

The Birmingham Pile Driving Monitor or PDM is a device that measures the impact velocity of a pile driving hammer. The impact velocity (and subsequent energy) can be used to verify, monitor, and record the performance of a pile driving hammer.

Using two magnetic proximity switches, the PDM senses the ram position and calculates the velocity just prior to impact. The PDM calculates the kinetic energy by

using the equation: $E = \frac{1}{2}mv^2$,

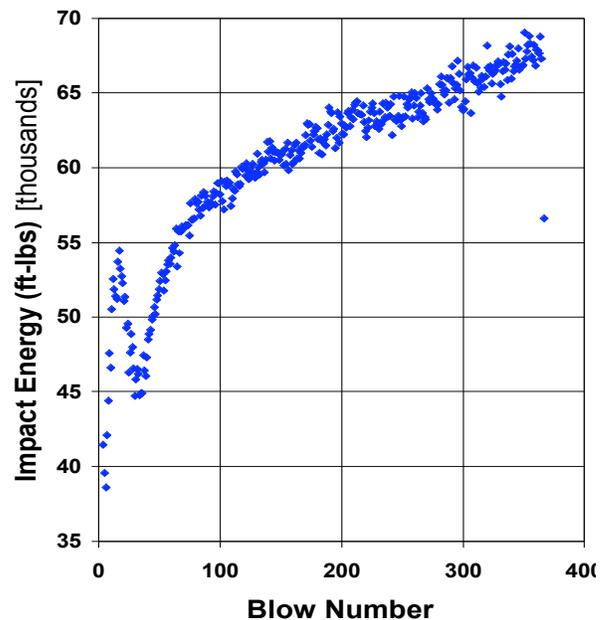
where m is the ram mass, and v is the impact velocity. The proximity switches are mounted directly on the side of the hammer in a pre-machined port. All Birmingham hammers manufactured since 1990 are equipped with such ports.



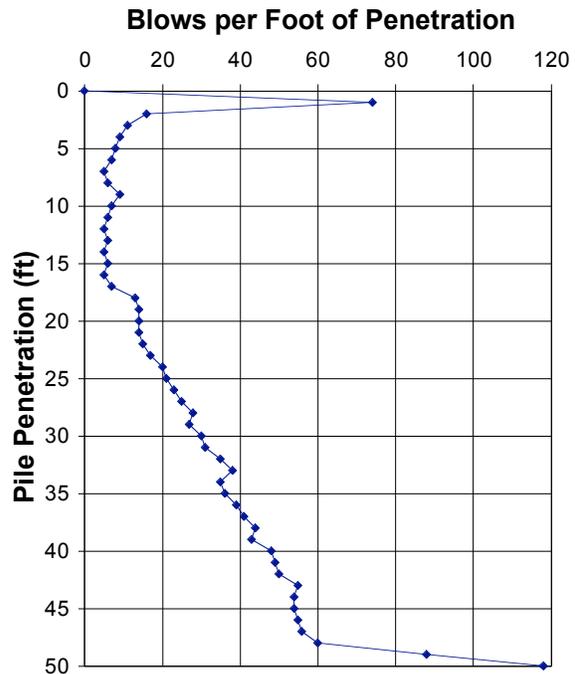
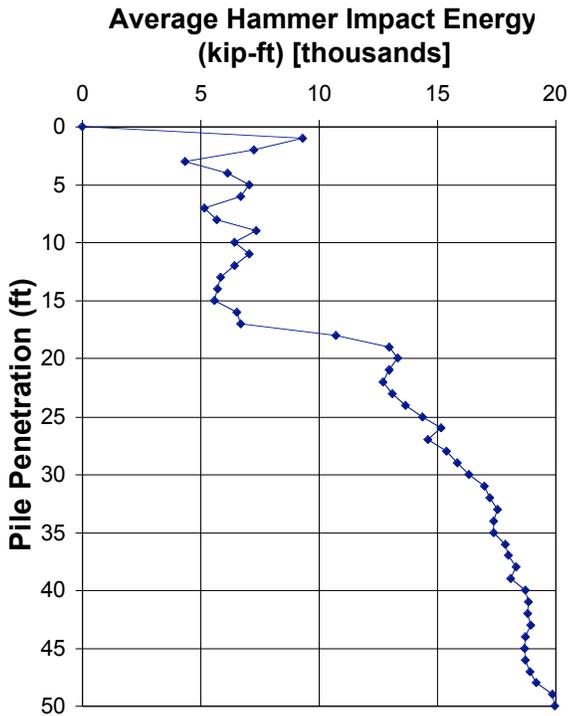
Other data stored by the PDM include:

- ▼ Pile number and pile type
- ▼ Hammer model
- ▼ Time driving starts and stops
- ▼ Total number of blows
- ▼ Number of blows per minute
- ▼ Impact velocity
- ▼ Impact energy

The data is easily downloaded from the PDM to a computer via a standard serial or USB port. Once downloaded to a computer, the data can be imported to a spreadsheet or other program for analysis.



Using the optional pile penetration logger, the PDM will store the average impact energy per unit of penetration as well as the number of blows per unit of penetration. Data can be exported to a spreadsheet and displayed as follows:



The PDM system comes packaged in a rugged, impact resistant, dust and waterproof carrying case, and easily withstands the rigors of work sites and air travel.

Originally developed to prove the superior performance of the Berminghammer line of diesel pile driving hammers, the PDM is now used most frequently as a powerful quality control and assurance tool for contractors, consultants, and governments worldwide.

When combined with a Berminghammer Pile Driving Hammer's infinitely controllable stroke, the Bermingham PDM system offers the ultimate in pile driving quality and energy control.

