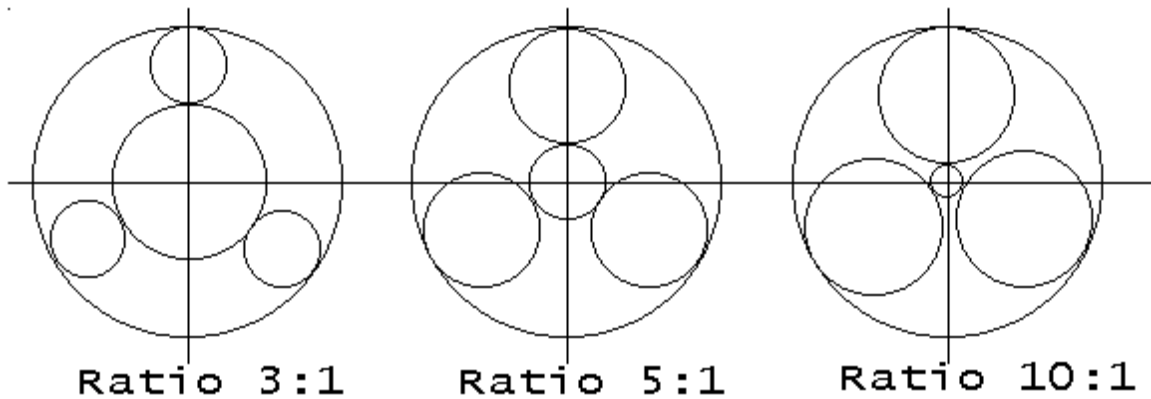


Planetary Gear Ratios and Rating

$$\text{Ratio} = (\text{Ring gear Diameter} / \text{Sun Gear Diameter}) + 1 =$$

$$= (\text{Number of Ring Gear Teeth} / \text{No. of Sun-gear Teeth}) + 1$$



Lowest practical ratio **3:1** (Planet -gear becomes very small)

Note :

(ratio 2:1 or smaller is NOT POSSIBLE / ratio 2:1 => Planet-gear diameter 0.0 ! =>geometrically impossible)

Highest practical reduction ratio (in one stage) **10:1** (Sun-gear becomes very small)

Torque rating of the planetary gears is ratio sensitive!

“ Most balanced” planetary design (highest rating) is at ratio around **5:1 -**