

ACCUMULATED MATERIAL SOLUTION

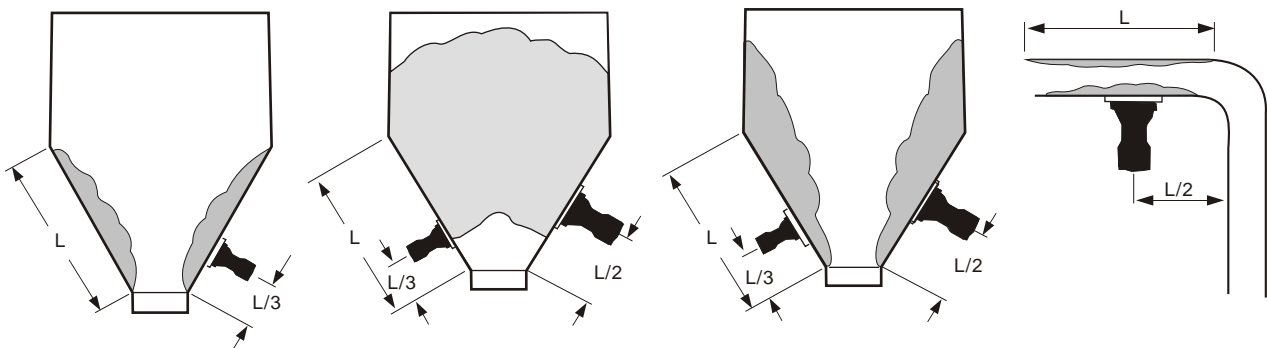
Different applications require various tanks. Customers choose appropriate vibrators to meet application demand (tank shape/ material, applied material humidity/ S.G./ granule size...). Suitable vibrator will not only prevent obstruction problem but also avoid the damage of tank wall.

Big amplitude, low frequency piston types are suitable in granule with small S.G. . AB1/AB2/AB3 types are better choices for high S.G. or material accumulation in filtration environment.

It is recommended to use multiple vibrators in serious clogging situation or big tank surrounding.

Accumulation condition and vibrator installation

According to various clogging situations, the recommended vibrators and suitable installation positions (usually 1/2L or 1/3L) are shown by below.



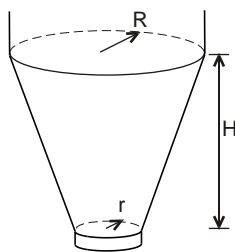
Vibration force calculation

Taking accumulation situation into consideration, appropriate vibrator will give 0.2~0.5 G accelerated vibration force onto target object.

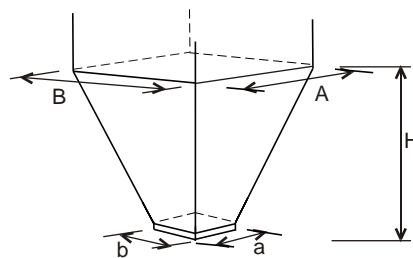
$F=0.2\sim 0.4GW$, F: Vibration force (N)
 G: $9.8m/s^2$
 W: Material weight (KG)

Material weight calculation

W: Material weight (KG)
 V: Chute volume (M^3)
 γ : Specific gravity



$W=1000V\gamma$ $V=\frac{\pi H}{3}(R^2+Rr+r^2)$

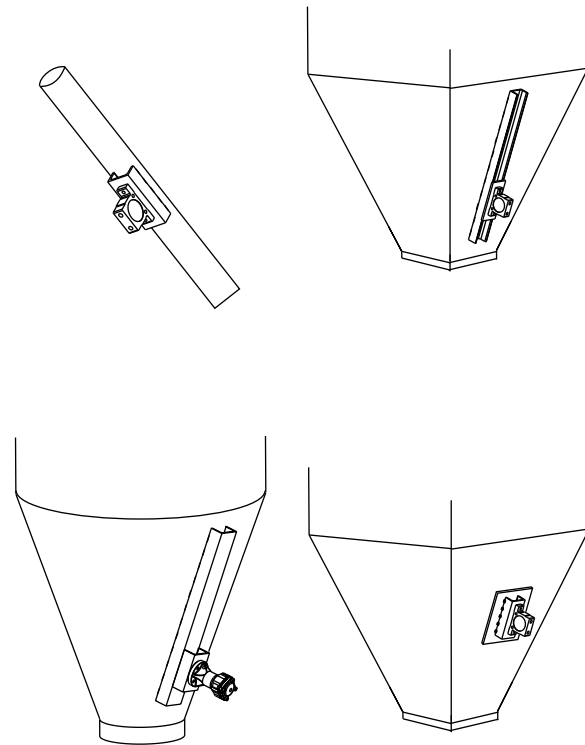


$V=\frac{H}{6}[A \times B+(A+a)(B+b)+a \times b]$

INSTALLATION

Vibration force transmits more efficiently in conical hopper tank than in rectangular hopper. It is recommended to install two vibrators for rectangular hopper application.

1. Vibration force can be transmitted more efficiently by using U shape steel supporter. It can help material fall smoothly in the tank or pipe. It also reduces tank damage.
2. U shape steel or fixer can prevent irregular movement of vibrators. To avoid possible damage on the tank wall caused by vibration force, stitch weld method is suggested. (10mm space will be required on two ends of U shape steel)
3. Reinforced board is required between U shape steel and thin tank wall.
4. Cross installed of U shape steel can increase vibration field in big hopper tank.



ATTENTION

Vibrator has to be fixed by high tension bolt, washer, and spring washer. It is suggested to use security cable if vibrator is installed onto hopper.

