

DAMPERS OPPOSED BLADE DAMPER - Type – OBD

Determining the sound level which results from the combined effects of several sound sources is not as difficult as it is confusing.

- The NY data for diffusers given contains an allowance for the sound absorbing properties of the average room and its contents.
 - This absorption is assumed to be 8 db. with sound power level referenced to 10-12 Watts. (The absorption is 18 db. referenced to 10-13 Watts)
 - For relatively small spaces - about 76.2m² or less floor area and ceiling height of 3.0m or less –the following simplified method for estimating NC levels produced by a combination of supply diffusers and return registers or grilles can be used:
1. Determine the difference in NC level between the supply outlets or return intakes having the highest NC and the second highest NC level.
 2. From Table 9 determine the number of decibels to be added to the NY level of the unit having the highest NC level. This sum is the combined NC level generated by the two units.
 3. If three units serve the space, determine the difference between the combined NC levels of the first two units and the NC level of the third unit. Determine the NC addition as above, and add this to the combined NC level of the first two units.

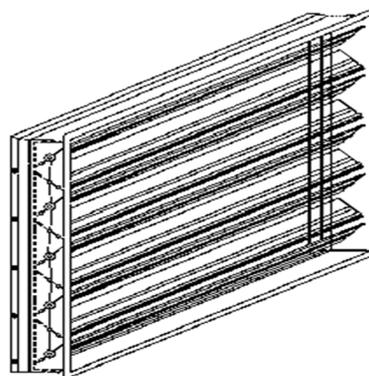
If the difference between NC levels of two units is 10 dB or more, the sound generated by the quieter unit will not affect the space NC.

EXAMPLE

Two supply diffusers having an NC level of 30 and a return grille having an NC level of 35 serve a room. What is the combined NC level?

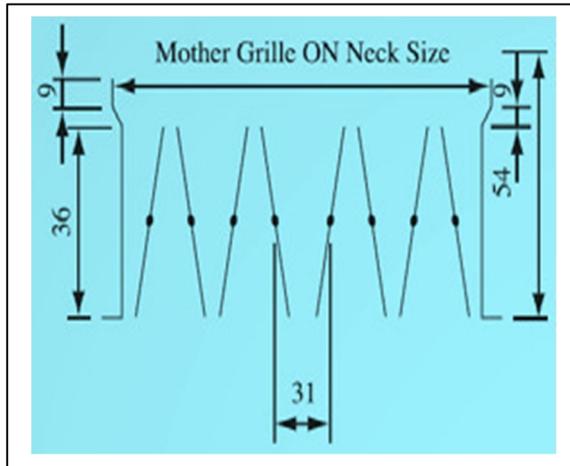
SOLUTION

The return has the highest NC level 35 db. The second highest is one of the diffusers at 30 db. The difference between them is 5 db. From Table 6, the NC addition for a 5 dB difference is about one. Adding this to the higher NC gives a combined NC of 36. To take the second diffuser into consideration, follow the same procedure as above. The NC calculated above is 36. The NC of the diffuser is 30. The difference between them is 6. The NC addition for this difference is 1, and the combined effect of the two diffusers and the return grille is NC 37.



ADVANTAGE AIR®

OPPOSED BLADE DAMPER



TYPE OBD: Opposed Blade Damper manufactured from extruded aluminum Blades. Blades are held in place by spring wire and star lock push on fix.

The OBD blades are linked and lever or slot operated.

OBD suits all standard grilles and diffusers.

BLADE OPTIONS: Standard as per sketch

FINISH OPTIONS:

PR = Primed Black (optional)

MF = Mill Finish (standard)

BLADE SPACING: 25mm Standard

Note: (1) Dimensions given are for - To fit ON of mother grille
(2) If OBD to fit grille, indicate type of grille, outside neck size.