May 3, 2005

Mr. Joe Smith
ABC Company
7990 Auburn Rd.
Concord Township, OH 44077

Subject: PadPak® Package Designs for Blower Assemblies

Dear Mr. Smith:

We designed PadPak® packages for two blower assemblies provided by your company. The packaged products were drop tested according to International Safe Transit Association (ISTA) Procedure 1A for packaged-products weighing less than 150 pounds. The first package design for the first blower assembly failed testing, so only the second design for it is described below. The design for the second blower assembly, the test procedure and results follow as well.

PadPak® Package Design for First Blower Assembly:

1. We used a RSC style box of 200 psi single wall corrugated with inside dimensions of 15" x 14" x 15". This is one inch longer and one inch deeper than the current box for this product.

2. Produced two (2) - 68 in. pads, and folded them in half to form double-thick pads.

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3. Placed the pads in a “crossed” configuration over the open box sides.

4. Centered the blower on the crossed pads as shown.

5. Produced a 44 in. pad, and folded it twice to form a triple-thick pad.

6. Placed the triple-thick pad in between the blower outlet flange and box corner.

7. Slid the blower and pads into the box bottom.

8. Produced a 50 in. pad, formed it into a coil, and placed it around the motor assembly on top of the blower as shown. Closed and sealed the box flaps.

Total PadPak® used in this design was 19.2 linear feet.

PadPak® Package Design for Second Blower Assembly:

1. We used a RSC style box of 200 psi single wall corrugated with inside dimensions of 14" x 13" x 10". This is a different size than the current box for this product.
2. Produced a 62 in. pad, and folded it twice to form a triple-thick pad.

3. Centered the blower on the pad as shown.

4. Folded the pad ends up against the blower ends, and placed this assembly in the box bottom.

5. Produced two (2) - 32 in. pads, and folded each pad twice to form a triple-thick pad. Placed the pads in between opposite sides of the blower and box.

6. Produced a 38 in. pad, formed it into a coil, and placed it around the motor assembly on top of the blower as shown. Closed and sealed the box flaps.

Total PadPak® used in this design was 13.7 linear feet.

The packaged blower was free fall drop tested according to the ISTA procedure. It weighed less than 21 lbs., so it was dropped 10 times from a height of 30 inches. After testing, we removed the blower from the package and inspected it. No product damage was observed, so this package design passed the drop test.

Summary & Comments:

ISTA drop testing of the PadPak® package design for the first blower assembly indicates that it should provide excellent protection for this product. The PadPak® material used in this design was 2-ply 50/50 through our AutoPad® II converter. We used the same 2-ply 50/50 material in the package design shown above with the second blower assembly.

As mentioned via e-mail on April 21st, the first package design for the first blower assembly failed drop testing. This design utilized PadPak® 2-ply 30/50 material and your current box size. The blower was packed with the motor down in this design, and resulted in bent motor mounts that forced the impeller out of alignment as shown below. I understand your concern about packing the

blower with the motor up, and so by using the stronger PadPak® 50/50 material with a larger box, the product should be cushioned better on all sides. A test shipment of this design with the motor up will give us some indication if this design works or not. Based on the result, if you could ship me one or two additional blowers (same part number), I can drop test either this package design, a motor-down design, or both.

The packaged blowers should be shipped to you on May 3rd via UPS Ground. Please let me know how they perform in this test shipment.

Thank you for the opportunity to work on this project. If you have any questions please feel free to call me at (800) 726-7257, ext. 8094.

Sincerely,

Edward S. Martis, CPP
Packaging Engineer