

Innovative Design Engineering of America, LLC

1730 Jamestown Place, Pittsburgh PA 15235-4944

412.242.4347

The Total Dynamic Head (TDH) of the pump was therefore calculated to be 300 feet. The Brake Horsepower (BHP) of the driver was estimated to be 0.86 HP (643 Watts). This power consumption was based on a pump efficiency of 65%.

These values assume that the above-ground piping is constructed using galvanized steel, and the below-ground piping is HDPE. Because HDPE weakens at higher temperatures, if the HDPE were exposed to sunlight, a Temperature Factor (safety factor) of up to 1.6 would have to be applied to the pressure rating. This increases the wall thickness and the cost. If we ensure that all of the HDPE piping is covered with earth, then we can use a pipe with an Standard Dimension Ratio of 11.0. For 1 1/2" diameter HDPE pipe, the wall thickness would then be 0.173".

