

Formula to calculate gear pump displacement.

$$Q = \frac{\pi}{2} \times b \times (da^2 - a^2)$$

Q = Displacement cm³/rev.

b = Gear Width cm. (see photo 1)

da = Gear tip diameter cm. (see photo 2)

a = Gear Centres (when meshed) cm. (see photo 3)



Photo 1 – shows gear width 1.614cm

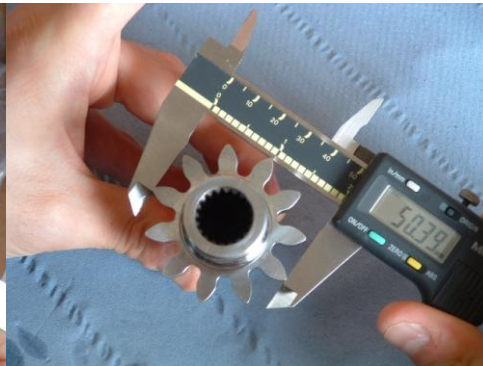


Photo 2 – shows tip diameter 5.039cm

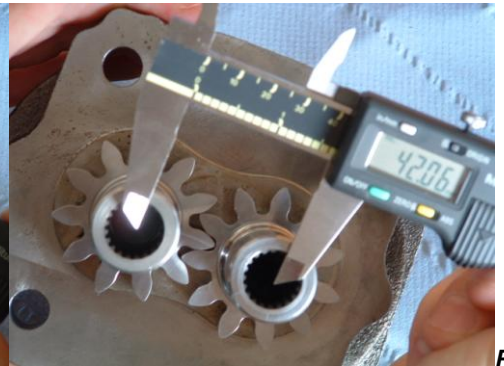


Photo 3 - shows gear centres 4.206cm

Example gear set shown

$$\frac{\pi}{2} \times 1.614 \times (5.039^2 - 4.206^2) = 19.52\text{cc/rev.}$$

Please note this is a general guide and cannot be relied on to be 100 % accurate (mind you the gear set in the photo is actually 19cc so it works pretty well). UHE do not accept any liability for misapplication of this information