

AGN 187 – Noise Levels

OVERVIEW

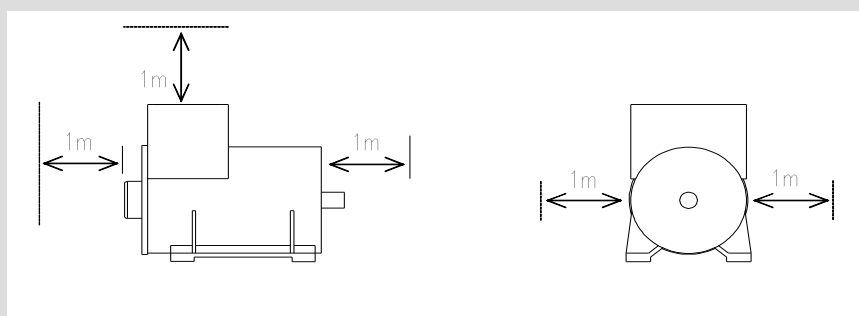
A growing number of businesses find that large, heavy-duty Generating Sets are critically important to their operations, whether for continuous, prime or standby power. Not surprisingly, large Generating Sets produce high levels of noise that often must be mitigated to meet local, state and federal regulations or directives. This usually involves key decisions about the optimal Generating Set location and installation, how to design noise control systems, and other factors.

MEASURED LEVELS

In any power supply installation, the noise emitted from the Generating Set will be attenuated when enclosed in a canopy or enclosure. The alternator's noise level is measured during test, without attenuation.

STAMFORD Alternators

Using a broad band noise measurement meter, the noise emissions of STAMFORD alternators were measured on acoustically isolated alternators and were measured in db (A). The levels were measured with the alternators operating with no load applied and levels were measured 1 metre from the alternator, at the positions indicated in the following drawing:



The measured noise levels of STAMFORD alternators are as follows:

Frame Size	Speed (rev / min)	Average Noise level dB(A)
S0/S1	1500	90
	1800	94
P0/P1 (2 Pole)	3000	100
	3600	104
P0/P1	1500	90
	1800	94
UC 224 (S2)	1500	77
	1800	80
UC 274 (S3)	1500	83
	1800	87
S4L1D	1500	102
	1800	106
S4L1S	1500	91
	1800	94
HC5 (S5)	1500	92
	1800	96
S6L1D	1500	102
	1800	106
S6L1S	1500	94
	1800	98
P7 (S7)	1500	102
	1800	107
P80 (S8/S9)	1500	102
	1800	107

To obtain the average noise level emitted during full load application, increase these values by 3dB(A).

AvK Alternators

Noise level emissions from AvK alternators depend on the design of the alternator, but generally, for a conventional open air ventilated alternator, the full load noise level is 106dB(A). An AvK alternator with cooler has a lower noise level; at 95dB(A). As there are many and various AvK alternator designs, Application Engineering should be consulted for specific noise level data. Contact applications@cummins.com for noise level data, for a particular AvK alternator.