



Formulas for calculation

$$v_{(th)} = \sqrt{2gH}$$

$$H = \frac{V^2}{2g}$$

$$e = mgH$$

$$e = \frac{mV^2}{2}$$

$$v = \frac{d}{t}$$

$$F = ma$$

$$\text{System friction (\%)} = \frac{V_{(th)} - V_{(pr)}}{V_{(th)}}$$

Respectively where:

a = acceleration (m /sec²)

e = energy (joules)

m = mass (kg)

F = Force (Newton)

H = drop height (m)

g = 9.8068 m/sec² (universal gravity constant)

V_(pr) = practical velocity (m /sec)

V_(th) = theoretical velocity (m /sec)

d = distance (mm)

t = time (milliseconde)