



# Amplitude Calculations

Select vibrator driver size by using these calculations for amplitude

## Amplitude equation- non-metric

$$A = \frac{2 \times EM}{VM}$$

EM = Eccentric moment in in-lbs  
VM = Vibrating mass lbs  
A = Amplitude in inches

VM - Vibrating Mass includes the following:

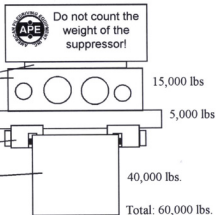
The vibrating mass is the sum of all the weights in vibration:

$$VM = B + C + D$$

**B:** Vibrating mass (dynamic weight) of vibratory gearbox & motors and inner suppressor housing plus:

**C:** Clamping device including all plates or beams and clamps plus:

**D:** Casing weight or pile weight



**Note:** Calculate casing weight using the following formula:

OD (outside diameter) less wall thickness times wall thickness times 10.69 = lbs per foot. Take lbs per foot and multiply by total length of pile.

OD - wall thickness X wall thickness X 10.69 = lbs per foot

Example for vibro shown above:

$$2 \times 13,000 = 26,000 / 60,000 = .433 \text{ inches of amplitude}$$

Please go to larger vibro if amplitude is less than 0.125

Visit our WEB site:  
[www.apevibro.com](http://www.apevibro.com)  
e-mail: [ape@apevibro.com](mailto:ape@apevibro.com)