

Blower Package Noise Control

To reduce the overall noise level of a blower package there are several options available but a basic understanding of the noise being generated should come first.

Overall blower package noise is composed of three noise sources: air, mechanical, and vibration. At a distance of three feet from the package these noises all blend together and are indistinguishable. Studies, which Stoddard Silencers has performed on hundreds of blower packages, have demonstrated that silencers take out the majority of the air noise from the blower package to at the point where what noise remains is masked by the other two sources. Therefore, what the customer hears is mechanical and/or vibration noise. We must search out and treat these sources before we consider treating the silencers or using alternate designs.

Each blower package is different but here are the most common treatments:

1. If flex connectors are use, lagging them.
2. Lining the belt guard with a sound absorbing foam.
3. Using a quiet line motor (80 dBA or less at full load).
4. Treating the gear end of the blower to deaden it.
5. Mechanically isolating all equipment from the base.
6. Putting a shroud, lined with sound absorbing foam, around any rotating components not already treated.
7. Modify the silencer design.
8. Put an enclosure over the blower and motor.
9. Put an enclosure over everything.

These treatments are rated by the level of the noise normally emanating from each of the sources given. Depending on the difference between the blower package noise level and the level required, the number of steps required to meet "spec" will vary. These steps are progressive. Doing #7 without doing #1 through #6 not be productive.

Lastly, depending on the package design the positions of treatments #1 through #6 may interchange; however, #7, #8, and #9 almost always work in that order.

Stoddard Silencers sales and engineering personnel are available to discuss all of the above, provide computer generated noise calculations using premium silencers for your particular blower package and help with silencer size and model selection.