

Horsepower Required to Drive Pump:

GPM x PSI x .0007 (this is a 'rule-of-thumb' calculation)

Example: How many horsepower are needed to drive a 5 gpm pump at 1500 psi?

GPM = 5

PSI = 1500

GPM x PSI x .0007 = 5 x 1500 x .0007 = 5.25 horsepower

Pump Output Flow (in Gallons Per Minute):

RPM x Pump Displacement ÷ 231

Example: How much oil will be produced by a 2.5 cubic inch pump operating at 1200 rpm?

RPM = 1200

Pump Displacement = 2.5 cubic inches

RPM x Pump Displacement ÷ 231 = 1200 x 2.5 ÷ 231 = 12.99 gpm

Pump Displacement Needed for GPM of Output Flow:

231 x GPM ÷ RPM

Example: What displacement is needed to produce 5 gpm at 1500 rpm?

GPM = 5

RPM = 1500

231 x GPM ÷ RPM = 231 x 5 ÷ 1500 = 0.77 cubic inches per revolution