Slide (linear) Shock Sizing

Need Six Inputs:

1. Direction of motion: The weight moves horizontally, vertically up or vertically down?

2. Weight: This is the moving weight that needs to be stopped

   W = _____ lb or kg

3. Velocity, how fast is the weight moving when it hits our shock

   You know the speed? V = _____ ft/sec or m/sec

   OR

   It takes _____ seconds to travel _____ inches or mm

4. Propelling force, the force that is driving the weight into our shock.

   This is calculated by knowing the air cylinder bore and pressure.

   Bore = ____ inches

   Pressure= _____ psi

5. Cycle rate, how frequently are the shocks used.

   Example: 10 cycles per hour, 1 cycle per minute, 1 cycle per lifetime (safety stop)

6. Number of shocks used to stop the moving weight.

   Slide moves weight into 1 shock, 2 shocks, 4 shocks.....

   This is not the total number of shocks on a machine but the number of shocks at one stop position.

Consider the environment: Temperature or Fluids present.....

Temperature and fluids can affect the seals of a shock; do any fluids come in contact with our shock? What is the temperature where the shocks are installed?