



# AIR BOOSTER

## INSTALLATION PROCEDURES

### GENERAL INSTRUCTIONS

Packard Air Boosters are designed to increase air flow of both hot and cold air in any forced duct system. They will put more hot or cold air in any room you designate and can be installed to operate only when you want, thus saving energy. There are different sizes of Air Boosters: 6", 8", 10", 12", and 14" diameters. They are installed in the branch duct serving the individual room (not the main supply duct) and perform better when installed near the outlet end of the branch duct. Installation can be made easily in all ducts (round, square, and rectangular) by following these simple instructions. (See Fig. 1)

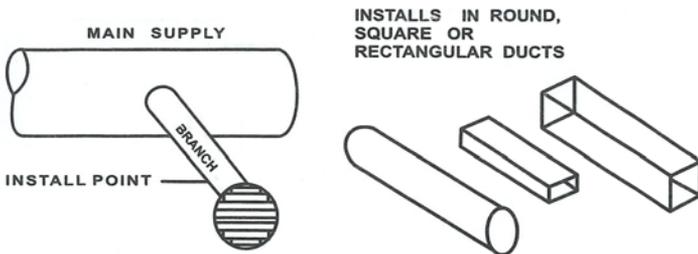
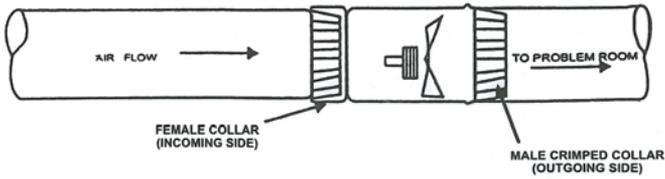


FIG. 1

### ROUND DUCTS (SEE FIG. 2)

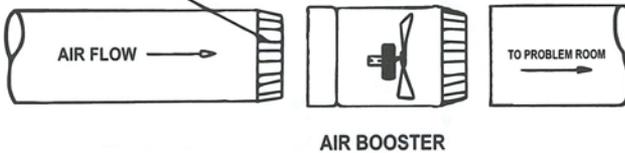
The housings of Packard Air Boosters are standard 6", 8", 10", 12", and 14" diameter ducts with a female receptacle collar on the incoming end and a male crimped collar on the outgoing end. This allows it to be fitted into a standard round duct system. Separate the existing system at a joint and cut off a section from the female end of the duct. Install the Packard Air Booster in the space provided with the fan blades nearest the problem room. If separating at a joint isn't practical cut out some section anywhere in the branch duct. You must "crimp" or make a series of 1" slits in one end of the cut duct so that it can be tapered to fit into the female collar end of the Packard Air Booster.



**FIG. 2**

The male crimped end of the Packard Air Booster will fit right into the duct on the outgoing side. (See Fig. 3) After installation, seal both ends of the Booster to the existing branch duct with duct tape.

**CRIMP OR SLOT THIS  
END OF EXISTING DUCT**



**FIG. 3**

## **MOUNTING INSIDE ROUND, SQUARE OR RECTANGULAR DUCTS**

1. Separate the branch duct at a joint if possible and determine the approximate location where the Packard Air Booster will be located inside the duct with the fan blade nearest the room to be helped. A Packard Air Booster can be installed in any convenient location inside the duct: side, top, or bottom. It does not have to be in the middle of the duct.
2. Locate the approximate position on the outside of the duct and tape the template in place.
3. Remove the booster from inside the duct and drill holes as indicated on the template.
4. Replace the booster in the duct, pull wires through the drilled  $\frac{1}{2}$ " hole, and screw the booster in place using the included metal screws.
5. Reconnect branch ducts at joint and replace insulation. Complete the electrical installation based on the existing local codes.

If it is impossible or impractical to separate the branch duct at a joint, then use the following instructions:

## ROUND DUCT (SEE FIG. 4)

Select an appropriate position for the location of the Packard Air Booster. To either the left or the right of this position you must now provide an access hole by cutting the existing duct. The access hole should start at least  $1\frac{1}{2}$ " to the left or right of the anticipated booster location. Use Template A to provide the pattern for cutting the access hole. Cut only three sides as indicated. Carefully bend along the uncut side and lift the created door of the access hole. Cover all created edges with duct tape so that approximately  $\frac{1}{2}$  of the tape is outside and  $\frac{1}{2}$  is inside the duct. This protects hands and arms during installation and makes a good seal when the "door" is closed. Lift the access door and place the air booster inside the duct with the fan blades nearest the problematic room. Having decided on approximate location, tape Template C to branch duct and drill all holes in the existing duct as indicated on the template. Place the booster back in the marked position, feed the electrical wires through the  $\frac{1}{2}$ " drilled hole, then secure the booster inside the branch duct using the included screws. After the booster has been properly wired and operation has tested, close the created access door and completely seal it using duct tape. Be sure to observe all local regulations during installation.

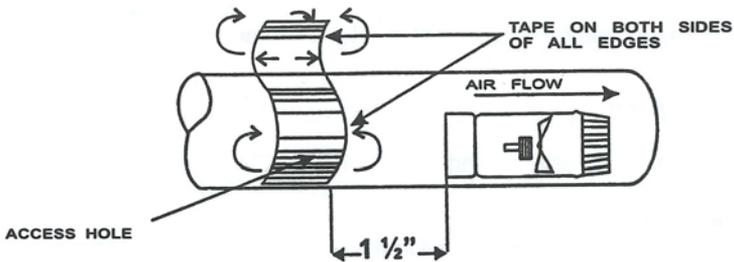
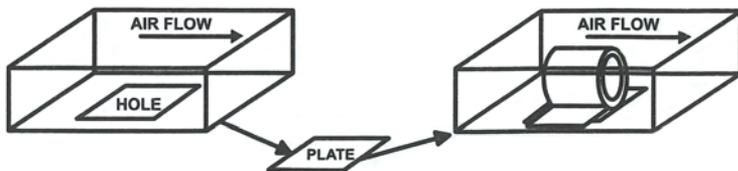


FIG. 4

## SQUARE OR RECTANGULAR DUCT (SEE FIG. 5)

There must be minimum of  $\frac{1}{4}$ " clearance in height and width. Select the location in the branch duct where the Packard Air Booster is to be installed. At this location use Template B to cut out a rectangular plate along the direction of air flow of appropriate width. Using Template C locate and drill holes for mounting the booster to this plate as well as the necessary hole for the wire leads. The long dimensions of the air booster should be parallel to the short dimensions of the mounting plate. After mounting the air booster to the plate with the provided screws, place the mounted air booster inside the duct with the mounting plate outside. The fan blades should be nearest the problem room. Drill holes in the overlapping metal plate and secure the plate the duct with the provide screws. Seal the remaining open space in the duct with duct tape.



**FIG. 5**

## **ELECTRICAL CONNECTION**

The Packard Air booster should be connected to the appropriate power source indicated on the nameplate. This product comes equipped for flexible cord connection which may not be acceptable by local authorities. To conform to local codes, it may be necessary to attach a junction box at the point where the wires extend through the duct. Where this air booster is installed as part of a heating duct system the electrical supply connection should be suitable for 75° C temperature. The 6", 8", 10", 12", and 14" Packard Air Boosters have a junction box; please check that it meets the local regulation upon installation.

## **POWER CONTROL OPTIONS**

1. Connect directly to the voltage indicated on the nameplate for continuous operation.
2. Wire through an "on/off" switch located in a convenient place (Example: A wall switch in the room to be served).
3. Wire through a thermostat installed in the room to be served. This provides for automatic on/off room temperature control.
4. Wire in parallel to existing blower. Be sure that the motor is rated to the same voltage as the air booster. Note that the blower motor controller cannot be a variable speed tap type, solid state speed control, or any other type not designed for dual motor control.
5. Wire to voltage indicated on the nameplate through an auxiliary switch, (pressure or "sail" type) which will automatically energize the air booster whenever the blower operates.

### **TOOLS REQUIRED:**

- Screwdriver
- Drill
- Sheet metal shears

### **INCLUDED PARTS:**

- 8 Sheet metal screws
- 2 wire connectors
- Paper Templates

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**Must be installed by a licensed contractor.**