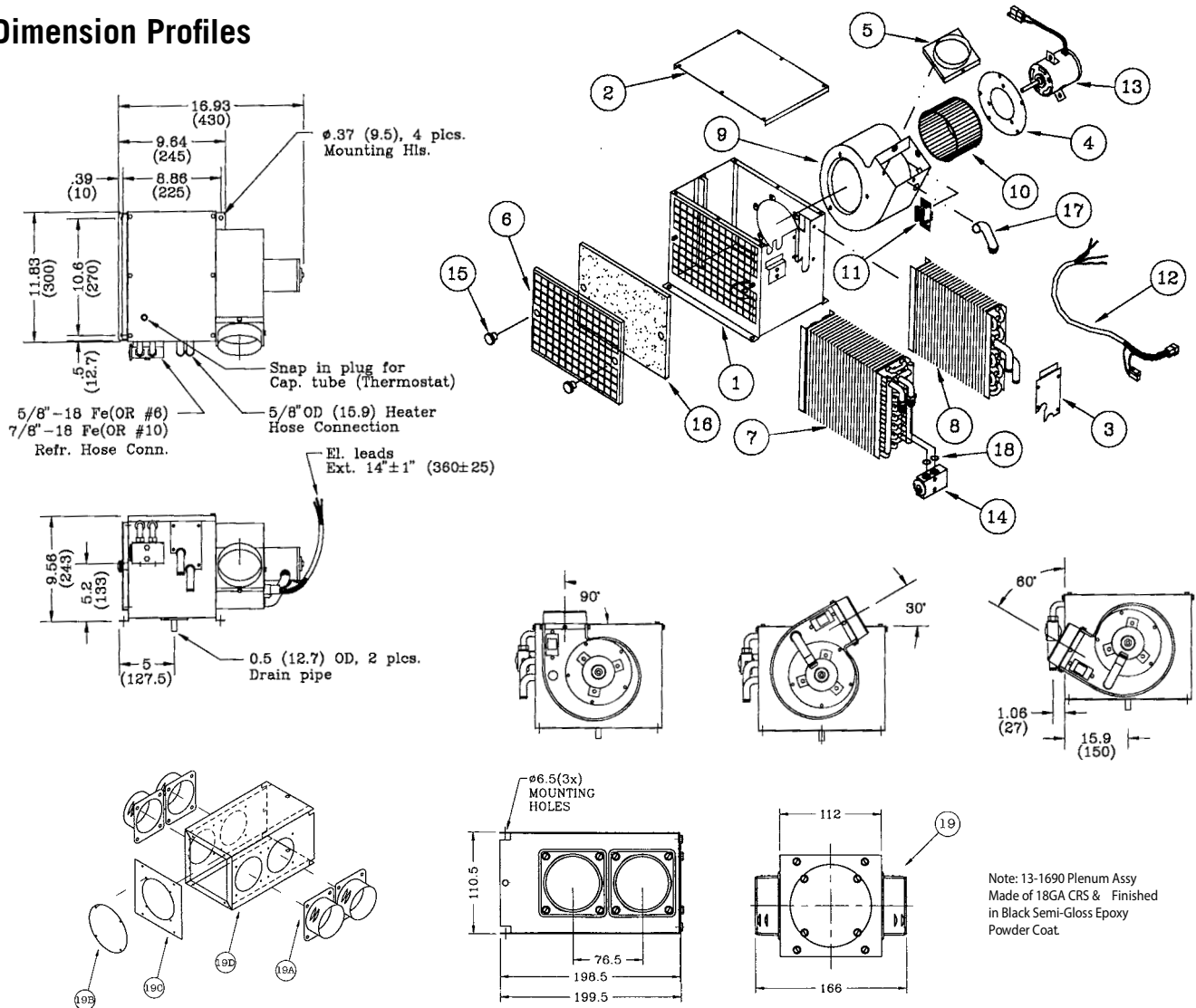
### Part Descriptions: Specifications

Part No.		Specifications		
13-1601	Heater-AC 12V	Heating	-32500 Btu/hr (9525 W)	The unit is supplied w/o heater valve and de-icing thermostat, which have to be installed if needed.
13-1602	Heater-AC 24V	Cooling	-26500 Btu/hr (7770 W)	
13-1690	Plenum Assy.	Air Flow	-350 CFM (595 m <sup>3</sup> /h)	
	Inc. 19A -19D	Current	-24 Amps/12V -12 Amps/24V	
		Weight	-26 lbs. (11.8kg)	

### Features

The 316 is designed for behind the seat installations or for sleeper bunks. It is also designed to duct air around the cab. The blower can be rotated as shown in dimension profiles.

## Dimension Profiles



## Part Descriptions: Specifications

No.	Part No.	Description	No.	Part No.	Description	No.	Part No.	Description
1	24-2425	Casing	10	25-0098	Blower Wheel	16	26-0430	Air Filter
2	24-2426	Cover	11	25-0136	Resistor 12V	17	27-0105	Vent Tube
3	24-2427	Cover Plate		25-0552	Resistor 24V	18	27-0602	O-Ring #8
4	24-2431	Motor Plate	12	25-0538	Wiring Harness	<b>19*</b>	<b>13-1690</b>	<b>Plenum Assy</b>
5	24-2432	Hose Adapter	13	25-0675	Motor 12V	<b>19A</b>	<b>23-0125</b>	<b>Hose Adapters 2.5"</b>
6	24-2501	Filter Grill		25-0676	Motor 24V	<b>19B</b>	<b>23-0006</b>	<b>Cover Plate</b>
7	21-0395	Evaporator Coil	14	26-0190	Block Valve	<b>19C</b>	<b>24-3317</b>	<b>Covers</b>
8	22-0339	Heater Coil	15	26-0263	Knurled Knob	<b>19D</b>	<b>24-3316</b>	<b>Plenum</b>
9	25-0668	Blower Housing						

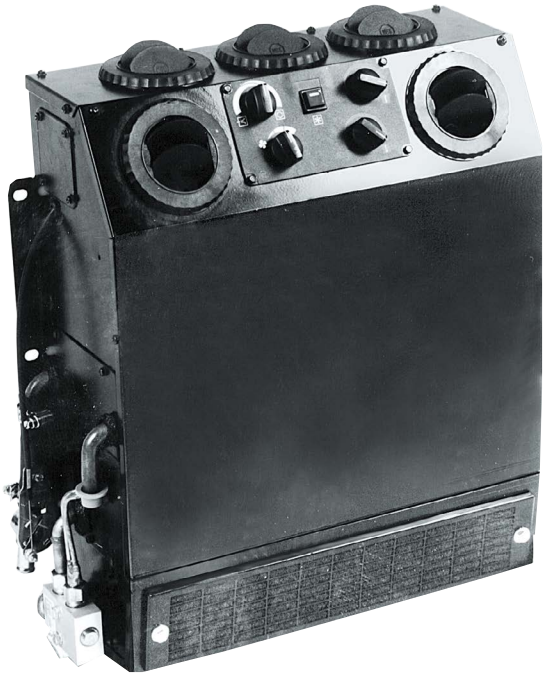
Item 19 is optional and has to be ordered separately.

## Features

The 316 is designed for behind the seat installations or for sleeper bunks. It is also designed to duct air around the cab. The blower can be rotated as shown in dimension profiles.

# Heater-Air Conditioner **Model 320**

Note:  
Switch is not as depicted in photo, has been changed to sealed rocker switch.



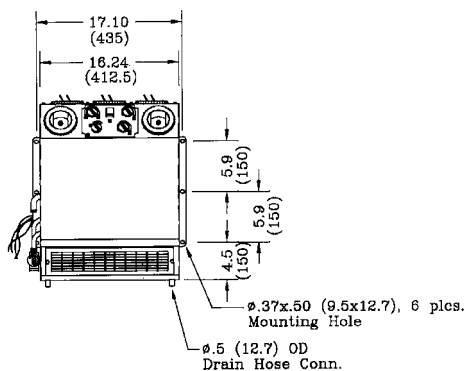
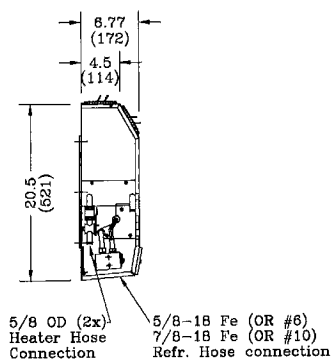
## Part Descriptions: Specifications

Part No.		Specifications		
13-2021	Heater-AC 12V	Heating	-28000 Btu/hr (8200 W)	Made of 18GA (1.25mm) Cold Rolled Steel and finished in black semi-gloss epoxy powder coat.
13-2022	Heater-AC 24V	Cooling	-21000 Btu/hr (6150 W)	
13-2051	Air Conditioner 12V	Air Flow-	380 CFM (646 m³/h)	
13-2052	Air Conditioner 24V	Current	-18 Amps/13.5V	
			-9 Amps/27V	
		Weight	-40 lbs. (18 kg)	
		3-Speed blower.		

## Features

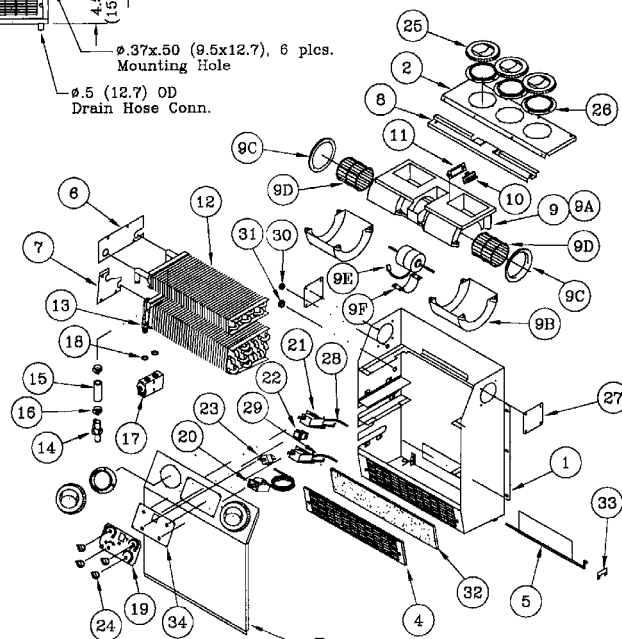
The 320 is a universal wall mounted unit that can handle the requirements of most off-road cabs. An outside filter kit and damper door can be added for outside air.

## Dimension Profiles



### El. connection

Orange-Power (+)  
Black-Ground (-)  
White-To compressor/Press. Switch  
Blue-To Condenser/Relay (if Fan Condenser)



## Part Descriptions: Specifications

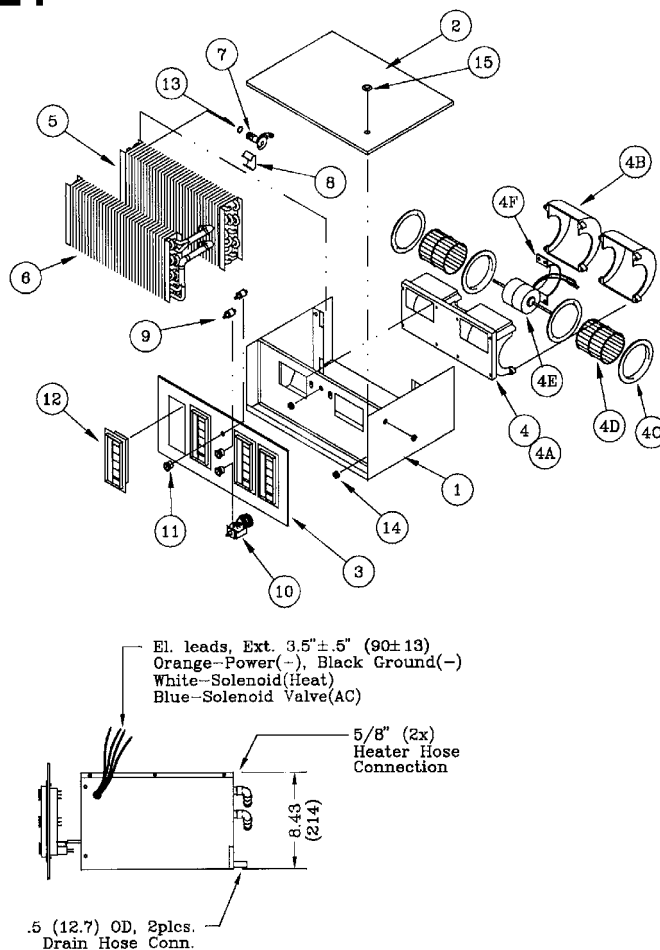
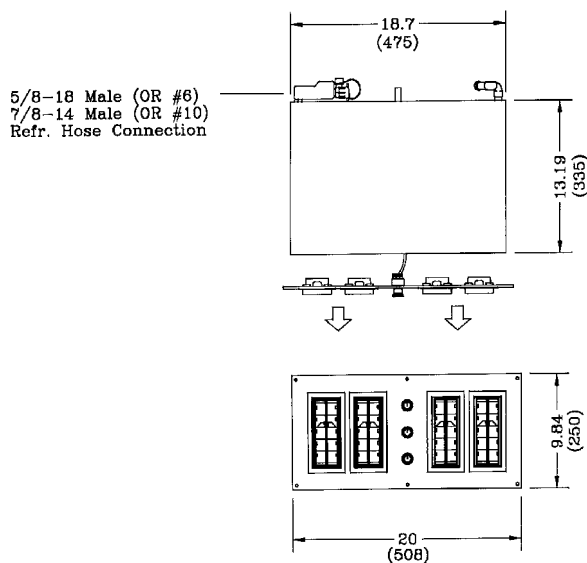
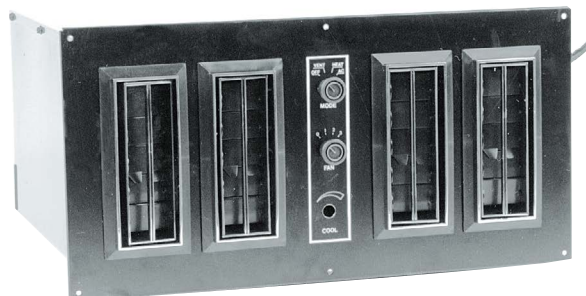
No.	Part No.	Description	No.	Part No.	Description	No.	Part No.	Description
1	24-1182	Casing	9E	25-0665	Motor 12V	22	25-0631	Switch Push 12V
2	24-1183	Top Cover		25-0650	Motor 24V		25-0632	Switch Push 24V
3	24-1184	Front Cover	9F	25-0271	Motor Mount	23	25-0044	Blower Switch
4	24-1185	Filter Holder	10	25-0120	Resistor 12V	24	25-0435	Knob
5	24-1186	Flapper		25-0139	Resistor 24V	25	23-0005	Louver
6	24-1230	H.C. Cover Plate	11	24-0836	Mounting Plate	26	23-0048	Adapter
7	24-1243	E.C. Cover Plate	12	22-0207	Heater Coil	27	24-0320	Cover Plate
8	24-1187	Blower Bracket	13	21-0212	Evaporator Coil	28	26-0242	Bowden Cable
9	15-1503	Blower 12V	14	26-0025	Heater Valve	29	26-0243	Bowden Cable
	15-1502	Blower 24V	15	27-0225	Heater Hose 5/8"	30	28-0014	Grommet
9A	25-0048	Blower Housing	16	27-0059	Gear Clamp	31	28-0004	Grommet
9B	25-0348	Blower Housing Top	17	26-0190	Block Valve	32	26-0258	Filter
9C	25-0060	Venturi	18	27-0602	O-Ring #8	33	24-1188	Flapper Holder
9D	25-0200	Blower Wheel	19	28-0110	Overlay	34	24-1128	Control Plate
			20	25-0045	Thermostat	35	25-0436	Wiring Harness (Not Shown)
			21	26-0095	Rotary Control			

## Features

The 320 is a universal wall mounted unit that can handle the requirements of most off-road cabs. An outside filter kit and damper door can be added for outside air.



## Heater-Air Conditioner **Model 321**



### Part Descriptions: Specifications

Part No.	No.	Part No.	Description	No.	Part No.	Description
13-2155		Heater-AC 12V		1	24-0539	Casing
				2	24-0274	Cover
				3	24-0275	Front
				4	15-1513	Blower 12V
				4A	25-0048	Blower Housing
				4B	25-0348	Housing Top
				4C	25-0060	Venturi
				4D	25-0200	Blower Wheel
				4E	25-0053	Motor 12V
				4F	25-0271	Motor Mount
				5	21-0046	Evaporator Coil
				6	22-0130	Heater Coil
				7	26-0162	Expansion Valve
				8	26-0006	Bulb Clamp
				9	25-0029	Switch
				10	25-0045	Thermostat
				11	25-0072	Knob
				12	23-0055	Louver
				13	27-0602	O-Ring #8
				14	28-0004	Grommet
				15	28-0021	Snap-in Plug

#### Specifications

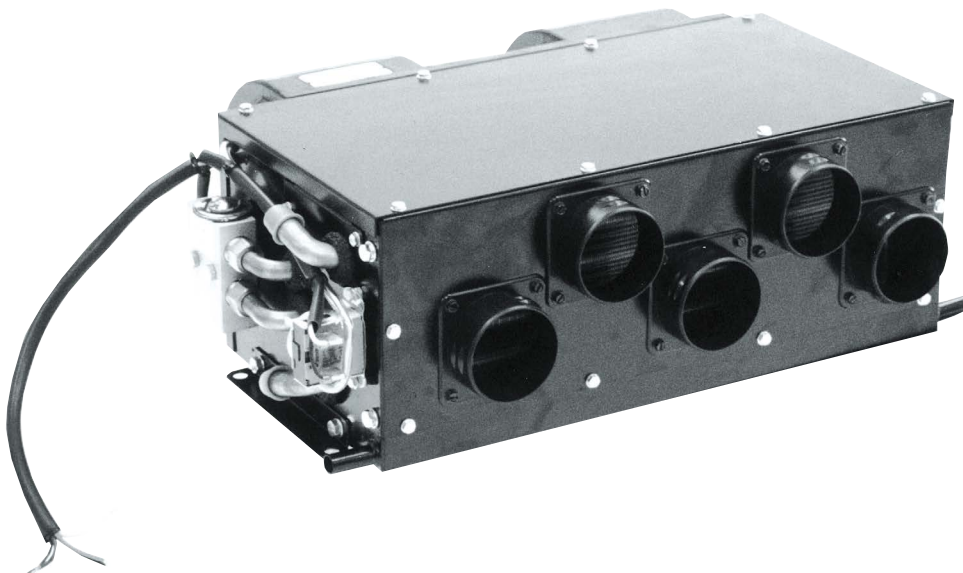
Heating	-40000 Btu/hr (11720 W)
Cooling	-27300 Btu/hr (8000 W)
Air Flow	-450 CFM (765 m³/h)
Current	-17 Amps/12V
Weight	-31 lbs. (14 kg)

Made of 18GA (1.25mm) Cold Rolled Steel and finished in black semi-gloss epoxy powder coat.

### Features

The 321 was designed for ambulance installation. It can be used for any deck mounting application. The high capacity of the 321 makes this unit ideal for ambulance and large cabs.

# Heater-Air Conditioner **Model 325**



## Part Descriptions: Specifications

Part No.		Specifications		
13-2503	Heater-AC 12V	Heating	-36000 Btu/hr(10500 W)	Permanent magnet motor with ball bearings. Casing made of 18GA (1.25mm) Cold Rolled Steel and finished in black semi-gloss powder coat.
13-2504	Heater-AC 24V	Cooling	-28500 Btu/hr (8350 W)	
		Air Flow	-450 CFM (765 m³/h)	
		Current	-16 Amps/13.5V -8 Amps/27V	
		Weight	-19 lbs. (8.6 kg)	

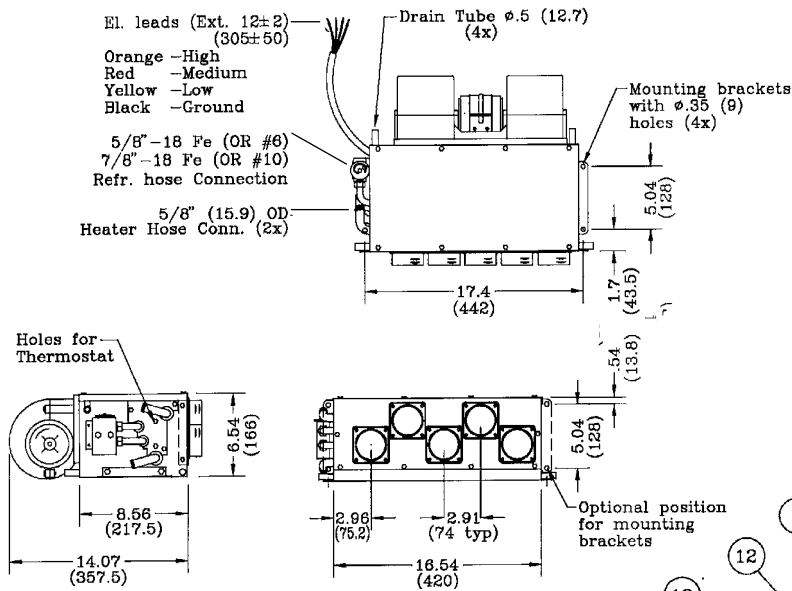
## Features

The 325 is a universal unit that fits all ducting requirements.



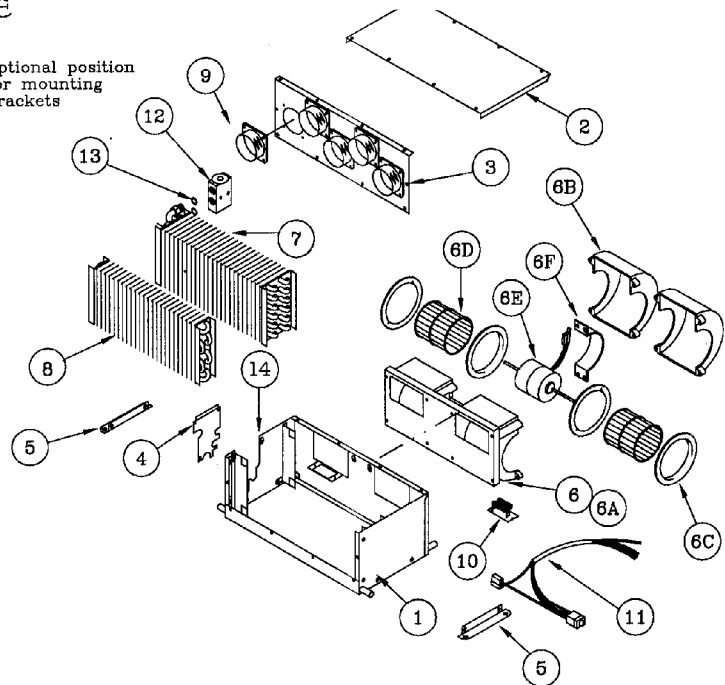


## Dimension Profiles



### Note:

This Unit is supplied w/o Heater Valve and De-icing Thermostat which have to be installed if needed.



## Part Descriptions: Specifications

No.	Part No.	Description	No.	Part No.	Description	No.	Part No.	Description
1	24-0027	Casing	6B	25-0348	Housing Top	9	23-0125	Hose Adapter 2.5"
2	24-0028	Cover	6C	25-0060	Venturi	10	25-0136	Resistor 12V
3	24-0013	Cover	6D	25-0200	Blower Wheel		25-0552	Resistor 24V
4	24-0017	Coil Cover (H)	6E	25-0645	Motor 12V	11	25-0671	Wiring Harness
5	24-0033	Mounting Bracket		25-0650	Motor 24V	12	26-0190	Block Valve
6	15-1501	Blower 12V	6F	25-0271	Motor Mount	13	27-0602	O-Ring #8
	15-1502	Blower 24V	7	21-0091	Evaporator Coil	14	25-0069	Thermostat
6A	25-0048	Blower Housing	8	22-0348	Heater Coil			

## Features

The 325 is a universal unit that fits all ducting requirements.

## Heater-Air Conditioner **Model 330**

Note:

Switch is not as depicted in photo, has been changed to sealed rocker switch.



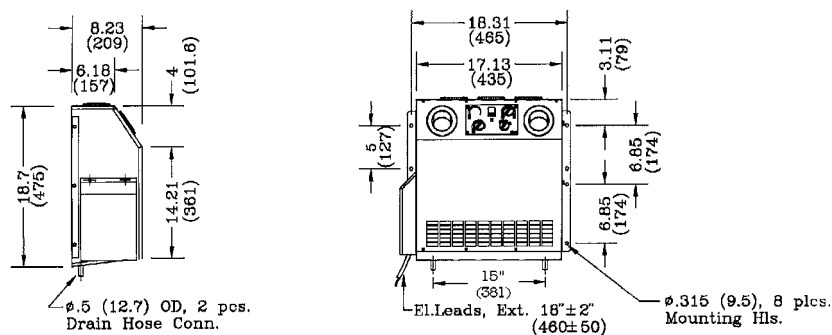
### Part Descriptions: Specifications

Part No.		Specifications		
13-3061	Heater-AC 12V	Heating	-42200 Btu/hr(12370 W)	Permanent magnet motor with long life brushes. 3-Speed blower. Made of 18GA (1.25mm) Cold Rolled Steel and finished in black semi-gloss epoxy powder coat. Items 31-35 are optional and have to be ordered separately
13-3062	Heater-AC 24V	Cooling	-28500 Btu/hr (8350 W)	
13-3063	Air Conditioner 12V	Air Flow	-450 CFM (765 m³/h)	
13-3064	Air Conditioner 24V	Current	-22 Amps/13.5V	
13-3067	Heater 12V		-11 Amps/27V	
		Weight	-38 lbs. (17.2 kg)	

### Features

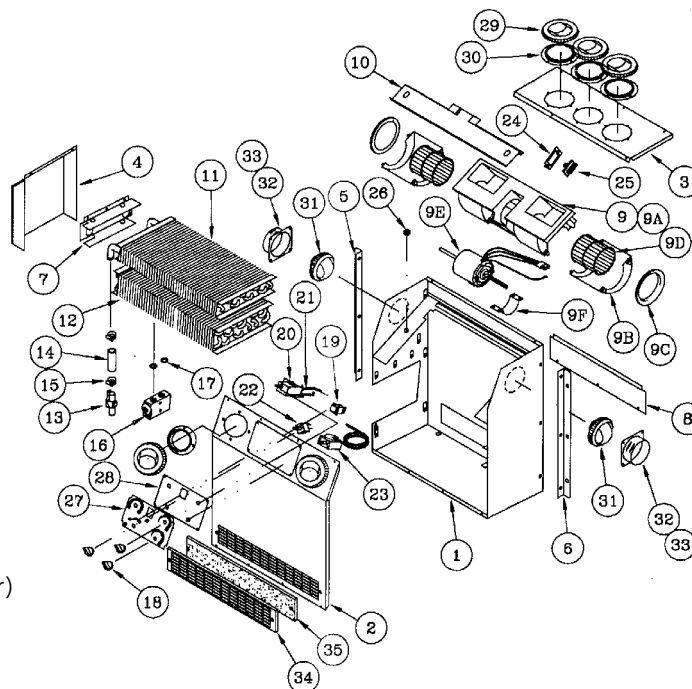
Although similar in design and function, the 330 is a larger capacity unit than the 320. It is ideal for street sweepers and large off-road cabs. Outside air can be achieved by adding a filter kit.

## Dimension Profiles



**Note:**  
 5/8-18 Male (OR #6)  
 7/8-14 Male (OR #10)  
 Refr. Hose Conn.  
 5/8" OD Heater Hose Conn.  
 All behind protection cover.

**Electrical Connections**  
 Orange - Power (+)  
 Black - Ground (-)  
 White - To Compressor/Pressure Switch  
 Blue - To Condensor/Relay (if fan condensor)



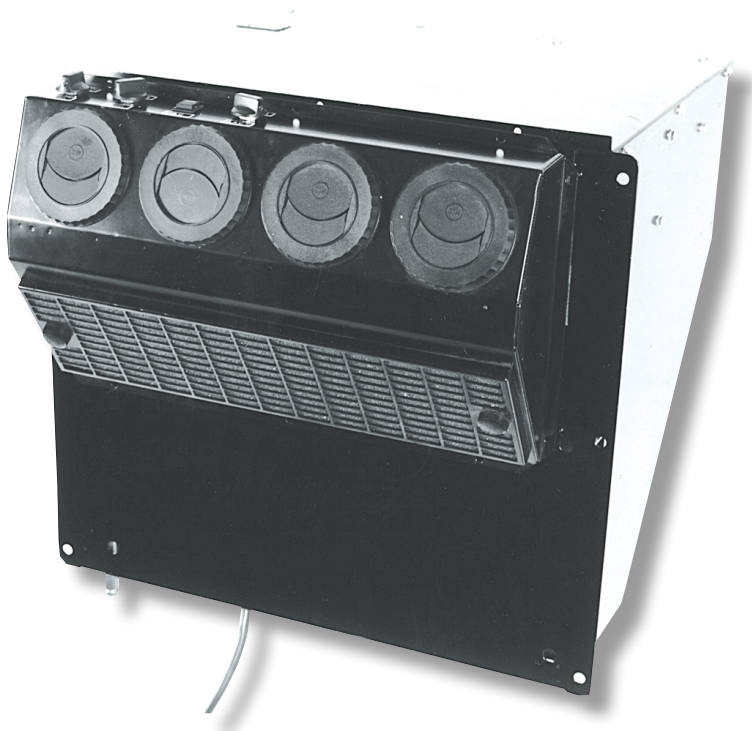
## Part Descriptions: Specifications

No.	Part No.	Description	No.	Part No.	Description	No.	Part No.	Description
1	24-1157	Casing	9F	24-0271	Motor Mount	23	25-0045	Thermostat
2	24-1158	Front Cover	10	24-1160	Blower Mount	24	24-0836	Resistor Bracket
3	24-1159	Top Cover	11	22-0078	Heater Coil	25	25-0120	Resistor 12V
4	24-0205	Protection Cover	12	21-0063	Evaporator Coil		25-0139	Resistor 24V
5	24-0290	Mounting Bracket (L)	13	26-0025	Heater Valve	26	28-0014	Grommet
6	24-0279	Mounting Bracket (R)	14	27-0225	Heater Hose 5/8"	27	28-0110	Overlay
7	24-0242	Coil Bracket	15	27-0059	Gear Clamp	28	24-1128	Control Plate
8	24-0291	Fresh Air Cover	16	26-0190	Block Valve	29	23-0005	Louver
9	15-1503	Blower 12V	17	27-0602	O-Ring #8	30*	23-0048	Adapter
	15-1502	Blower 24V	18	25-0435	Knob	31*	23-0087	Ball Louver
9A	25-0048	Blower Housing	19	25-0631	Switch Push 12V	32*	23-0110	Hose Adapter 2"
9B	25-0348	Blower Housing Top		25-0632	Switch Push 24V	33*	23-0125	Hose Adapter 2.5"
9C	25-0060	Venturi	20	26-0095	Rotary Control	34*	24-2018	Grill
9D	25-0200	Blower Wheel	21	26-0320	Bowden Cable	35*	26-0425	Air Filter
9E	25-0665	Motor 12V	22	25-0044	Blower Switch	36	25-0436	Wiring Harness
	25-0650	Motor 24V						(Not Shown)

## Heater-Air Conditioner **Model 344**

Note:

Switch is not as depicted in photo, has been changed to sealed rocker switch.



### Part Descriptions: Specifications

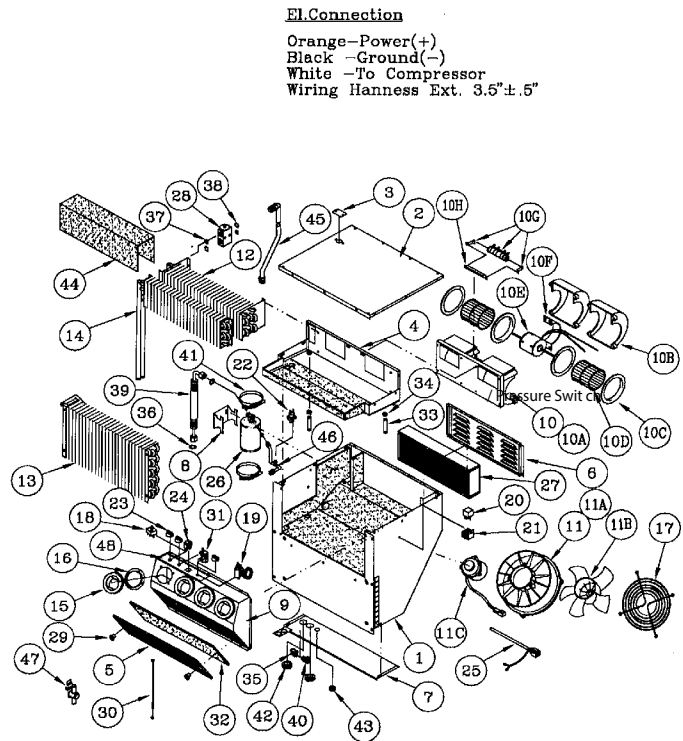
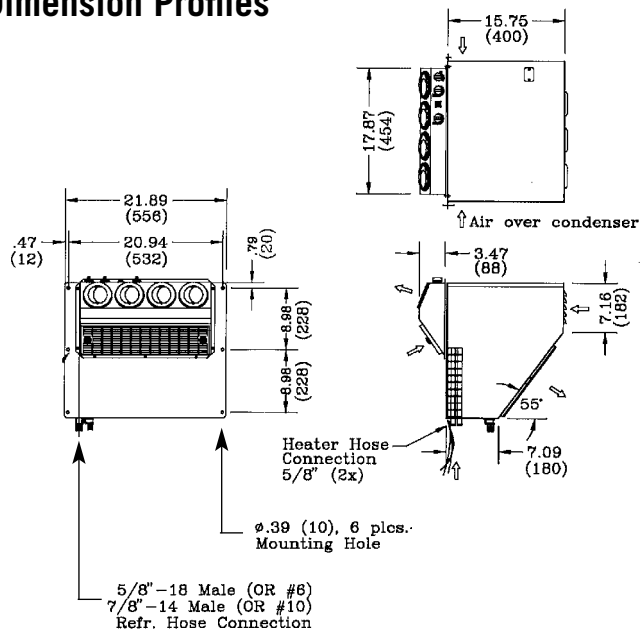
Part No.		Specifications		
13-4401	Heater-AC 12V	Heating	-34000 Btu/hr (9960 W)	Casing made of 16GA (1.5mm) Cold Rolled Steel and finished in black semi-gloss epoxy powder coat.
13-4402	Heater-AC 24V	Cooling	-17000 Btu/hr (4980 W)	
		Air Flow	-265 CFM (450 m³/h)	
		Current	-33.4 Amps/3.5V	
			-16.7 Amps/27V	
		Weight	-77 lbs. (35 kg)	

### Features

The 344 is a unit that has the condenser mounted in the same compartment as the heater-air conditioner. This unit is mounted on the side of any cab and blows air into a louver console. Outside air is standard.



## Dimension Profiles



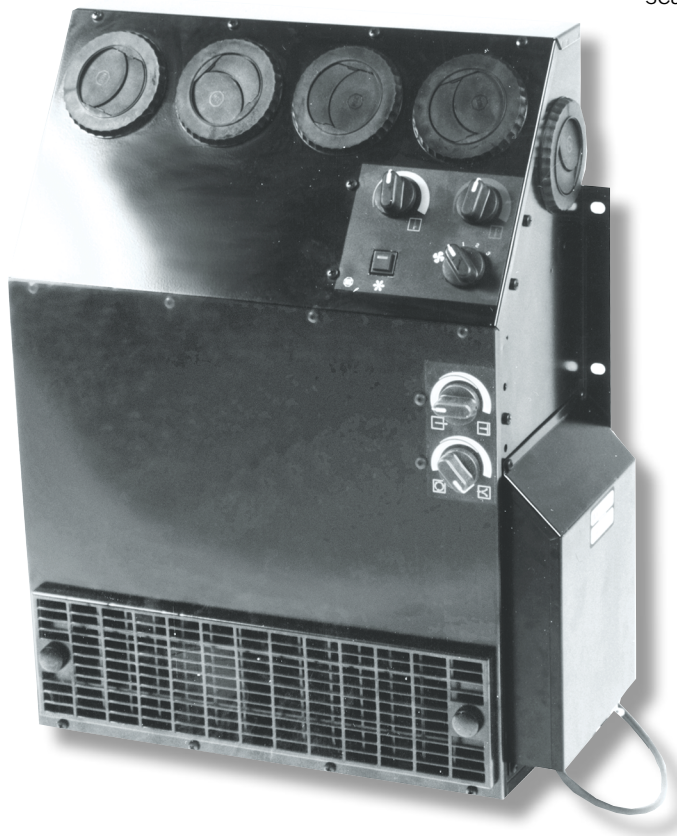
## Part Descriptions: Specifications

No.	Part No.	Description	No.	Part No.	Description	No.	Part No.	Description
1	24-2229	Casing Assy.	11	15-7512	Fan Assy. 24V	27	26-0041	Air Filter
2	24-2230	Cover Assy.	11A	25-0577	Venturi	28	26-0190	Block Valve
3	24-1919	Sight Glass Cover	11B	25-0579	Fan	29	26-0263	Knurled Knob
4	24-2231	Drain Pan Assy.	11C	25-0621	Motor 12V	30	26-0347	Bowden Cable
5	24-1921	Recirc. Grill		25-0622	Motor 24V	31	26-0350	Rotary Control
6	24-1922	Filter Cover	12	21-0318	Evaporator Coil	32	26-0374	Air Filter (Recirc.)
7	24-1923	Bottom Plate	13	21-0319	Condenser Coil	33	27-0030	Drain Hose
8	24-1924	R/D Bracket	14	22-0292	Heater Coil	34	27-0091	Drain Hose Clamp
9	24-2010	Plenum	15	23-0005	Louver	35	27-0502	Clamp
10	15-1561	Blower 12V	16	23-0048	Adapter	36	27-0601	O-Ring #6
	15-1562	Blower 24V	17	23-0148	Finger Guard	37	27-0602	O-Ring #8
10A	25-0048	Blower Housing	18	25-0044	Blower Switch	38	27-0603	O-Ring #10
10B	25-0348	Blower Top	19	25-0045	Thermostat	39	27-1107	Refr. Hose Assy. #6
10C	25-0060	Venturi	20	25-0251	Relay 12V	40	27-1108	P-Clamp #8
10D	25-0200	Blower Wheel		25-0219	Relay 24V	41	27-1121	Gear Clamp
10E	25-0655	Motor 12V	21	25-0221	Socket/Relay	42	28-0005	Grommet
	25-0660	Motor 24V	22	25-0343	Pressure Switch	43	28-0045	Grommet
10F	25-0271	Motor Mount	23	25-0435	Knob	44	28-0210	Reticulated Foam
10G	25-0601	Resistor 12V	24	25-0631	Switch Push 12V	45	34-0164	Copper Tube Assy.
	25-0602	Resistor 24V		25-0632	Switch Push 24V	46	34-0167	Copper Tube Assy.
10H	29-0130	Resistor Bracket	25	25-1015	Wiring Harness	47	26-0025	Heater Valve
11	15-7511	Fan Assy. 12V	26	26-0018	Drier Receiver	48	28-0191	Overlay

## Heater-Air Conditioner **Model 345**

Note:

Switch is not as depicted in photo, has been changed to sealed rocker switch.



### Part Descriptions: Specifications

Part No.		Specifications	
13-4503	Heater-AC 12V	Heating	-46000 Btu/hr(13480 W)
13-4504	Heater-AC 24V	Cooling	-33000 Btu/hr (9670 W)
13-4590	Air Plenum Assy.	Air Flow	-450 CFM (765 m <sup>3</sup> /h)
13-4595	Rear Outlet Flapper Kit	Current	-22 Amps/13.5V
			-11 Amps/27V
		Weight	-48 lbs. (22 kg)

Made of 18GA (1.25mm) Cold Rolled Steel and finished in black semi-gloss "texture" epoxy powdercoat.

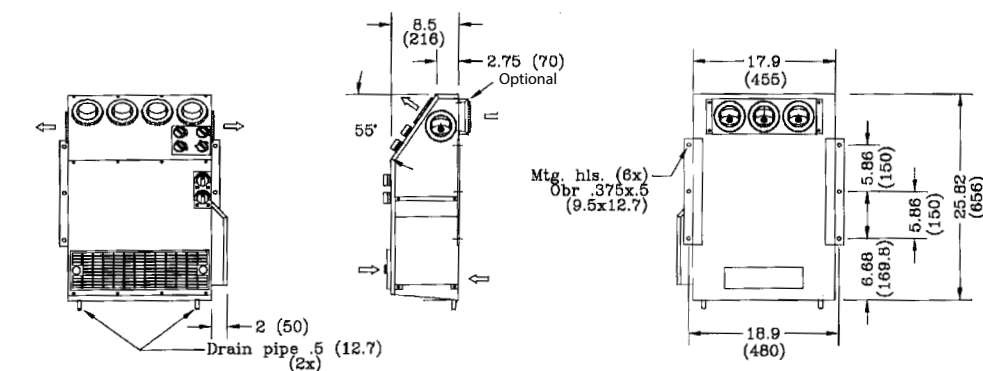
**13-4595 Rear Outlet Flapper Kit includes 1 piece 26-0350, 25-0581, 26-0421 and 26-0079 with hardware. Kit is optional and has to be ordered separately**

### Features

The 345 is an excellent choice for armored cars and large cabs. Its many options include outside air, rear air damper control, and side air louvers.

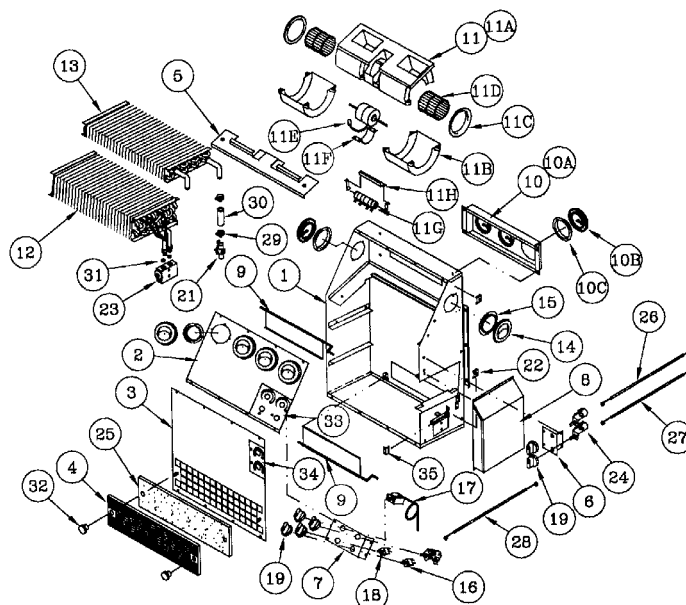


## Dimension Profiles



### El. Connection

Orange - Power (+)  
Black - Ground (-)  
White - To Compressor/Press. Switch  
Blue - To Condenser/Relay (if Fan Condenser)



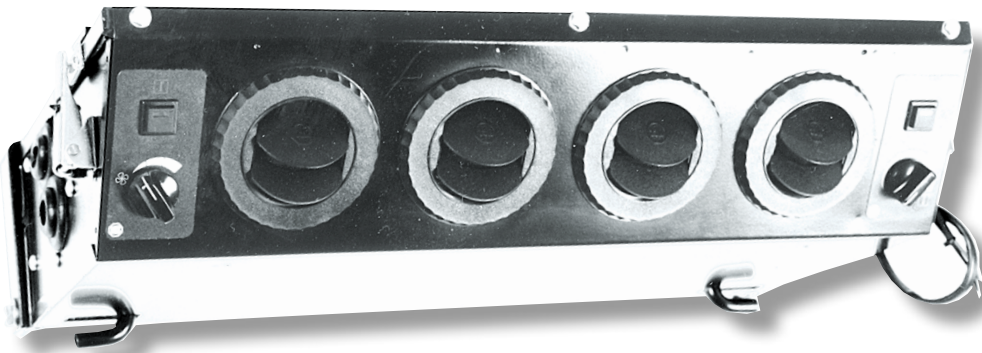
## Part Descriptions: Specifications

No.	Part No.	Description	No.	Part No.	Description	No.	Part No.	Description
1	24-2235	Casing	11C	25-0060	Venturi	21	26-0025	Heater Valve
2	24-2236	Face Cover	11D	25-0200	Blower Wheel	22	26-0079	Cable Clamp
3	24-2237	Front Cover	11E	25-0228	Motor 12V	23	26-0190	Block Valve
4	24-2238	Grill		25-0298	Motor 24V	24	26-0350	Rotary Control
5	24-2239	Blower Support	11F	25-0271	Motor Mount	25	26-0400	Air Filter
6	24-2240	Control Bracket	11G	25-0601	Resistor 12V	26	26-0421	Bowden Cable (R/A-Option)
7	24-2241	Control Bracket		25-0602	Resistor 24V	27	26-0422	Bowden Cable (F/A)
8	24-2242	Protection Cover	11H	29-0130	Resistor Bracket	28	26-0423	Bowden Cable (Heat)
9	24-2243	Flapper Door	12	21-0362	Evaporator Coil	29	27-0059	Gear Clamp
10	13-4590	Air Plenum Assy.	13	22-0318	Heater Coil	30	27-0225	Heater Hose
10A	24-2447	Plenum	14	23-0005	Louver	31	27-0602	O-Ring #8
10B	23-0005	Louver	15	23-0048	Adapter	32	26-0263	Knurled Knob
10C	23-0048	Adapter	16	25-0044	Blower Switch	33	28-0212	Overlay
11	15-1551	Blower 12V	17	25-0118	Thermostat Assy.	34	28-0213	Overlay
	15-1552	Blower 24V	18	25-0307	Switch	35	24-2274	Mounting Bracket
11A	25-0048	Blower Housing	19	25-0581	Knob			
11B	25-0348	Housing Top	20	25-0669	Wiring Harness (Not Shown)			

## Heater-Air Conditioner **Model 346**

Note:

Switch is not as depicted in photo, has been changed to sealed rocker switch.



### Part Descriptions: Specifications

Part No.	Specifications			
13-4603	Heater-AC 12V	Heating	- 17500 Btu/hr (5130 W)	3-Speed motor. Made of 18GA (1.25mm) Cold Rolled Steel finished in black textured epoxy.
13-4604	Heater-AC 24V	Cooling	- 17300 Btu/hr (5070 W) -AC	
13-4623	Air Conditioner 12V	only		
13-4624	Air Conditioner 24V		- 14250 Btu/hr (4180 W) - Heater-AC	
		Air Flow	- 250 CFM (425 m <sup>3</sup> /h)	* Only for Heat/AC version.
		Current	- 12 Amps/13.5 V	** Only for AC version
			- 6 Amps/27V	
		Weight	- 33 lbs. (15 kg)	

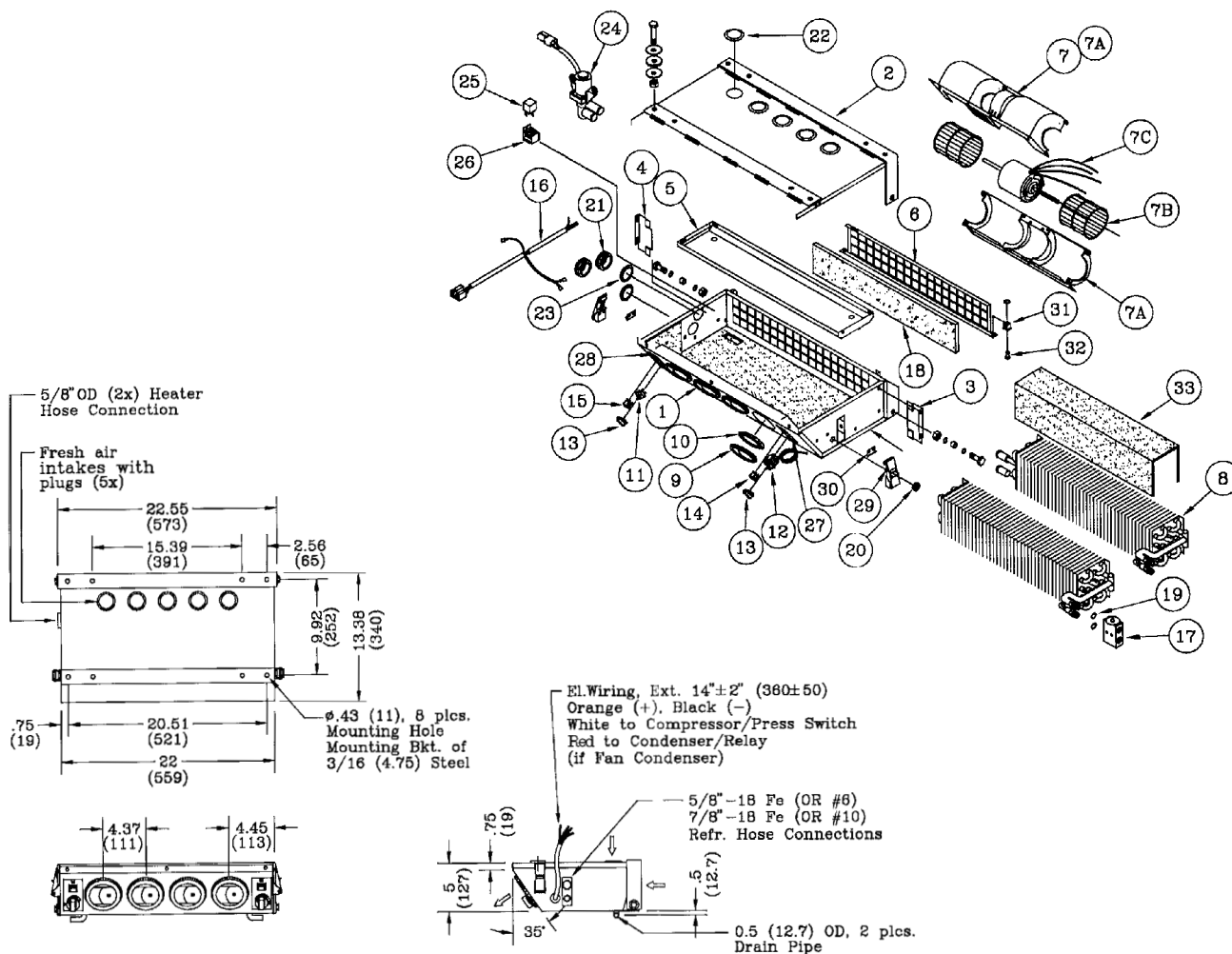
### Features

The 346 is a compact overhead with a heater option. Its compact design makes it an excellent choice for many off-road cabs.

The convenient swing-down unit makes for easy service.



## Dimension Profiles



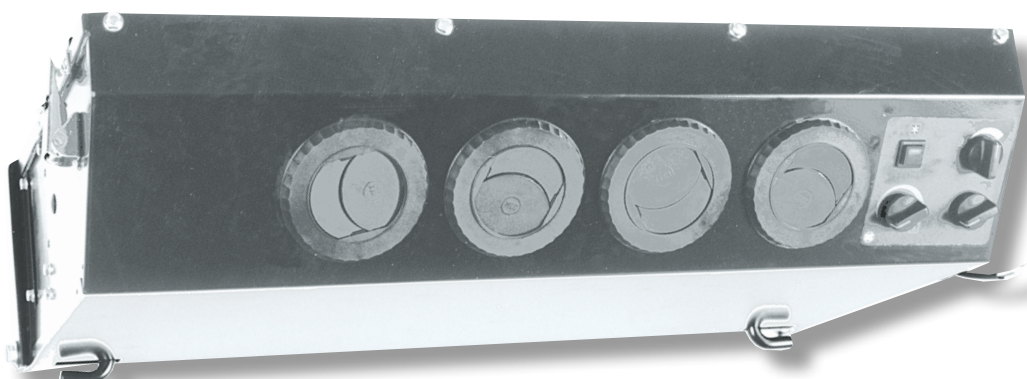
## Part Descriptions: Specifications

No.	Part No.	Description	No.	Part No.	Description	No.	Part No.	Description
1	24-1991	Casing Assy.	10	23-0048	Adapter	22	28-0012	Snap-in Plug
2	24-1992	Cover Assy.	11	25-0029	Blower Switch	23	28-0013**	Snap-in Plug
3	24-1979	Coil Bracket	12	25-0118	Thermostat	24	26-0348	Solenoid Valve 12V
4	24-1980	Coil Bracket	13	25-0435	Knob	26	26-0194	Solenoid Valve 24V
5	24-1981	Drain Pan	14	25-0631	Switch Push 12V(AC)	25	25-0251	Relay 12V
6	24-1982	Filter Holder		25-0632	Switch Push 24V(AC)	25	25-0219	Relay 24V
7	15-0533	Blower 12V	15	25-0633*	Switch Push 12V (Heat)	26	25-0221	Socket Relay
	15-0534	Blower 24V		25-0634*	Switch Push 24V (Heat)	27	28-0173	Overlay
7A	25-0017	Blower Housing	16	25-0636**	Wiring Harness	28	28-0174	Overlay
7B	25-0021	Blower Wheel		25-0637*	Wiring Harness	29	29-0221	Latch
7C	25-0643	Motor 12V	17	26-0190	Block Valve	30	29-0222	Latch Hook
	25-0644	Motor 24V	18	26-0375	Air Filter	31	29-0075	Receptacle
8	21-0315**	Evaporator Coil Combo Coil (HE)	19	27-0602	O-Ring #8	32	29-0076	Stud, Oval Slotted
9	21-0314*	Louver	20	28-0004	Grommet		29-0077	Retainer
	23-0005		21	28-0005*	Grommet	33	28-0185	Reticulated Foam

## Heater-Air Conditioner **Model 347**

Note:

Switch is not as depicted in photo, has been changed to sealed rocker switch.



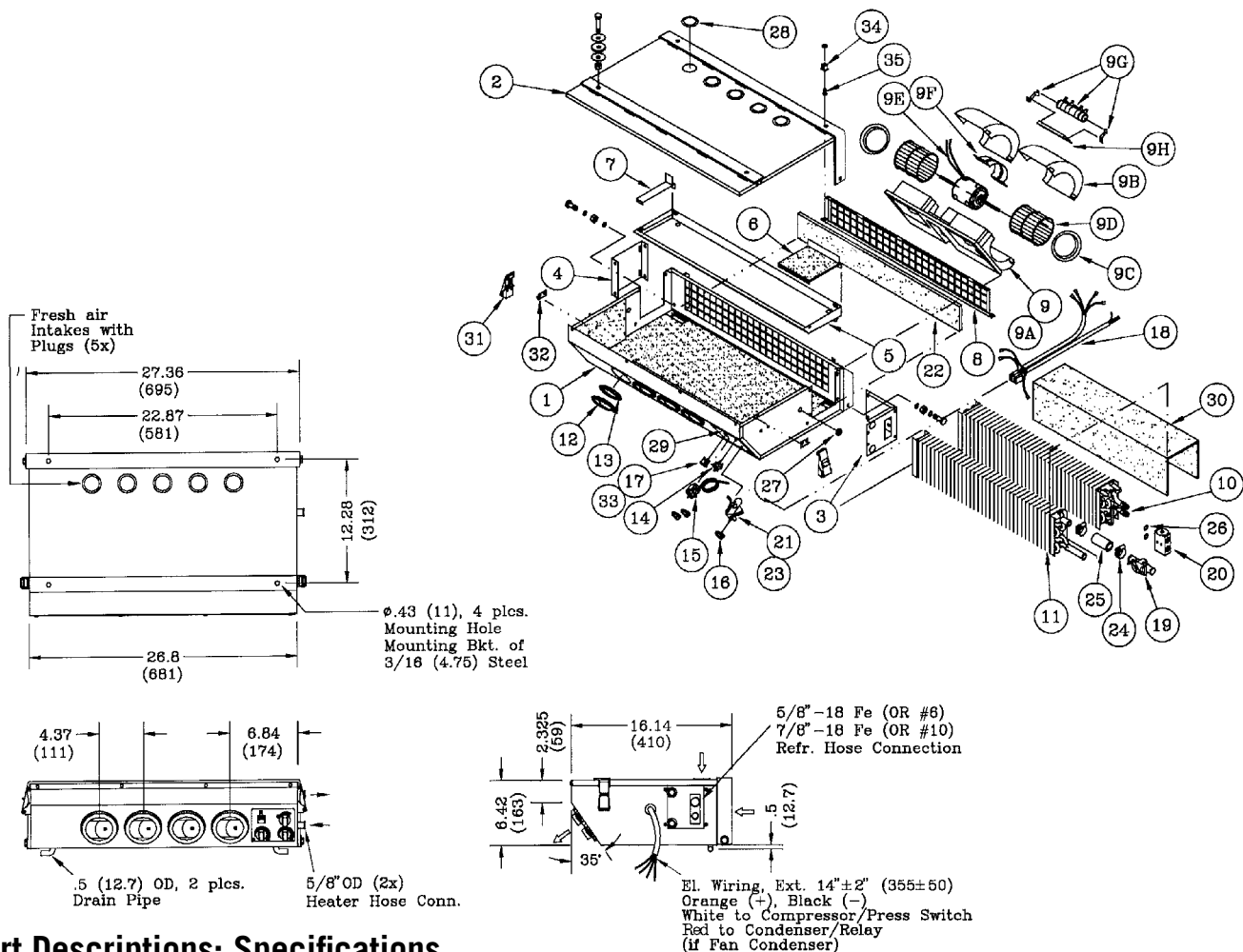
### Part Descriptions: Specifications

Part No.		Specifications		
13-4703	Heater-AC 12V	Heating	-40000 Btu/hr (11720 W)	3-Speed motor. Made of 18GA (1.25mm) Cold Rolled Steel and finished in black textured epoxy powder coat. * Only for Heat/AC version. Heater and Evaporator Coil can be changed to have opposite connections.
13-4704	Heater-AC 24V	Cooling	-21000 Btu/hr (6150 W)	
13-4723	Air Conditioner 12V	Air Flow	-450 CFM (765 m <sup>3</sup> /h)	
13-4724	Air Conditioner 24V	Current	-23 Amps/13.5V	
13-4795	Heater Conv. Kit		-11.5 Amps/27V	
		Weight	-49 lbs. (22.2 kg)	

### Features

The 347 is a larger capacity version of the 346. The coils can be flipped to either side of the unit to accommodate different installations. Outside air is available. This high capacity unit will handle most off-road cabs.

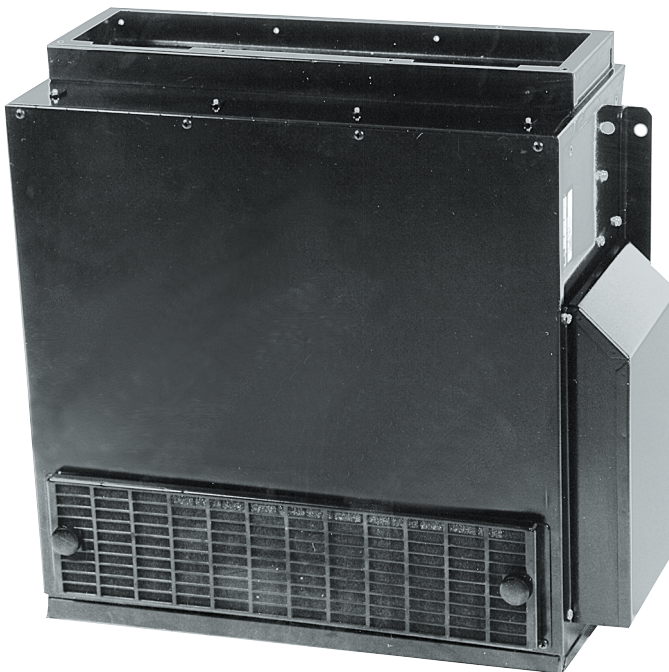
## Dimension Profiles



## Part Descriptions: Specifications

No.	Part No.	Description	No.	Part No.	Description	No.	Part No.	Description
1	24-2215	Casing Assy.	9F	25-0271	Motor Mount	21	26-0350*	Rotary Control
2	24-2216	Cover Assy.	9G	25-0601	Resistor 12V	22	26-0376	Air Filter
3	24-1956	Coil Bracket		25-0602	Resistor 24V	23	26-0377*	Bowden Cable
4	24-1957	Coil Bracket	9H	29-0130	Resistor Bracket	24	27-0059*	Gear Clamp
5	24-1958	Drain Pan	10	21-0313	Evaporator Coil	25	27-0225*	Heater Hose
6	24-2228	Coil Support Assy.	11	22-0290*	Heater Coil	26	27-0602	5/8" (HD)
7	24-1960	Coil Support	12	23-0005	Louver	27	28-0004	O-Ring #8
8	24-1961	Filter Holder	13	23-0048	Adapter	28	28-0012	Grommet
9	15-1561	Blower 12V	14	25-0044	Blower Switch	29	28-0172	Snap-in Plug
	15-1562	Blower 24V	15	25-0118	Thermostat	30	28-0187	Overlay
9A	25-0048	Blower Housing	16	25-0435	Knob		28-0189*	Reticulated Foam
9B	25-0348	Housing Top	17	25-0631	Switch Push 12V	31	29-0221	Reticulated Foam
9C	25-0060	Venturi		25-0632	Switch Push 24V	32	29-0222	Latch
9D	25-0200	Blower Wheel	18	25-0638	Wiring Harness	33	29-0075	Latch Hook
9E	25-0655	Motor 12V	19	26-0025*	Heater Valve	34	29-0076	Receptacle
	25-0660	Motor 24V	20	26-0190	Block Valve		29-0077	Stud, Oval Slotted Retainer

## Heater-Air Conditioner **Model 353**



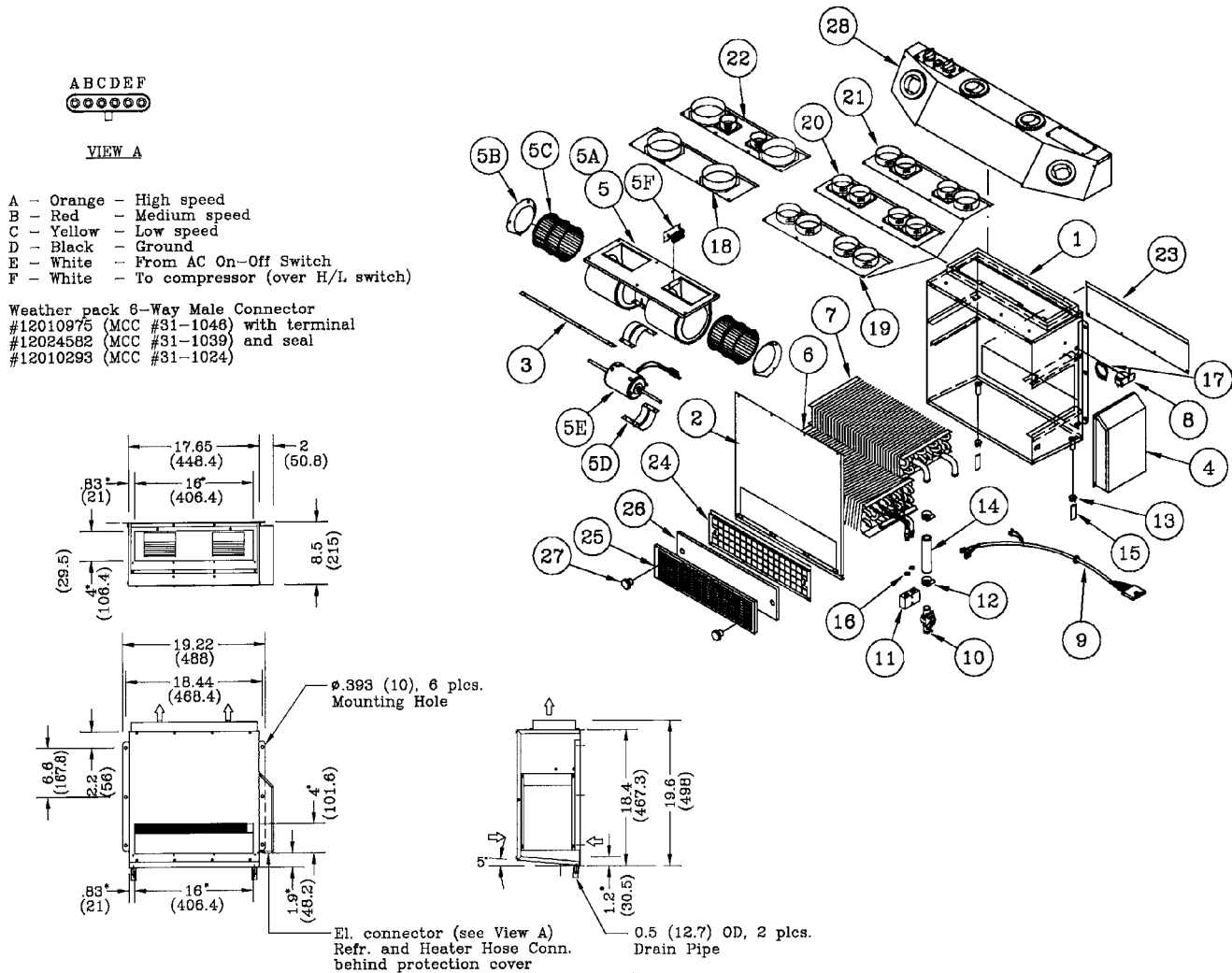
### Part Descriptions: Specifications

Part No.		Specifications		
13-5303	Heater-AC 12V	Heating	-46000 Btu/hr (13480 W)	Made of 18GA (1.25mm) Cold Rolled Steel and finished in black epoxy powder coat. Dim. marked (*) are inlet and outlet openings. <b>Items 18 to 28 are optional and have to be ordered separately.</b>
13-5304	Heater-AC 24Vt	Cooling	-34000 Btu/hr (9970 W)	
		Air Flow	-450 CFM (765 m³/h)	
		Current	-10.2 Amps/27V -20.4 Amps/13.5V	
		Weight	-44 lbs. (22 kg)	

### Features

The 353 was designed for log loader applications in Western North America. It is available in many different hose adapter options. It also has a 32" cover option for cab wall mount applications.

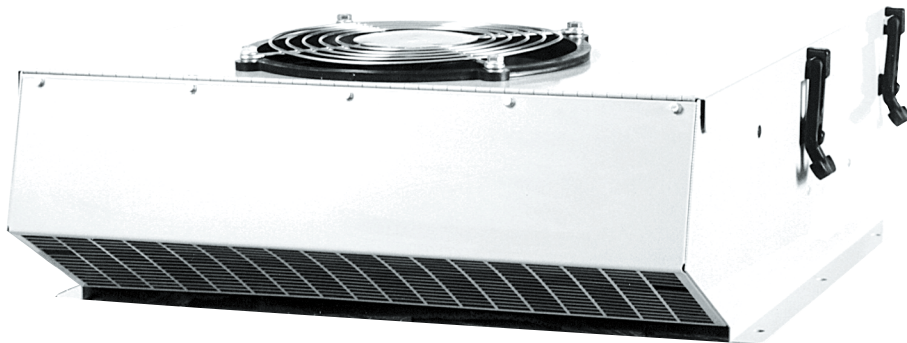
## Dimension Profiles



## Part Descriptions: Specifications

No.	Part No.	Description	No.	Part No.	Description	No.	Part No.	Description
1	24-2204	Casing	6	21-0337	Evaporator Coil	18	23-0160	HA Plate (2x4")
2	24-2205	Cover	7	22-0299	Heater Coil	19	23-0161	HA Plate (4x3")
3	24-2206	Blower Mount	8	25-0069	Thermostat	20	23-0162	HA Plate (4x2 1/2")
4	24-2207	Protection Cover	9	25-0661	Wiring Harness	21	23-0165	HA Plate (2x3"/2x2
5	15-2033	Blower 12V	10	26-0025	Heater Control Valve	22	23-0167	1/2")
	15-2034	Blower 24V	11	26-0190	Block Valve	23	24-1436	HA Plate (2x4"/2x2")
5A	25-0159	Blower Housing	12	27-0059	Gear Clamp	24	24-2212	Cover Plate
5B	25-0164	Venturi	13	27-0091	Drain Hose Clamp	25	24-1524	Grill Support
5C	25-0047	Blower Wheel	14	27-0225	Heater Hose	26	26-0412	Grill
5D	24-0234	Motor Mount	15	27-0421	Drain Valve	27	26-0263	Air Filter
5E	25-0265	Motor 12V	16	27-0602	O-Ring #8	28	13-5391	Knurled Knob
	25-0270	Motor 24V	17	28-0031	PVC Hose		13-5392	Plenum 12V
5F	25-0136	Resistor 12V						Plenum 24V
	25-0552	Resistor 24V						

# Heater-Air Conditioner **Model 360**



## Part Descriptions: Specifications

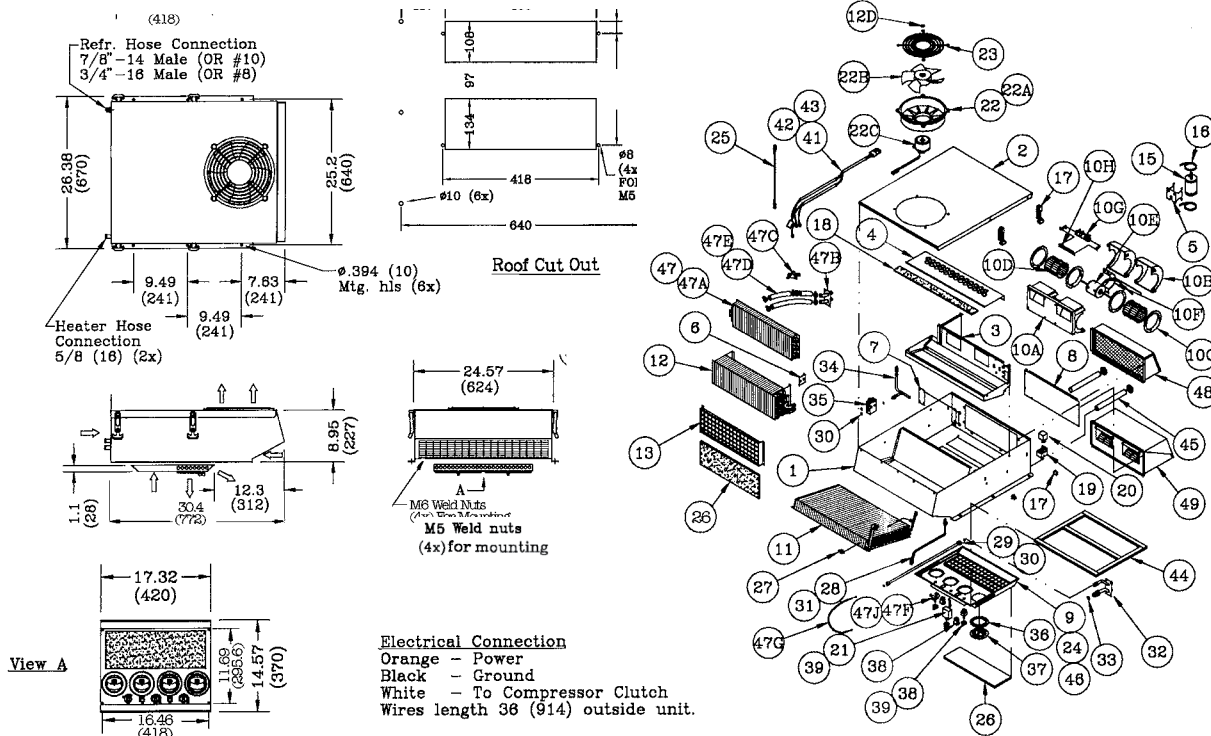
Part No.		Specifications		
13-6023	Air Conditioner 12V	Heating	-46000 Btu/hr (13500 W)	Made of 14 (1.5mm) and 16 (1.5mm) GA Cold Rolled Steel and finished in grey semi-gloss epoxy powder coat. <b>Items 47 to 49 are optional and have to be ordered separately.</b>
13-6024	Air Conditioner 24V	Cooling	-27000 Btu/hr (7900 W)	
13-6095	Heater Conv. Kit	Air Flow	-400 CFM (680 m³/h)	
		Current	-40 Amps/12V -20 Amps/24V	
		Weight	-77 lbs. (35 kg)	

## Features

The 360 was designed to offer a variety of installation options. It can be set up with an outside air or positive fan pressurizer. It is also available with heat. A water and corrosion resistant condenser ensures years of service. Four nylon latches allow easy service access.



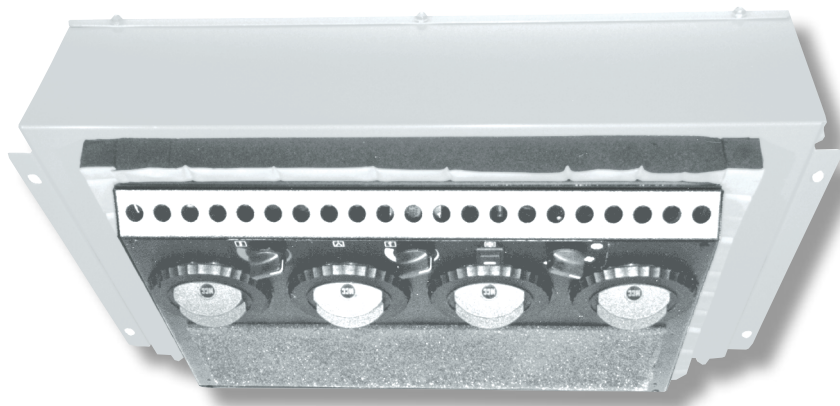
## Dimension Profiles



## Part Descriptions: Specifications

No.	Part No.	Description	No.	Part No.	Description	No.	Part No.	Description
1	24-2219	Casing Assy.	17	29-0236	Draw Latch Assy.	37	23-0005	Louver
2	24-2208	Cover Assy.	18	28-0242	Foam	38	25-0044	Blower Switch
3	24-2221	Drain Plate	19	25-0221	Socket Relay	39	25-0435	Knob
4	24-2270	Coil Support	20	25-0251	Relay 12V	40	25-0631	Switch Push 12V
5	24-2429	R.D. Bracket		25-0219	Relay 24V		25-0632	Switch Push 24V
6	24-2428	Bracket	21	25-0118	Thermostat	41	25-0693	Wiring Harness
7	24-2505	Plate	22	15-7501	Fan Assy. 12V	42	25-0689	Fuse 40A/12V (Blower)
8	24-2226	Cover Plate		15-7502	Fan Assy. 24V		25-0686	Fuse 20A/24V (Blower)
9	24-2430	Air Plenum	22A	25-0577	Venturi	43	25-0688	Fuse 30A/12V (Fan)
10	15-1561	Blower 12V	22B	25-0579	Fan		25-0685	Fuse 15A/24V (Fan)
	15-1562	Blower 24V	22C	25-0591	Motor 12V	44	28-0225	Gasket
10A	25-0048	Blower Housing		25-0592	Motor 24V	45	27-0030	Drain Hose
10B	25-0348	Housing Top	22D	29-0167	"C" Clip		27-0091	Drain Hose Clip
10C	25-0060	Venturi	23	23-0148	Finger Guard	46	28-0248	Overlay
10D	25-0200	Blower Wheel	24	28-0221	EPDM Seal	47	13-6095	Heater Conv. Kit
10E	25-0655	Motor 12V	25	29-0235	Cable Assy.	47A	22-0301	Heater Coil
	25-0660	Motor 24V	26	28-0244	Air Filter	47B	34-0267	Copper Tube Assy.
10F	25-0130	Motor Mount	27	25-0343	Pressure Switch	47C	26-0074	Heater Valve
10G	25-0601	Resistor 12V	28	34-0397	Copper Tube 3/8"	47D	27-0225	Heater Hose 5/8"
	25-0602	Resistor 24V	29	34-0398	Copper Tube 1/2"	47E	27-0059	Gear Clamp
10H	29-0130	Resistor Bracket	30	27-0602	O-Ring #8	47F	26-0345	Rotary Control
11	21-0341	Condenser Coil	31	27-0601	O-Ring #6	47G	26-0441	Bowden Cable
12	21-0339	Evaporator Coil	32	34-0261	Copper Tube Assy.	47J	25-0435	Knob
13	24-2433	Filter Support	33	27-0603	O-Ring #10	48	16-0200	Filter Unit
14	28-0243	Reticulated Foam	34	34-0364	Copper Tube 3/8"	49	16-0303	Filter Kit 12V
15	26-0018	Receiver Drier	35	26-0190	Block Valve		16-0304	Filter Kit 24V
16	27-1121	Gear Clamp 4"	36	23-0048	Adapter			

# Heater-Air Conditioner **Model 369**



## Part Descriptions: Specifications

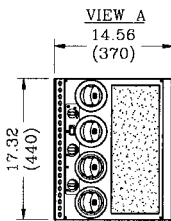
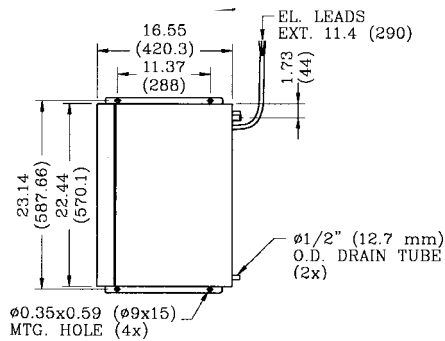
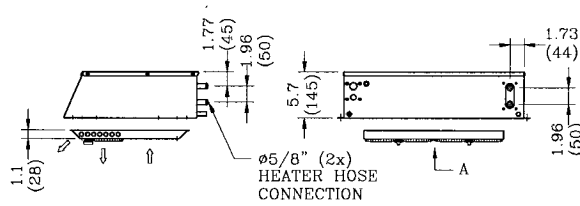
Part No.		Specifications		
13-6903	Combo Unit 12V	Heating	-28000 Btu/hr (8200 W)	Casing made of 18GA (1.25mm) Cold Rolled Steel and finished in grey epoxy powder coat.
13-6904	Combo Unit 24V	Cooling	-20000 Btu/hr (5860 W)	
		Air Flow	-275 CFM (468 m³/h)	
		Current	-12 Amps/12V -6 Amps/24V	
		Weight	-30.9 lbs. (14 kg)	

## Features

The 369 is a low profile roof mount heater-air conditioner.

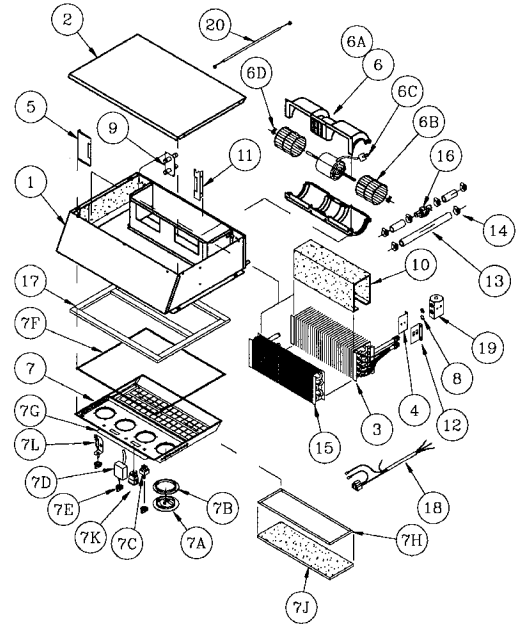


## Dimension Profiles



### EL. CONNECTIONS

ORANGE - POWER (+)  
BLACK - GROUND (-)  
WHITE - TO PRESSURE SWITCH/COMPRESSOR  
BLUE - TO CONDENSER/RELAY (IF FAN COND.)



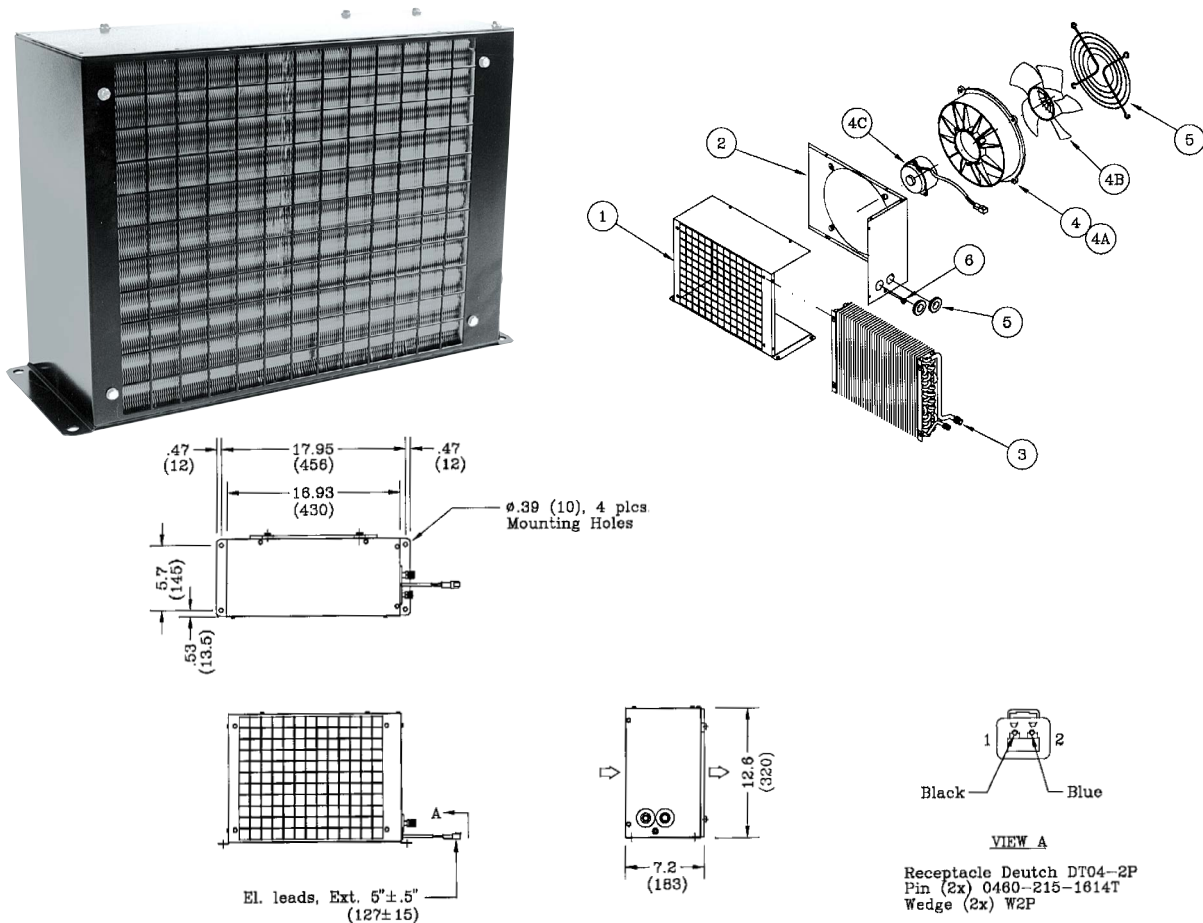
## Part Descriptions: Specifications

No.	Part No.	Description	No.	Part No.	Description	No.	Part No.	Description
1	24-2842	Casing Assembly	7b	23-0048	Adapter	11	24-2722	Coil Support Bracket
2	24-2843	Cover Assembly	7c	25-0044	Blower Switch	12	24-2719	Valve Mtg. Bracket (R)
3	21-0399	Evaporator Coil	7d	25-0118	Thermostat	13	27-0225	Heater Hose
4	24-2718	Valve mtg. brkt (L)	7e	25-0435	Knob			(2x70mm&180mm)
5	24-2721	Coil Support (Long)	7f	28-0161	EPDM Seal (10mm)	14	27-0059	Gear Clamp
6	15-0533	Blower 12V	7g	28-0248	Overlay	15	22-0376	Heater Coil
6	15-0534	Blower 24V	7h	28-0166	Hook Tape	16	26-0025	Heater Valve
6a	25-0017	Blower Housing	7j	28-0244	Air Filter	17	28-0225	Gasket
6b	25-0021	Blower Wheel	7k	25-1106	Rocker Switch (G) 24V	18	25-0737	Wiring Harness
6c	25-0644	Motor 24V	7k	25-1105	Rocker Switch (G) 12V	19	26-0190	Block Valve
6c	25-0643	Motor 12V	7L	26-0350	Rotary Control w/nut	20	26-0590	Bowden Cable
6d	25-0022	Clip	8	27-0602	O-Ring #8			
7	26-0584	Air Plenum Assy. 24V	9	34-0560	Copper Tube Assy.			
7	26-0583	Air Plenum Assy. 12V	10	28-0230	Reticulated Foam			
7a	23-0005	Louver						



# V. Compact Condensers

## Electric Condenser **Model 402**



### Part Descriptions: Specifications

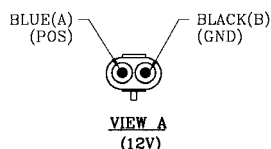
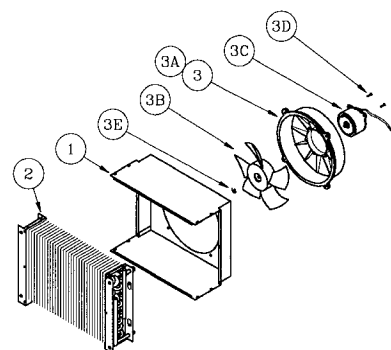
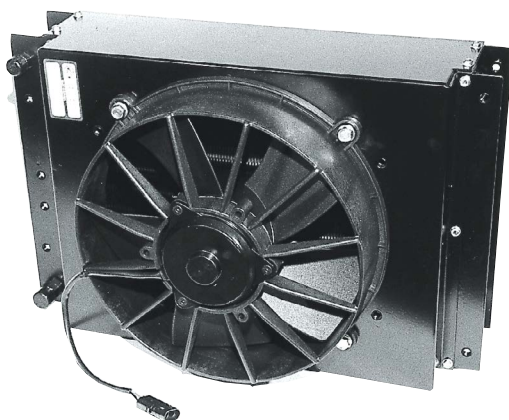
Part No.		No.	Part No.	Description	No.	Part No.	Description
14-0201	Condenser 12V	1	24-1591	Casing	4B	25-0579	Fan
14-0202	Condenser 24V	2	24-1592	Cover	4C	25-0621	Motor Assy. 12V
<b>Specifications</b>		3	21-0278	Condenser Coil		25-0622	Motor Assy. 24V
	Capacity	4	15-7511	Fan Assy. 12V	5	28-0005	Grommet
	-to support a cooling capacity of 26500 Btu/hr (7770 W)		15-7512	Fan Assy. 24V	6	28-0014	Grommet
Air Flow	-1025 CFM (1735 m <sup>3</sup> /h)	4A	25-0577	Venturi	7	23-0148	Finger Guard
Current	-21.2 Amps/13.5V						
	-10.6 Amps/27V						
Weight	-24 lbs. (11 kg)						
Casing made of 14/18GA (2/1.25mm) Cold Rolled Steel finished in black semi-gloss epoxy powder coat.							

Electric condensers are used when radiator mounted types cannot be installed. The reasons being insufficient air flow and/or when additional heat load over the engine cannot be tolerated. Condensing capacity will remain constant and will not be dependent on engine RPM.

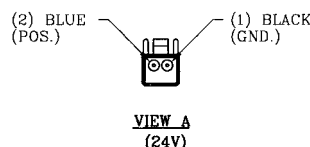
### Features

The 402 is an excellent light duty application condenser. It provides the option of deck or roof mounting.

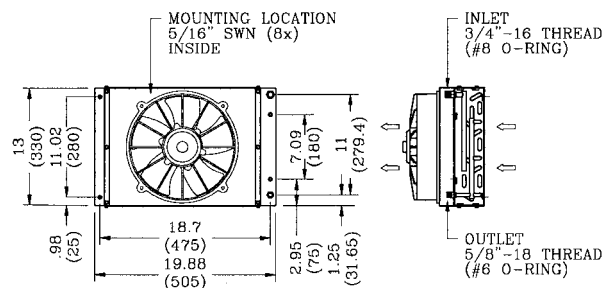
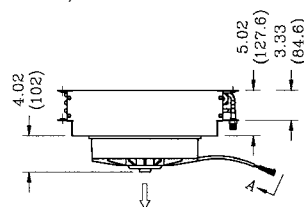
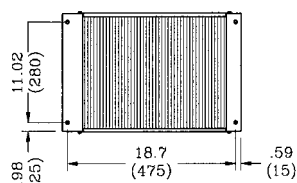
## Electric Condenser **Model 403**



**Electrical Connections**  
2-way male weather pack connector, packard #12010973 (MCC #31-1068) with male terminal #12124582-L (2x) (MCC #31-1039) and seal #12010293 (2X) (MCC #31-1024)



**Electrical Connections**  
2-way deutsch plug DT06 - 2S (MCC #31-1123) with #W2S wedge (MCC #31-1124) and 2 contacts 14/16Ga #0462-209-1614 (MCC #31-1125)



### Part Descriptions: Specifications

Part No.		No.	Part No.	Description	No.	Part No.	Description
14-0301	Condenser 12V	1	24-2514	Casing		25-0778	Motor 24V
14-0302	Condenser 24V	2	21-0412	Condenser Coil	3C	25-0591	Motor 12V
Specifications		3	15-7604	Fan Assembly 24V	3D	29-0166	#10-32 Hex. Socket
		3	15-7601	Fan assembly 12V	3E	29-0197	"C" Clip
Capacity	-To support a cooling capacity of 29700 Btu/hr (8700 W)	3A	25-0577	Venturi			
		3B	25-0728	Fan			

Capacity -To support a cooling capacity of 29700 Btu/hr (8700 W)  
Airflow -1150 CFM (1950 m<sup>3</sup>/h)  
Current -19.2 Amps (at 13.5V)  
-9 amps (at 27V)  
Weight -28.7 lbs (13kg)

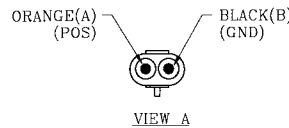
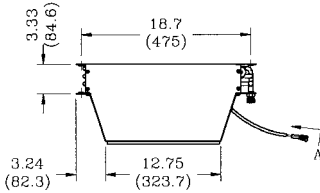
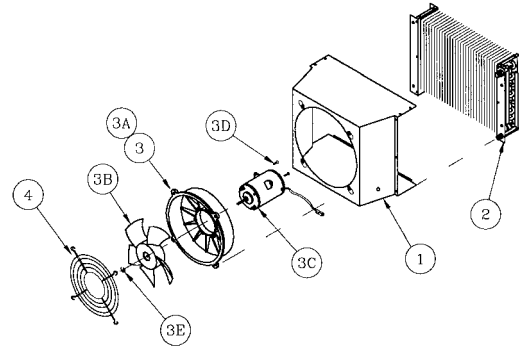
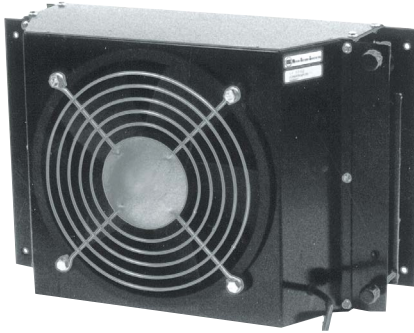
Note: Casing made of 16GA satin coat steel, endplates made of 14GA satin coat steel and both finished in black semi gloss epoxy powder coat.

### Features

The 403 is a compact high performance condenser.

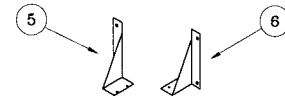
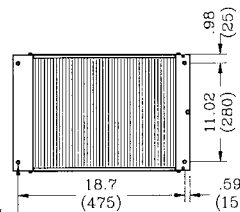
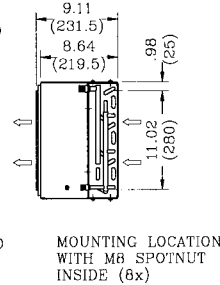
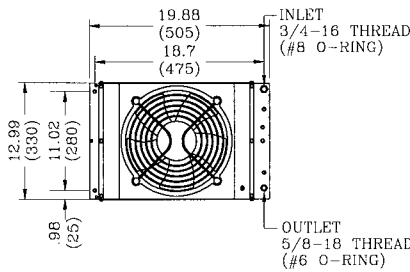
Electrical condensers are used when radiator mounted types cannot be installed. The reasons being insufficient air flow and /or when additional heat load over the engine cannot be tolerated. Condensing capacity will remain constant and will not be dependent on engine RPM.

## Electric Condenser **Model 405**



### Electrical Connections:

2-way male weather pack connector ,  
packard #12010973 (MCC #31-1068)  
with male terminal #12124582-L(2x)  
(MCC #31-1039) and seal #12010293  
(2x) (MCC #31-1024)



## Part Descriptions: Specifications

Part No.	
14-0513	Condenser 12V
14-0514	Condenser 24V
<b>Specifications</b>	
Capacity	-to support a cooling capacity of 29650 Btu/hr (8700 W)
Air Flow	-1150 CFM (1950 m³/h)
Current	-17 Amps (1.35V)
Weight	-8.5 Amps at (27V) -28.5 lbs. (13 kg)

No.	Part No.	Description
1	24-2892	Casing
2	21-0412	Condenser Coil
3	15-7551	Fan Assy. 12V
3A	15-7552	Fan Assy. 24V
	25-0577	Venturi
3B	25-0579	Fan

No.	Part No.	Description
3C	25-0745	Motor 12V
	25-0746	Motor 24V
3D	29-0166	#10 -32 HEX. Socket CTR.Sunk
3E	29-0167	"C" clip
4	23-0148	Finger Guard
5	24-3639	Bracket, Left (Opt.)
6	24-3640	Bracket, Right (Opt.)

**Items 5 and 6 have to be ordered separately.**

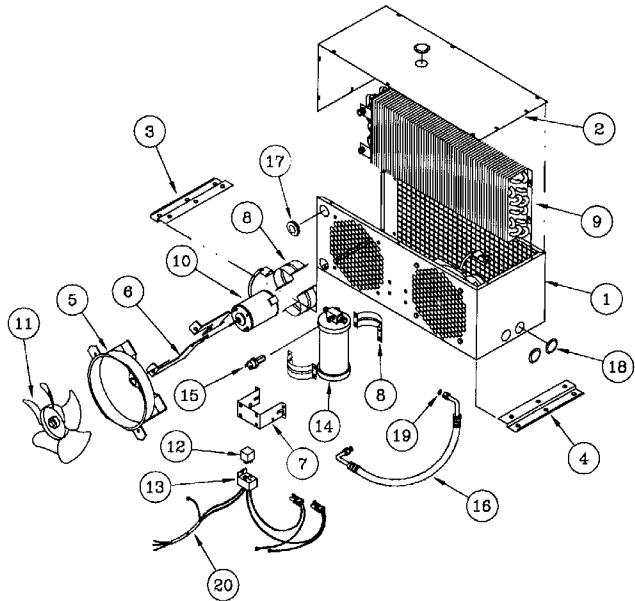
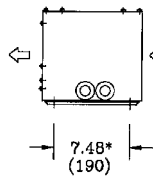
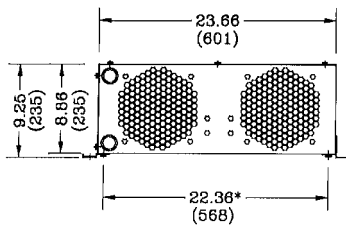
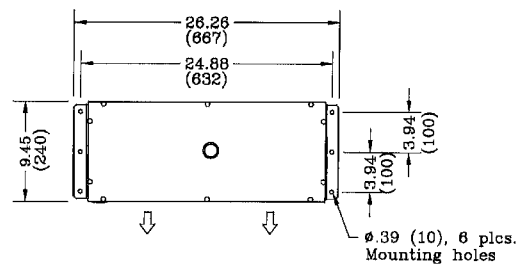
Casing made of 16GA (1.5mm) Satin Coat Steel.  
Endplates made of 14GA (2mm) Satin Coat Steel. Both are finished in black semi-gloss epoxy powder coat.

Electric condensers are used when radiator mounted types cannot be installed. The reasons being insufficient air flow and /or when additional heat load over the engine cannot be tolerated. Condensing capacity will remain constant and will not be dependent on engine RPM.

## Features

The 405 is a compact, high capacity unit. Its compact design allows for wall or flush mounting applications in engine compartments. A motor with longer life than in the 403 is used in this condenser which makes it slightly deeper.

## Electric Condenser **Model 406**



**Note**  
El. Wiring and Refr. Hose  
to be connected inside casing

**Wiring**  
Orange(+), Black(-)  
Blue (from On-Off AC)

**Refrigerant**  
Inlet-3/4"-18 Male (# 8 O-Ring)  
Outlet-5/8"-18 Male (#6 O-Ring)

(\*) - Dimensions of  
Mounting Hole (M8 Thd)

### Part Descriptions: Specifications

Part No.		No.	Part No.	Description	No.	Part No.	Description
14-0611	Condenser 12V	1	24-0145	Casing	11	25-0251	Relay 12V
14-0612	Condenser 24V	2	24-0159	Cover		25-0219	Relay 24V
<b>Specifications</b>		3	24-1993	Mounting Bracket (L)	12	25-0221	Socket, Relay
Capacity	-to support a cooling capacity of 23600 Btu/hr (6925 W)	4	24-1998	Mounting Bracket (R)	13	26-0220	Receiver Drier
Air Flow	-950 CFM (560 m <sup>3</sup> /h)	5	25-0309	Venturi Assy.	14	25-0343	Pressure Switch
Current	-14 Amps/13.5V	6	25-0434	Motor Support	15	27-0288	Refr. Hose Assy. #6
	-7 Amps /27V	7	24-0343	Receiver Drier Bracket	16	28-0005	Grommet
Weight	-30 lbs. (13.6 kg)	8	24-0234	Mount	17	28-0013	Snap-in Plug
		9	21-0122	Condenser Coil	18	27-0601	O-Ring #6
			25-0470	Motor 12V	19	25-0451	Wiring Harness
		10	25-0490	Motor 24V			

Casing made of 16GA (1.5mm) and mounting brackets of 14GA (2mm) Cold Rolled Steel finished in black semi-gloss epoxy powder coat.

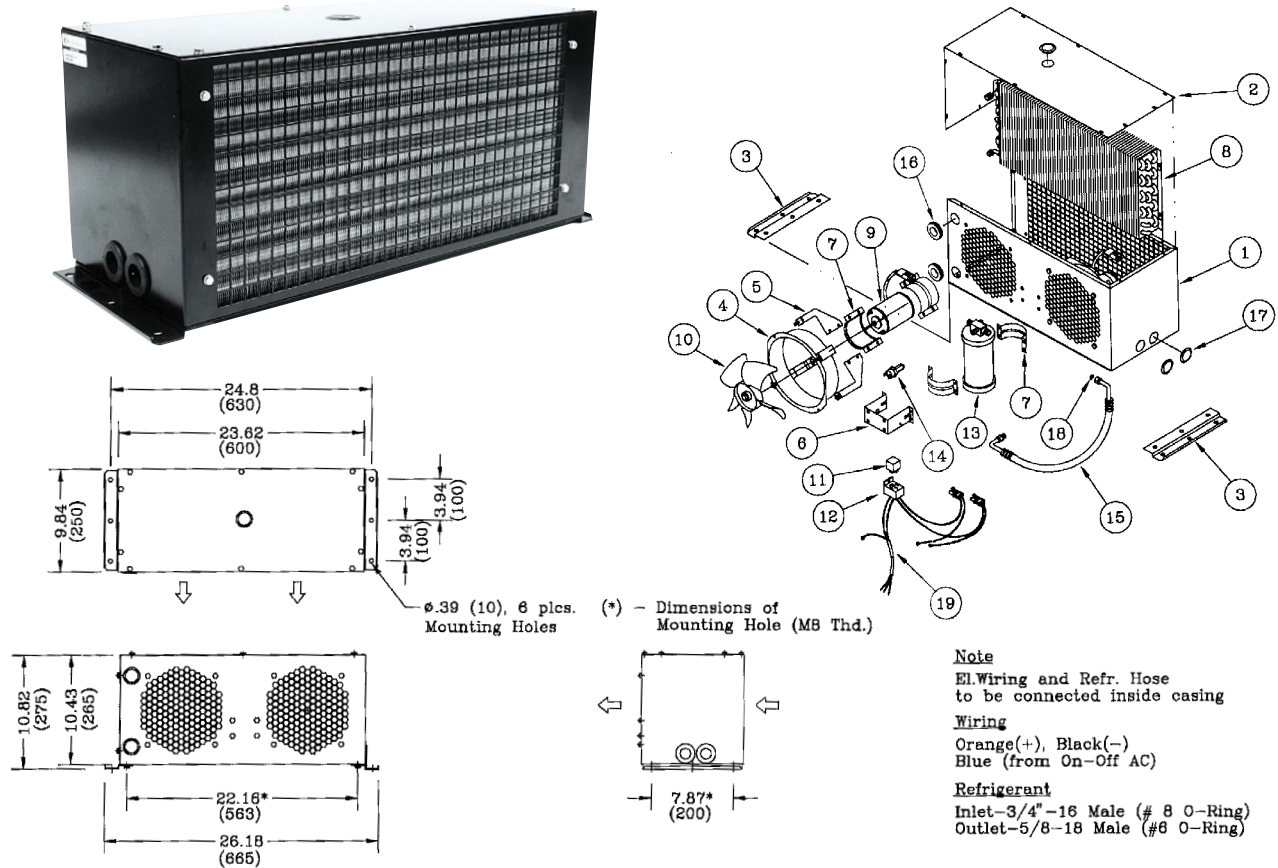
Electric condensers are used when radiator mounted types cannot be installed. The reasons being insufficient air flow and /or when additional heat load over the engine cannot be tolerated. Condensing capacity will remain constant and will not be dependent on engine RPM.

### Features

The 406 is a deck or roof mount condenser that has the receiver/drier mounted internally. The hose can exit either side of the 406. Condenser must be mounted as shown in picture.



## Electric Condenser **Model 407**



### Part Descriptions: Specifications

Part No.		No.	Part No.	Description	No.	Part No.	Description
14-0701	Condenser 12V	1	24-1199	Casing	11	25-0108	Fan
14-0702	Condenser 24V	2	24-1200	Cover	12	25-0251	Relay 12V
<b>Specifications</b>		3	24-1984	Mounting Bracket		25-0219	Relay 24V
Capacity	-to support a cooling capacity of 29000 Btu/hr (8500 W)	4	25-0388	Venturi	13	25-0221	Socket, Relay
Air Flow	-1100 CFM (1870 m³/h)	5	25-0434	Motor Support	14	26-0220	Receiver Drier
Current	-14 Amps/13.5V	6	24-0343	Receiver Drier Bracket	15	25-0343	Pressure Switch
	-7 Amps /27V	7	24-0234	Mount	16	27-0288	Refr. Hose Assy. #6
Weight	-33 lbs. (15 kg)	8	21-0203	Condenser Coil	17	28-0005	Grommet
		9	25-0470	Motor 12V	18	28-0013	Snap-in Plug
			25-0490	Motor 24V	19	27-0601	O-Ring #6
		10	25-0181	Fan	20	25-0451	Wiring Harness

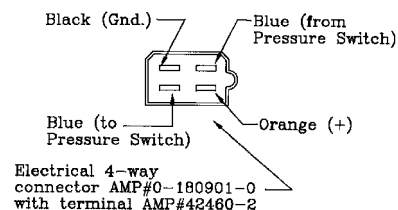
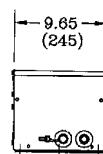
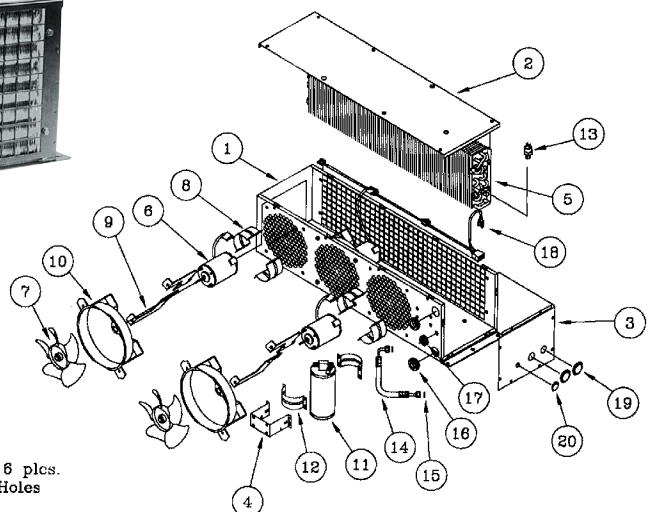
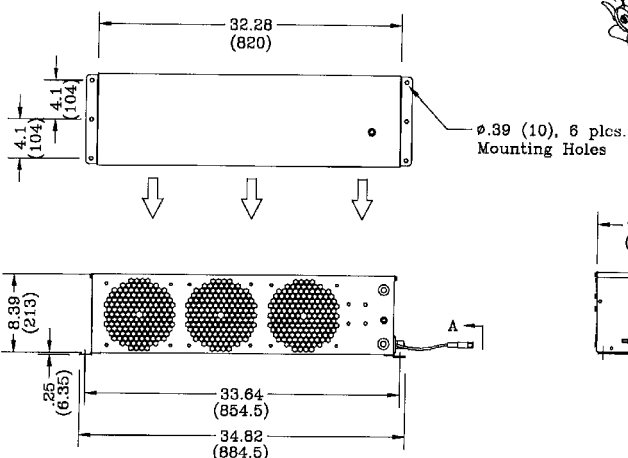
Casing made of 16GA (1.5mm) and mounting brackets of 14GA (2mm) Cold Rolled Steel finished in black semi-gloss epoxy powder coat.

Electric condensers are used when radiator mounted types cannot be installed. The reasons being insufficient air flow and /or when additional heat load over the engine cannot be tolerated. Condensing capacity will remain constant and will not be dependent on engine RPM.

### Features

The 407 is a larger capacity version of the 406. With the receiver/drier mounted internally, installation time is minimized. Condenser must be mounted as shown in picture.

## Electric Condenser **Model 408**



View A

### Part Descriptions: Specifications

Part No.		No.	Part No.	Description	No.	Part No.	Description
14-0851	Condenser 12V	1	24-0964	Casing	11	26-0219	Receiver Drier
14-0852	Condenser 24V	2	24-0965	Cover	12	25-0297	Mount
<b>Specifications</b>		3	24-0966	Side Cover	13	25-0308	Pressure Switch
Capacity	-to support a cooling capacity of 29000 Btu/hr (8500 W)	4	24-0967	Receiver Drier Bracket	14	27-0373	Refrigerant Hose #6
		5	21-0166	Condenser Coil	15	27-0601	O-Ring #6
		6	25-0185	Motor 12V	16	28-0005	Grommet
Air Flow	-1050 CFM (1785 m³/h)	7	25-0190	Motor 24V	17	28-0004	Grommet
Current	-20 Amps/13.5V		25-0108	Fan C.C.W.	18	25-0450	Wiring Harness
	-10 Amps/27V	8	24-0234	Motor Mount	19	28-0013	Snap-in Plug
Weight	-47 lbs. (21.3 kg)	9	25-0434	Motor Support	20	28-0011	Snap-in Plug
Casing made of 16GA (1.5mm) and mount		10	25-0309	Venturi Assy.			

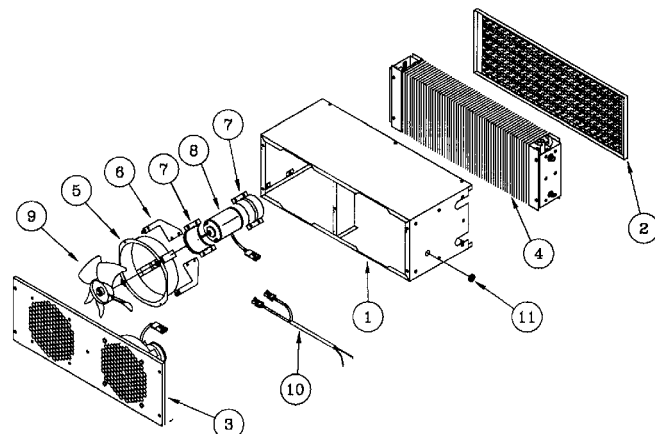
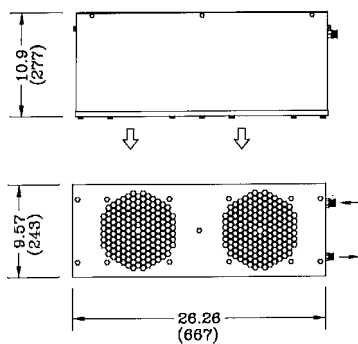
Electric condensers are used when radiator mounted types cannot be installed. The reasons being insufficient air flow and /or when additional heat load over the engine cannot be tolerated. Condensing capacity will remain constant and will not be dependent on engine RPM.

### Features

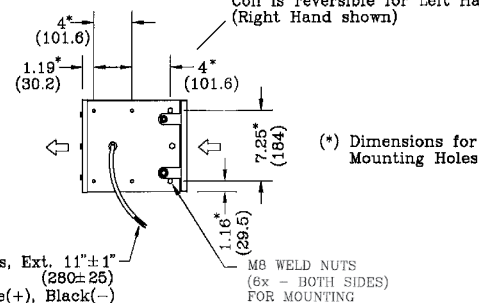
The 408 was designed for large capacity requirements in the forestry, construction and mining industries. Its three fan design ensures high capacity performance in the most demanding conditions. Receiver/drier mounted internally. Condenser must be mounted as shown in picture.



## Electric Condenser **Model 409**



Inlet 3/4-18 UNF Male (#8 O-Ring)  
Outlet 5/8-18 UNF Male (#6 O-Ring)  
Coil is reversible for Left Hand Conn.  
(Right Hand shown)



El. Leads, Ext. 11"±1"  
(280±25)  
Orange(+), Black(-)

(\*) Dimensions for  
Mounting Holes

### Part Descriptions: Specifications

Part No.		No.	Part No.	Description	No.	Part No.	Description
14-0901	Condenser 12V	1	24-1967	Casing	7	24-0234	Motor Mount
14-0902	Condenser 24V	2	24-1966	Grill	8	25-0181	Fan
<b>Specifications</b>		3	24-1968	Cover	9	25-0470	Motor 12V
Capacity	-to support a cooling capacity of 28500 Btu/hr (8350 W)	4	21-0309	Condenser Coil		25-0490	Motor 24V
Air Flow	-1100 CFM (1870 m³/h)	5	25-0388	Venturi	10	25-0635	Wiring Harness
Current	-14 Amps/13.5V -7 Amps/27V	6	25-0434	Motor Support	11	28-0045	Grommet
Weight	-46 lbs. (21 kg)						

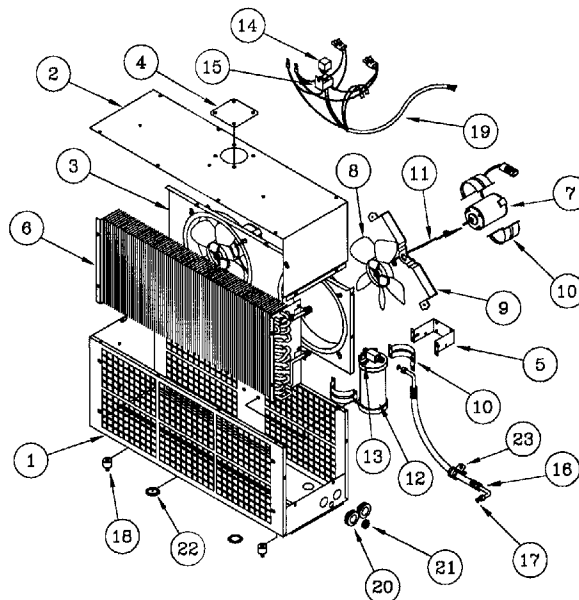
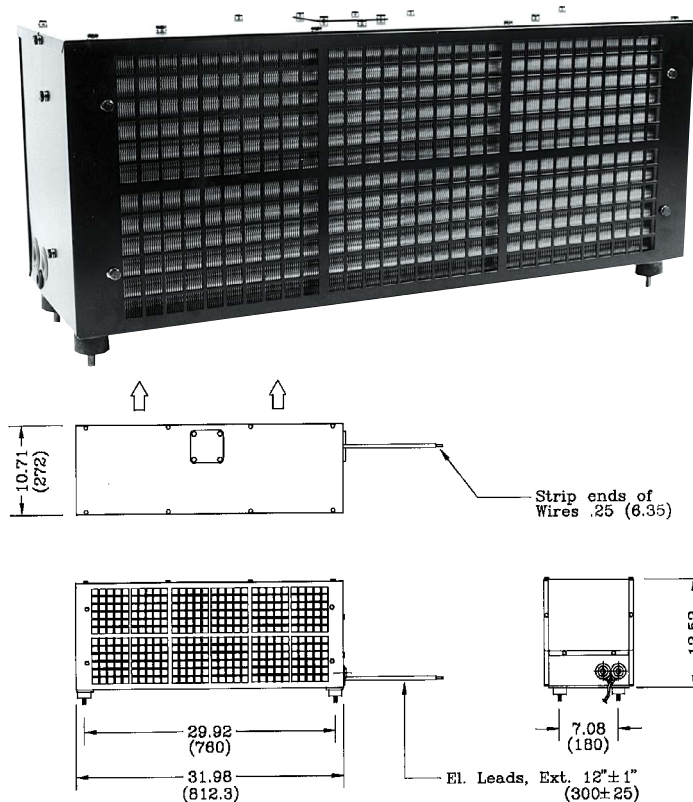
Casing made of 16GA (1.5mm) Cold Rolled Steel finished in black semi-gloss epoxy powder coat.

Electric condensers are used when radiator mounted types cannot be installed. The reasons being insufficient air flow and/or when additional heat overload the engine cannot be tolerated. Condensing capacity will remain constant and will not be dependent on engine RPM.

### Features

The 409 is a universal mount electric condenser. It does not have the receiver/drier mounted internally. This allows for many different installation options. Condenser can be mounted vertically or horizontally.

## Electric Condenser **Model 410**



### Part Descriptions: Specifications

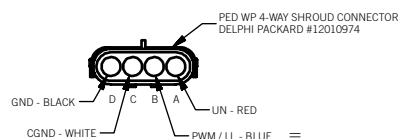
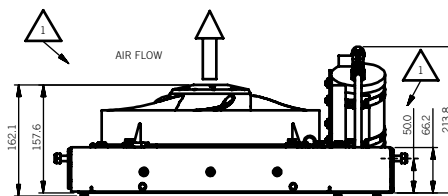
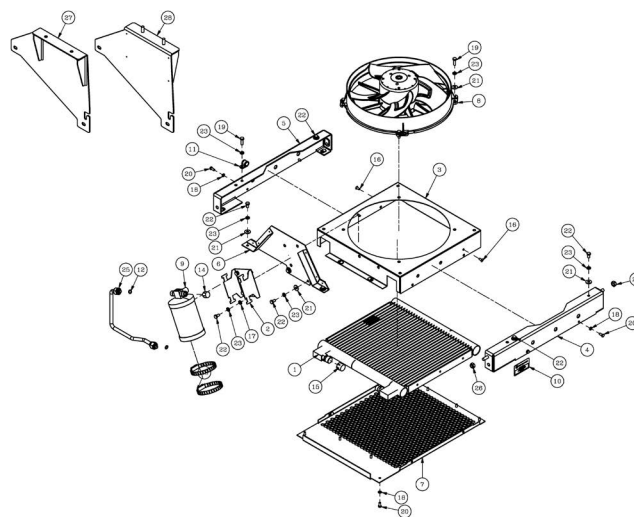
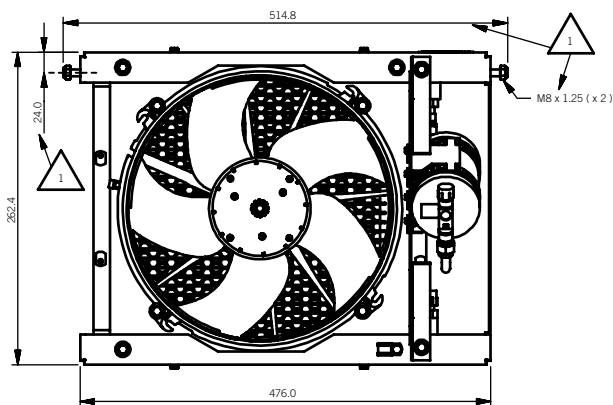
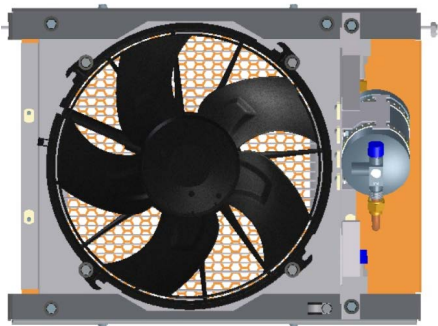
Part No.	No.	Part No.	Description	No.	Part No.	Description
14-1001	1	24-0925	Casing	13	25-0308	Pressure Switch
14-1002	2	24-0926	Cover	14	25-0251	Relay 12V
<b>Specifications</b>	3	24-0927	Fan Mounting Plate		25-0219	Relay 24V
Capacity	4	24-0928	Cover Plate	15	25-0221	Socket
-to support a cooling capacity of 41600 Btu/hr(12200 W)	5	24-0929	Receiver Drier Bracket	16	27-0379	Refrigerant Hose #6
Air Flow	6	21-0188	Condenser Coil	17	27-0601	O-Ring #6
-1900 CFM (3230 m³/h)	7	25-0470	Motor 12V (B.B.)	18	28-0057	Vibration Mount
Current		25-0229	Motor 24V (B.B.)	19	25-0394	Wiring Harness
-24 Amps/13.5V	8	25-0302	Fan	20	28-0045	Grommet
-12 Amps/27V	9	24-0963	Motor Bracket	21	28-0005	Grommet
Weight	10	24-0234	Motor Mount	22	28-0013	Plastic Plug
-65 lbs. (29.5 kg)	11	24-0962	Motor Support	23	27-0012	Hose Clamp #6
Casing made of 16GA (1.5mm) Cold Rolled Steel and finished in black semi-gloss epoxy powder coat.	12	26-0219	Receiver Drier			

Electric condensers are used when radiator mounted types cannot be installed. The reasons being insufficient air flow and /or when additional heat load over the engine cannot be tolerated. Condensing capacity will remain constant and will not be dependent on engine RPM.

### Features

The 410 was designed for high capacity off-road applications. Its large design has flexible hose routing options. The receiver/drier is mounted internally. Condenser must be mounted as shown in picture.

## Electric Condenser **Model 443**



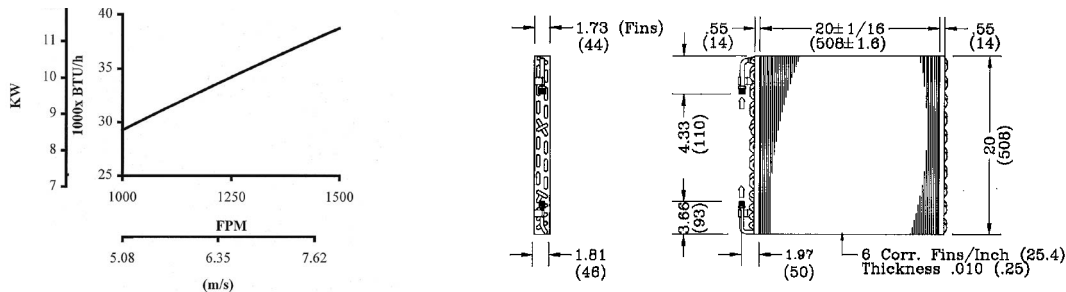
### Part Descriptions: Specifications

Part no.		No.	Part No.	Description	No.	Part No.	Description
14-4302	Condenser 24V	1	21-1855	CONDENSER	11	27-0082	P-Clamp #08
		2	24-12022	Receiver Bracket	12	27-0601	O-Ring #6
		3	24-12040	Condenser Casing	13	27-1211	Gear Clamp 3"
		4	24-12041	Condenser Supp. Back	14	28-0345	Plastic Cap #6
		5	24-12042	Condenser Supporter	15	28-0348	Plastic Cap #8
		6	24-12043	Receiver Support	16	29-0315	Pop Rivet 3/16"x.44"
		7	24-12044	Condenser Cover	17	29-0500	Washer M6 SS
		8	25-3089	Fan EBM 24V	18	29-0514	Washer M5 SS
		9	26-0018	Receiver Drier	19	29-0520	Bolt M6x20 SS
		10	26-1916	MCC Label for 14-4302	20	29-0626	Bolt M5x12 SS
Specifications					21	29-0555	Washer M6 S.S.
Heating	23.000 Btu/hr				22	29-0753	Bolt M6x12 SS
Air flow	1000 CFM				23	29-1252	Lock Washer M6
Current	2.0 AMPS				24	31-1164	Conduit 3/8" L=300mm
Weight	10.7KG				25	34-4810	Copper Tube 3/8"
	(13.8KG with mounting brackets and mtg. fastners)				26	29-1455	M8 LOCKNUT w/NYLON IN

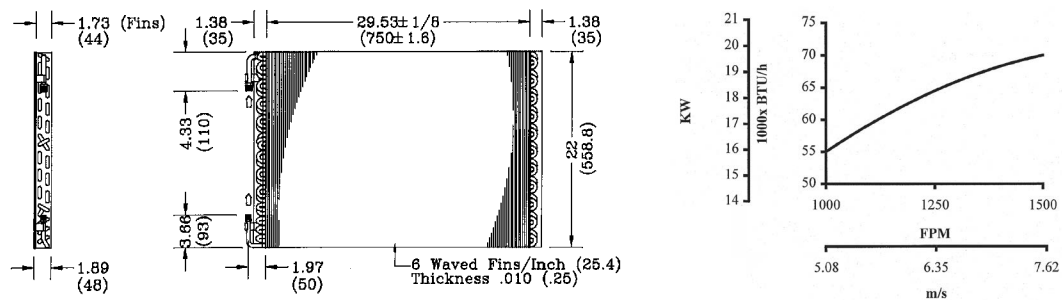
## Condensors Radiator Mount

MCC's heavy duty radiator mounted condensers are the least expensive alternative compared to forced air types. They are manufactured using 0.008-0.010" (0.20mm-0.25mm) thick aluminum fins and copper tubes, with endplates made of 16GA (1.5mm) satin coat steel. Waved or corrugated fins are available, as indicated on the drawings. In addition to the heavy fin thickness, the edges are rippled, increasing the strength further. Low fin density makes cleaning easier and provides less pressure drop. Please keep in mind that the MCC condensers are developed for off-road environments. Condensers are painted black. In and outlet tubes are reinforced with metal brackets where required. All coils are pressure tested to a minimum of 300 psi (2.1 MPa) .

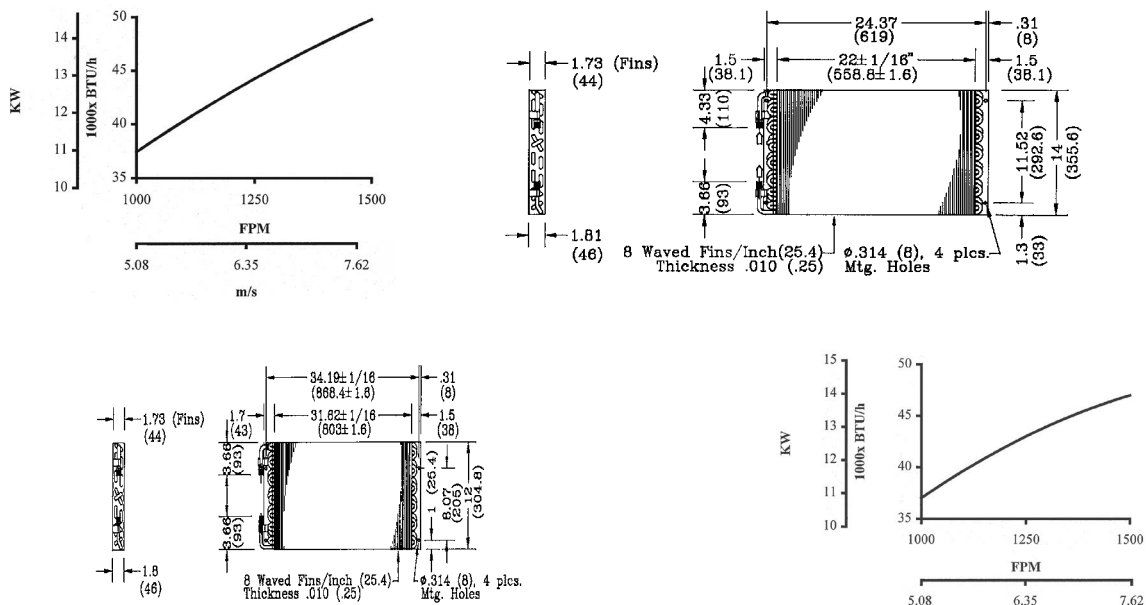
### 21-0089 Condenser



### 21-0176 Condenser



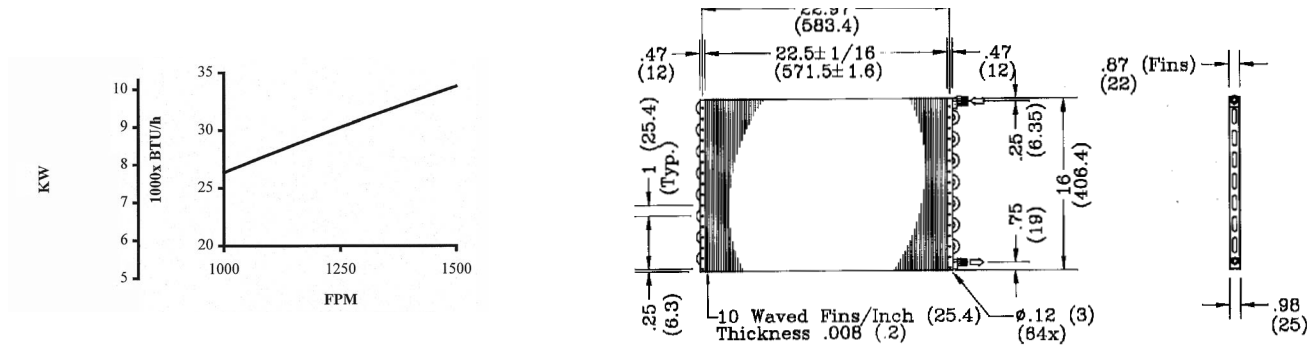
### 21-0320 Condenser



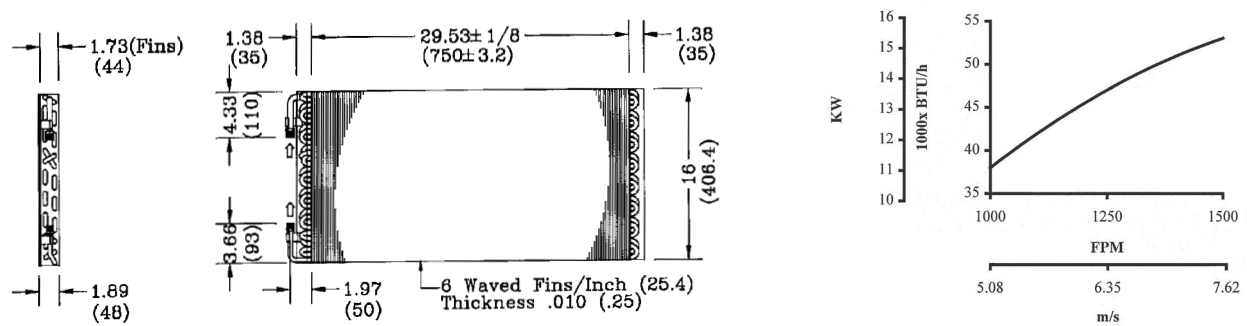
Note: Capacity based on 100°F (38°C) air temp. and 140°F (60°C) condensing temp.  
Inlet -3/4-16 UNF Male (O-Ring #8) Outlet -5/8-18 UNF Male (O-Ring #6)

## Condensors Radiator Mount

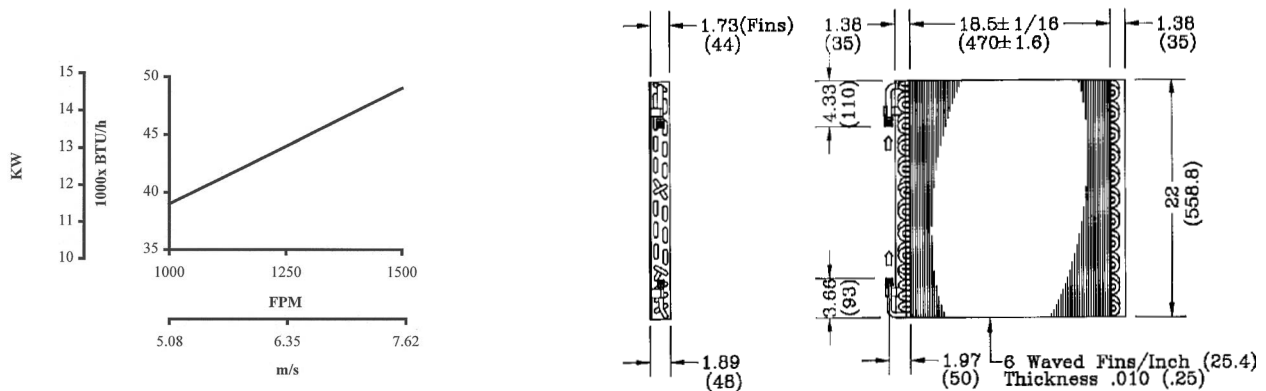
### 21-0020 Condenser



### 21-0322 Condenser



### 21-0324 Condenser



Note: Capacity based on 100°F (38°C) air temp. and 140°F (60°C) condensing temp.  
Inlet -3/4-16 UNF Male (O-Ring #8) Outlet -5/8-18 UNF Male (O-Ring #6)



# VI. Louvers





## Round Louvers



58-62077-00  
3" Round Louver with Louver Ring



23-0045  
Nylon strap up to 3" diameter

Louvers shown have diameters of 3.94" (100 mm) and are manufactured of super tough nylon. The ST801 was specially designed for extreme low temperatures. The louvers must be used with any of the adapters below.



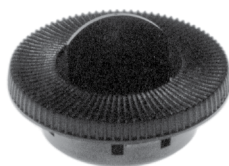
Y23-00002-00  
Louver, 2.5 in fixed vane



58-62077-00  
Louver, air diffuser, round, gen5



23-0005  
Round Louver



23-0171  
Rotates and closes,  
adapter include

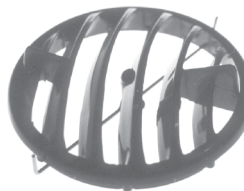


23-0172  
Rotates and closes, hose  
adapter 2" included

Above louvers are manufactured of prime grade ABS. The overall  $\varnothing$  2.75" (70 mm), screw hole  $\varnothing$  2.204" (56 mm) (4x), mounting hole  $\varnothing$  2.10" (53.5mm). Adapter will also accept snap in installation without screws.



23-0100  
Rotates and closes comes with 4" hose  
adapter (ABS) . Four screw holes at  $\varnothing$  4.93"  
(125.2mm)  
Used in the RV and motor home industry.



23-0065  
Non adjustable, mounts in 3"  
(76.2mm) hole.  
Mounting spring included.  
Low cost (ABS) .



## Ball Type Louvers (ABS)



23-0164  
Black ball, hose adapter 2" included  
23-0067  
Black ball, hose adapter 2.5" included



23-0087  
Black ball, adapter included  
23-0097  
Large black ball, adapter included  
mounts in a Ø 3" (76.2mm) hole.



23-0098  
Large black ball, hose adapter Ø 2.5" included  
Louvers 23-0097 and 23-0098 mounts in a Ø 3" (76.2mm) hole.



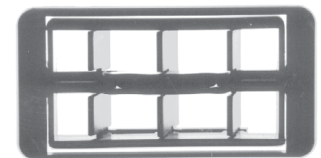
23-0057  
Chrome ball, hose adapter 2.5" included

Louvers  
23-0164, 23-0057, 23-0067, and 23-0087  
Mount in a Ø2.5" (63.5 mm) hole.





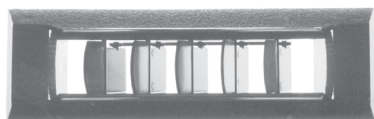
## Rectangular and Square Louvers (closable and adjustable)



23-0042  
3.65" (92.2mm) x 1.88" (47.8mm) , (ABS)  
snaps into hole  
3.41" (86.6mm) x 1.72" (43.7mm)



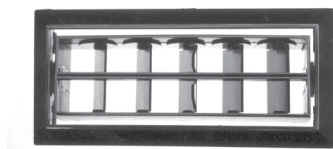
23-0027  
2.45" (62.2mm) x 2.44" (62mm) , (ABS)  
2" hose adapter included, snaps into hole  
2.2" (55.9mm) x 2.375" (60.3mm)



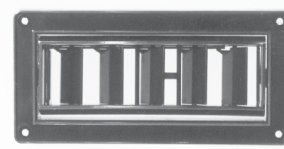
23-0029  
6" (152.4mm) x 1.87" (47.6mm) , (ABS)  
snaps into hole  
5.73" (145.5mm) x 1.72" (43.7mm)



23-0046  
6" (152.4mm) x 1.562" (39.7mm), (ABS)  
snaps into hole  
5.75" (146mm) x 1.375" (34.9mm)



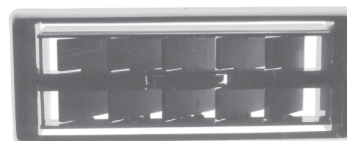
23-0055  
7.1" (180.3mm) x 3.3" (83.8mm) , (ABS)  
snaps into hole  
6.38" (162.1mm) x 2.48" (63mm)



23-0053  
5.43" (137.9mm) x 2.68" (68.1mm) ,  
(ABS) fits hole  
4.75" (120.7mm) x 2" (50.8mm)



23-0054  
Adapter for 23-0053 with 2.5" (63.5mm)  
hose adapter. (ABS)

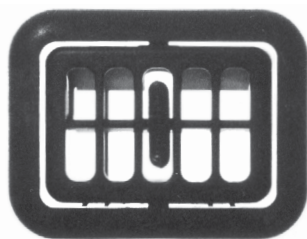


23-0116  
5.43" (138mm) x 2.17" (55mm) , (ABS)  
snaps into hole  
5.12" (130mm) x 1.81" (46mm)

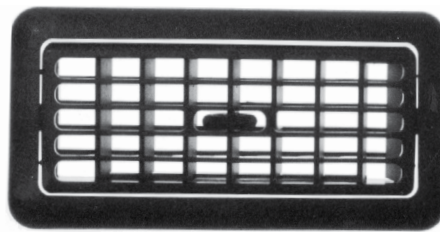


58-62042-00  
LOUVER, RECTANGULAR, GEN. 5

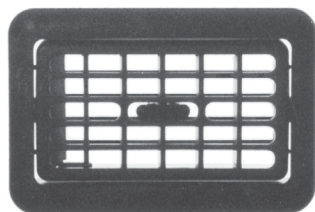
## Rectangular and Square Louvers (closeable & adjustable)



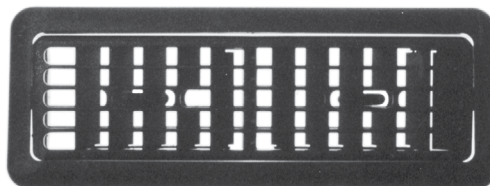
23-0173



23-0175



23-0174



23-0176

DIMENSIONS						
ABOVE LOUVERS SNAP INTO 1/16" (1.59mm) TO 1/8" (3.19mm) WALL THICKNESS OPENINGS						
Part No.	Overall Size		Mounting Hole		Snap-in	Hose* Adapter
	in.	mm	in.	mm		
23-0173	2.62 x 3.45	66.5 x 87.6	2.02 x 2.85	51.3 x 72.4	yes	no
23-0174	3.82 x 5.64	97.0 x 143.3	2.82 x 5.13	71.6 x 130.3	yes	no
23-0175	3.82 x 7.87	97.0 x 199.9	2.85 x 7.34	72.4 x 186.5	yes	no
23-0176	3.82 x 10.11	97.0 x 256.8	2.82 x 9.61	71.6 x 244.1	yes	no

\*Louvers available on request with Ø2.5" (63.5 mm) hose adapter as a one piece design.



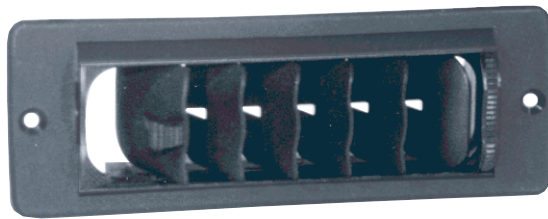
23-0177



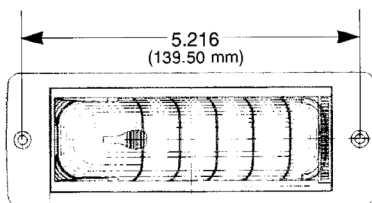
23-0178

DIMENSIONS					
ABOVE LOUVERS SNAP INTO 1/16" (1.59mm) TO 1/8" (3.19mm) WALL THICKNESS OPENINGS					
Part No.	Overall Size		Mounting Hole	Snap-in	Hose* Adapter
	in.	mm			
23-0177	2.17x 6.08	55.1 x 154.4	request sample	yes	No
23-0178	2.17 x 6.08	55.1 x 154.4	request sample	yes	No

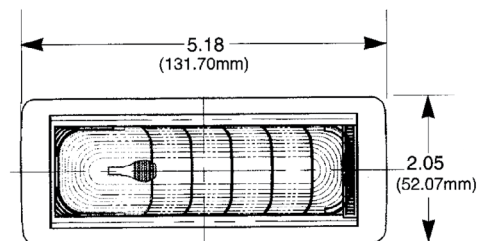
## Rectangular and Square Louvers (closable and adjustable)



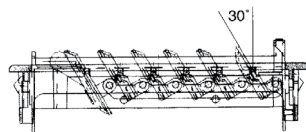
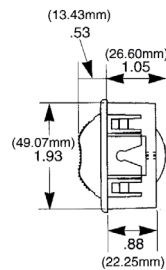
23-0186



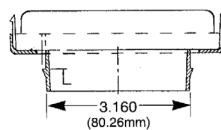
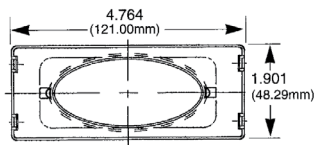
23-0145



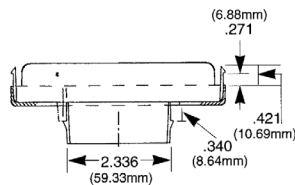
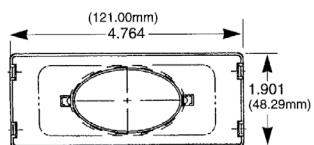
### Louver Vents



## Hose Adapters

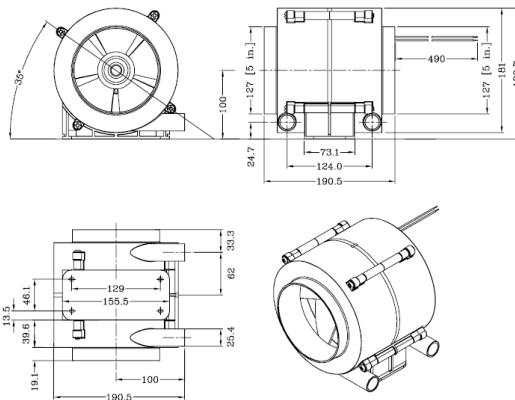
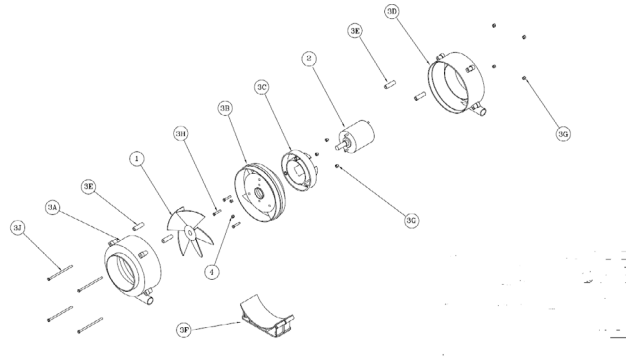


23-0203 Hose Adapter  $\varnothing$  2.5" (63.5 mm)

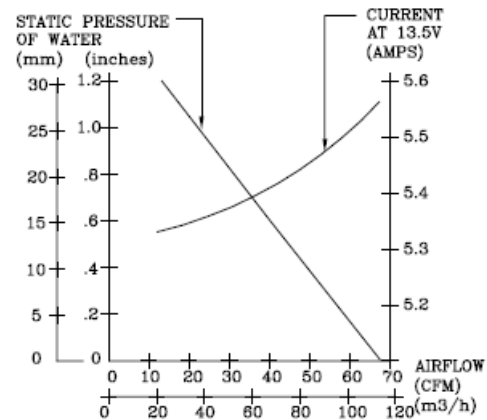


Hose Adapter  $\varnothing$  2" (50.8 mm)

## Filter Kit 605 - Pressurizer



### Airflow

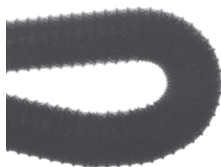


### Part Descriptions: Specifications

No.	Part No.	Description
4	29-0230	HEX NUT (10-32)
3K	29-0746	BASE INSERT (M6)
3J	29-0745	¼ - 20X5" SLOT SCREW
3H	29-0744	¼ - 20X1.25" HEX HEAD BOLT
3G	29-0743	HEX LOCK NUT (1/4-20)
3F	28-0623	BASE
3E	28-0622	SPACERS
3D	28-0621	OUTLET
1	25-0013	FAN

No.	Part No.	Description
3C	28-0620	MOTOR MOUNT
3B	28-0619	LOUVER MOUNT
3A	28-0881	Ø3" INLET
3	28-0649	BODY ASSY. (Ø3" INLET)
2	25-0894	MOTOR 24V

## Flex Hose



23-0102  
2" Low friction, non collapsible,  
sold in length of 47" (1200 mm)  
23-0104  
2.5" Low friction, non collapsible,  
sold in length of 47" (1200 mm)



23-0015	2" Collapsible sold in multiples of 50 feet
23-0020	2.5" " "
23-0025	3" " "
23-0035	3.5" " "
23-0040	4" " "

## Adapters



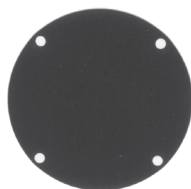
23-0048  
Adapter, Nylon 66



23-0017  
Hose adapter, 2"  
23-0018  
Hose adapter, 2.5"



23-0032  
Hose adapter, 3",  
Nylon 66



23-0006  
Cover plate (ABS)



23-0143  
Hose adapter, 60mm, Nylon 66

Mounting hole Ø 3.1" (79mm) . Screw hole 4 x Ø 84 mm.





**Mobile Climate Control**

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