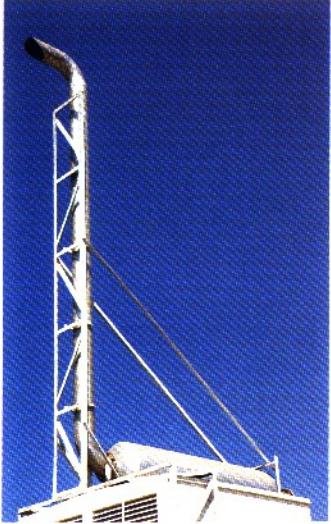


## What to look for in a silencer?

- Sound attenuation to meet the permissible noise levels.
- Customized exhaust back pressure, considering engine performance characteristics. Too much back pressure results in loss of fuel economy, loss of power available and excessive engine / turbocharger temperature.
- Aluminized steel body: It has a maximum operating temperature of 1250°F.
- Silicone Aluminum Paint: It has high heat resistance.
- Welded construction and suitable for mounting in any position.
- Considerably large diameter to cut exhaust flow / force of rushing flow of gas.

## Noise pollution reduction solution :

Cummins guarantees a noise reduction solution with acoustic treatment and Nelson make silencers being supplied through our nationwide network.



Cummins Diesel  
Sales & Service (India) Ltd.  
35A/1/2, Erandwana Pune : 411038



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# SILENCER

# EVERY™ DECIBEL.

Customer  
Awareness  
Series-Volume 10





Dear Customer,

We are pleased to release the tenth volume of our Customer Awareness Series. This is in continuation with our efforts of making our customers aware of noise pollution, its ill-effects and control.

The total noise in case of a genset is a combination of various noises and is in the range of 95-108 dB(A). One of the major sources of noise is from exhaust system.

The importance of health hazards due to noise pollution has been identified by health organizations. In India, Central Pollution Control Board is working towards reducing noise pollution. In this issue we deal with how to reduce the exhaust noise levels.

Regards,

Marketing &  
Business Development

Parts Marketing &  
Sales Support

### **The human resource concern:**

Noise levels in industries range between 85 to 105 dB(A). Noise levels higher than 85 dB(A) can lead to intolerance, ringing noise in ears and may adversely affect those with heart or psychiatric condition. The impacts of high noise level could be hearing loss, interference in concentration, increase in incidence of accidents and importantly reduced work efficiency.

### **CPCB noise level norms:**

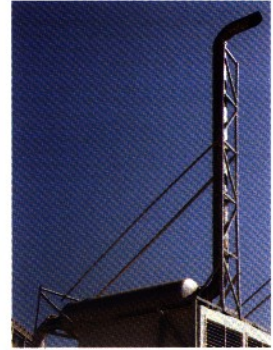
Central Pollution Control Board has set the environmental standards (Standard No. 44) as following:

Area	Daytime dB(A)	Night dB(A)
Industrial	75	70
Commercial	65	55
Residential	55	45
Silence Zone	50	40

CPCB recommendations for control of noise pollution from diesel generator (DG) sets :

1. The acoustic enclosure/acoustic treatment of the room should be designed for minimum 25 dB(A) insertion loss or for meeting the ambient noise standards, whichever is on the higher side.
2. The DG set should be provided with proper exhaust muffler with insertion loss of minimum 25 dB(A).

The silencer should be provided without extension of exhaust piping. Silencers exhaust shall be taken in exhaust piping to be carried to the top of building up to a height of 5.5 meter approx/ or permissible limit set by state pollution control board.



### **How silencer functions?**

The primary purpose of the exhaust system of an engine is to expel burnt gases. During this process a substantial amount of noise is generated.

Silencer is a device designed to muffle the sound of the discharging of pressurized gases exiting the muzzle. Thus it reduces insertion loss i.e. exhaust sound.

Silencer can be used along with acoustic enclosures. Combined effect of HG type silencer & acoustic enclosure will be reduction of 30 dB(A).

Silencer can be classified as **Industrial, Residential** and **Hospital Grade**.

Type of Silencer	Noise reduction by Nelson make silencers
Industrial	8-18 dB(A)
Residential	18-25 dB(A)
Hospital	25-32 dB(A)