Diesel Hammer Type	Sound pressure level dB(A) at distance from hammer	
	7m (13 ft)	300m (984 ft)
D8-22	100	73
D12-32	102	76
D16-42/D19-42	106	79
D25-32	110	84
D30-32	110	84
D36-32	111	85
D46-32	111	85
D62-22	114	86
D80-32	116	88
D100-13	119	92
D125 / D138	n.a.	n.a.
D160 / D180	n.a.	n.a.
D225/D250	n.a.	n.a.

This data sheet was made at the factory test stand on a refusal pile.

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The amount of noise produced when driving piles with a diesel pile hammer depends on several factors:

1. Explosion and Exhaust Noise
The explosion and exhaust noise is not, as often supposed, the main source of noise. A noise reduction mantle would reduce the overall sound level only a very small degree. The installation of a noise reduction mantle also inhibits proper escape of the exhaust gases and, therefore, reduces the fresh air supply for scavenging. This would impede the proper function of the pile hammer.

2. Noise generated by the piston hitting the impact block.
This noise is inside the lower cylinder of the hammer, so it is not the main source of noise.

3. Noise generated by impact block hitting the pile helmet.
This is where the main noise develops. It can be reduced to a large extent by using a very "soft" pile helmet cushion.

4. Noise generated by the pile helmet hitting the piles.
This is another main source of noise. In order to soften the impact it is necessary to use a soft cushion here, so that a reduction of noise can be achieved.

5. Noise generated from the piles themselves.
By taking the above-mentioned measures the structure-borne noise generation of the piles can be diminished considerably. Of course, the noise development also depends on the kind of piles used. If steel piles are used, the noise development will be higher than for concrete piles. Moreover the soil conditions have an effect on the generation of noise. If the soil is rocky, arid, or hard, there will be more vibration of the piles than if the soil consists of coarse clay. For the above reasons it is impossible to predict the exact noise level for a particular construction site.

The noise levels measured when pile driving with a diesel pile hammer is actually somewhat higher than the noise levels generated by alternate methods of pile installation: rotary drilling, percussion drilling or construction of diaphragm walls, but when examining the noise on a construction site, its is important to compare the noise level in relation to the duration of the noise. If this is done, the noise irritation caused by a diesel pile hammer will be the relatively insignificant.

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