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## ***Ibis International, inc.***

## ***Bulletin 040208***

### TECHNICAL DATA FOR SOUND/NOISE RATINGS ON CULL SYSTEM FANS

Sound is not an “exact science”. It is strange, so I will give you a little background on how Ibis and American Fan Company determine if a silencer is required.

All of the sound power levels that are generated by the fan selection programs are values in decibels with open inlets (no duct).

When a duct is added to a fan, the sound travels down the duct away from the sound source (fan).

AMCA (Air Movement and Control Association) states that when the fan is ducted away from the sound source (fan) you can deduct up to 20 dBA from the sound power levels of the un-ducted fan. The duct should be at least 14 ga. to minimize the sound transmission through the duct.

I like to be conservative and deduct 10-15 dBA.

The Main System Fan will be very quiet so no silencer is required. 85 dBA un-ducted.

The Nozzle fan will be on the edge; 95 dBA un-ducted. I would say to be safe, a silencer is a good idea.

The Cull Booster fans generate more noise; 102 dBA un-ducted. A silencer is recommended.

The price for a silencer for the Nozzle fan or the Cull booster fan is \$ 1,137.00 each.

Finally, the question is, do you need or want silencers on the inlet, on the outlet or on both? It usually depends where the “break out area” is located. (Where the noise would break out if not a closed loop). In most cases, the cull booster fan will have it’s outlet piped to a drum filter and the nozzle fan will have it’s outlet piped back to the process and/or to an off-line collector like a cyclone or bag filter. In these cases, an outlet silencer should not be necessary. Silencers can always be added later.

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