



C O R P O R A T I O N

## Technical Data Sheet

### Shock Machine Capability

TDS-15

©M/RAD Corporation  
71 Pine Steet  
Woburn, MA 01801  
888-500-9578 • 781-935-5940  
Fax: 781-933 -7210  
www.mradcorp.com • inquiries@mradcorp.com

Shock Machine capability is rated in terms of VELOCITY. The formula for calculating the velocity change for a half-sine pulse is:

$$386 \times .64 \times g \times t = V \text{ where}$$

V = Velocity Change (in/sec)

g = acceleration (g)

t - time (seconds)

For a shock machine whose velocity change is 200 in/sec, the calculation for maximum g is as follows:

$$0.5 \text{ ms: } 200 = 386 \times .64 \times g \times .0005$$

$$\text{Maximum g level at 0.5 ms} = 1600 \text{ g}$$

$$6 \text{ ms: } 200 = 386 \times .64 \times g \times .006$$

$$\text{Maximum g level at 6 ms} = 130 \text{ g}$$

$$18 \text{ ms: } 200 = 386 \times .64 \times g \times .018$$

$$\text{Maximum g level at 18 ms} = 45 \text{ g}$$

For a shock machine whose velocity change is 300 in/sec, the calculation for maximum g is as follows:

$$0.5 \text{ ms: } 300 = 386 \times .64 \times g \times .0005$$

$$\text{Maximum g level at 0.5 ms} = 2400 \text{ g}$$

$$6 \text{ ms: } 300 = 386 \times .64 \times g \times .006$$

$$\text{Maximum g level at 6 ms} = 200 \text{ g}$$

$$18 \text{ ms: } 300 = 386 \times .64 \times g \times .018$$

$$\text{Maximum g level at 18 ms} = 65 \text{ g}$$