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PARTS LIST

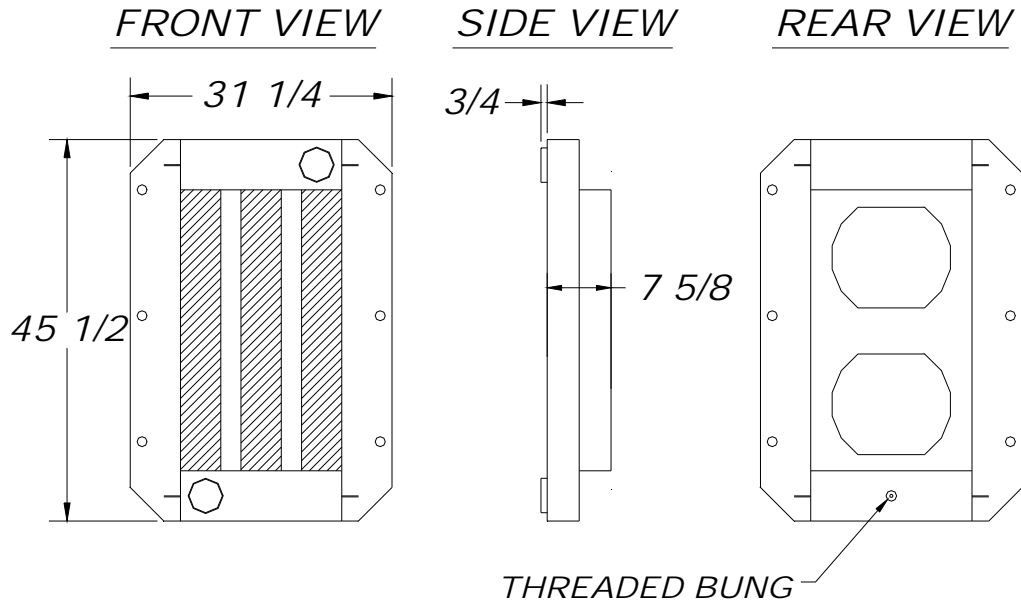
Bulk Transportation Services "Dry Cool"
Air-to-Air Cooler for Pneumatic Trailers
www.bulktransportationservices.com

U.S PATENT 5,580,193

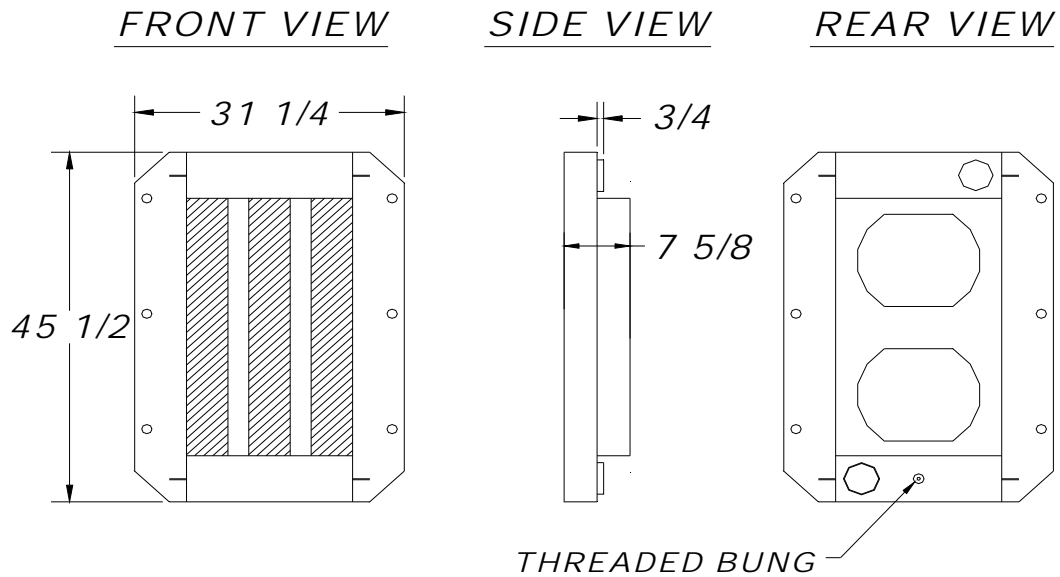
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Air coolers

Bulk Transportation Services has three different cooler configurations to suit your needs. The 4-inch inlet and outlet tubes can be located on the same side as the fans, on the side of the unit, or on the side opposite the fans:



ITEM 1-Standard air cooler, with 4 in. intake and discharge nozzles on side opposite of fans (part no. 251-058-000)

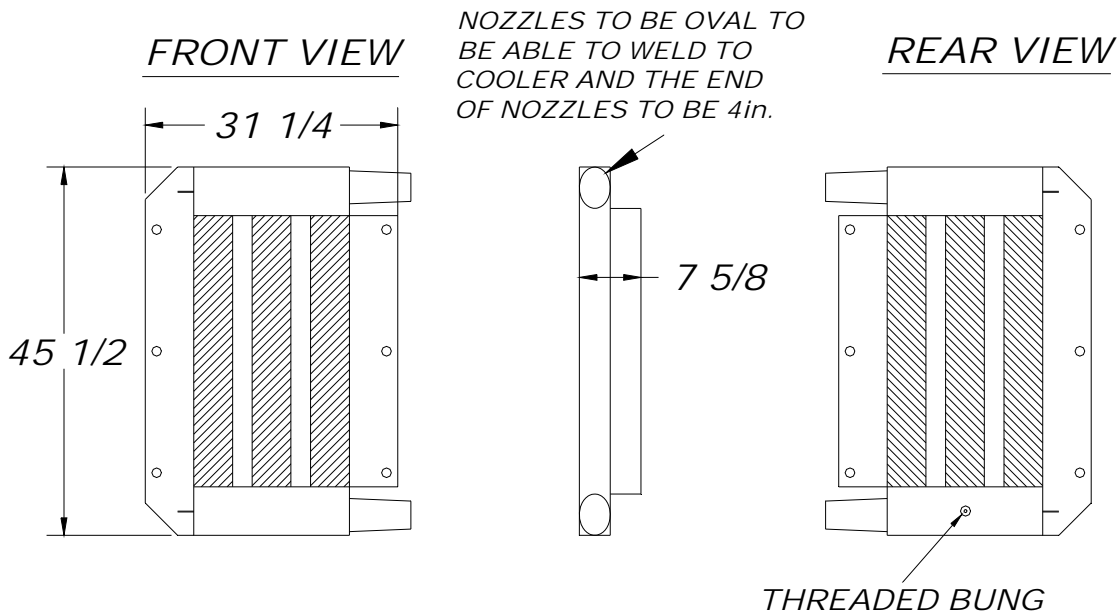


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ITEM 2-Optional air cooler, with 4 in. intake and discharge nozzles same
side as fans (part no. 251-059-000)

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ITEM 3- Optional air cooler, with intake and discharge on the side (4 in. nozzles to be oval) (part no. 251-060-000)

Cooler mounting bushings

Your kit comes with 1/2" ID rubber mounting bushings to isolate vibrations, for quiet, reliable operation of the unit. These are normally attached between the frame of the cooler and the front support of the dry bulk trailer using nuts, bolts, and washers.



ITEM 4-Mounting bushings for the cooler unit

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Electrical hardware

Your Air-To-Air cooler will automatically turn on its fans when it senses 3 PSI of air pressure in the inlet side of the cooler. This normally-open pressure switch completes the circuit to switch on the fan relay, which allows current to flow to the dual electric fans on the back of the cooler. It screws into the threaded bung on the inlet cooler tank (see items one through three.) One wiring terminal on item 5 is connected to the auxiliary terminal of the nosebox, and the other side is connected to the relay, so when pressure is seen, the relay closes and the fans turn.



ITEM 5-Pressure switch for turning on fans

Optionally, your cooler can be activated when inlet air reaches 100°F, using a normally-open temperature switch. It also screws into the inlet cooler tank. The wiring is exactly like the pressure switch.



ITEM 6-Optional temperature switch for fans

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Optionally, you may also choose for manual operation of the fans, using an off-on switch. This switch can be mounted anywhere on the trailer, and is wired in the same way as the pressure or temperature switch:



ITEM 7- On-off switch for fans

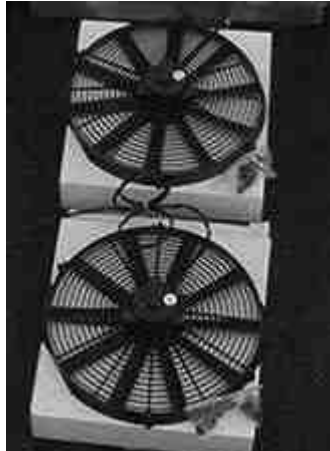
A weather-proof solenoid is used to protect the pressure, temperature, or on-off switch from the high amounts of current flowing to the two electric fans. This solenoid, like the pressure and temperature switches, uses electrical power from the nosebox of the trailer (see wiring diagram):



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ITEM 8-Electrical solenoid for cooler fans

The two 16 in. electric fans push air across the fins of the cooler, cooling down the air inside the unit:



ITEM 9-Electric fans for pushing air across the cooler fins

Temperature

Two 50-300°F liquid-filled temperature gages display intake and discharge air temperatures. These have probes integrated into the gage, and thread directly into the two threaded bungs, pictured below the gages, which are welded into the intake and discharge pipes of the cooler.



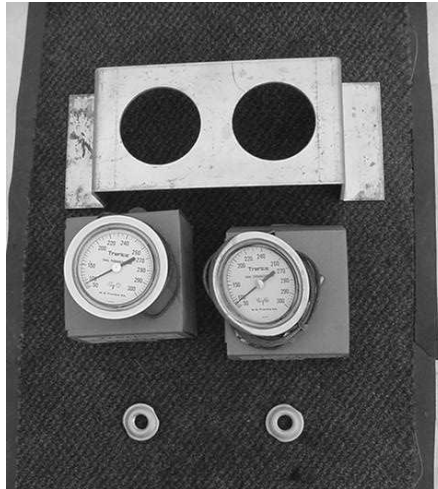
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ITEM 10 AND 11-Threaded bungs and temperature gages for intake and
discharge air

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Optionally, your unit may be equipped with temperature gages with 5 ft. remote probes, and the gages are mounted on a bracket up to 5 feet from the temperature probe location. These temperature gages are not liquid filled.



ITEM 12-Optional remote-mounted temperature gages, threaded bungs, and bracket

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Complete kit contents:



Complete contents of a cooler kit (shown with standard front-nozzle air-to-air cooler, liquid-filled temperature gages with integrated probes, and pressure-switch for fans)