Addition of Silencer

By adding a silencer to each return air line from the collectors, it will reduce the decibels to around 79dBa based upon your sound testing data.

Based upon your sound testing data , the average decibels is 89.6dBa

The silencer we are installing is model LRA 30”dia by 60” long will reduce to sound level to 79dBa. See attached table showing the insertion losses.

Based on the sound test data below shows the dBs for each frequency at the octave band.

Frequency dB at Octave Silencer Insertion Loss reduced sound levels

63 80 8 72

125 91 13 78

250 81 22 59

500 83 29 54

1000 80 37 43

2000 70 37 33

4000 68 24 44

8000 51 19 32

The new averaged sound level around 79 dBa

Note: The silencer should be install close to fan as possible to reduce the self-generating noise from the silencer.

Note: based on the sound test data the background noise without the fan running was 58 dBa