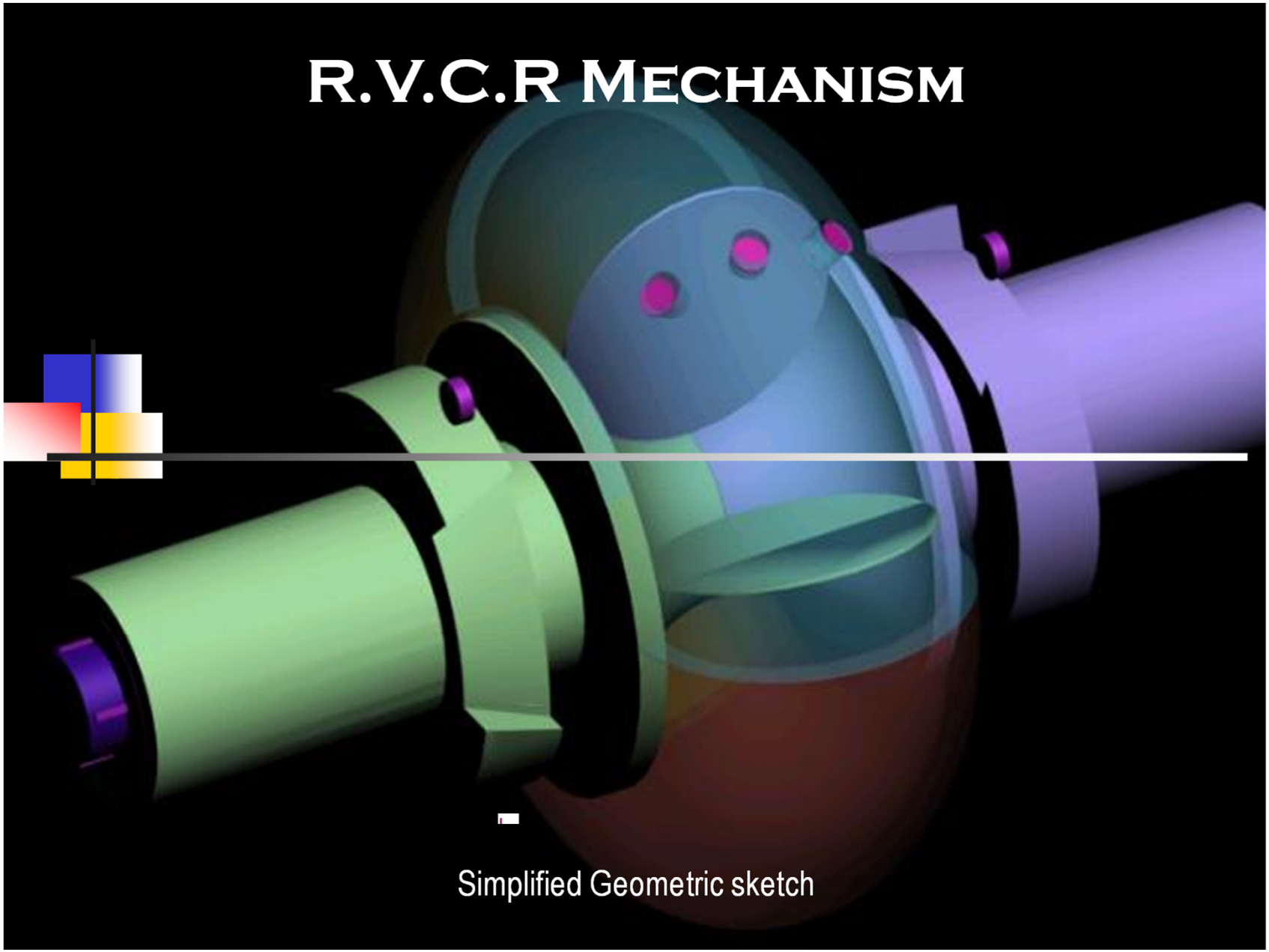
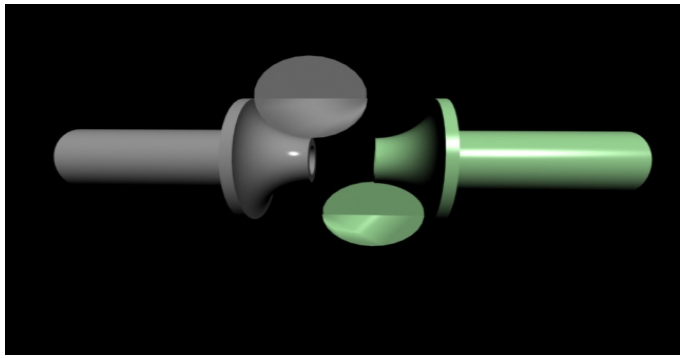
R.V.C.R Mechanism

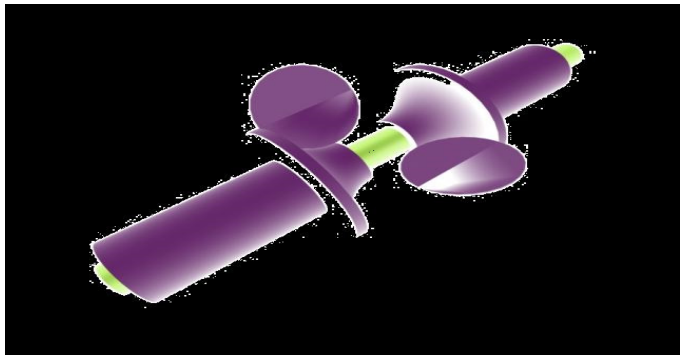


Simplified Geometric sketch

The Mechanism



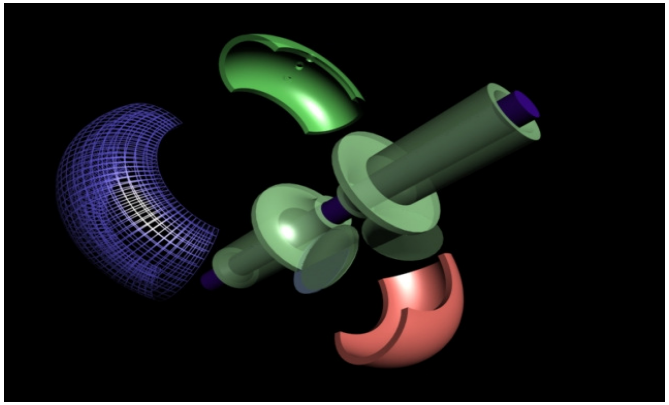
the picture shows the vane and sleeve which forms the primary part.



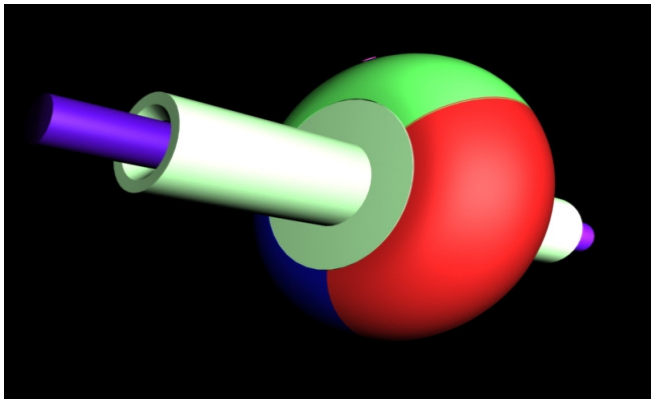
the bottom picture shows the internal shaft passing through the sleeves.

The mentioned shaft is continuous, coaxial to the sleeves, and the power take off is through the ends

The mechanism 2



The picture shows the exploded view of liner, sleeves, vanes and shaft



The bottom picture shows the assembly

The sequence pg1

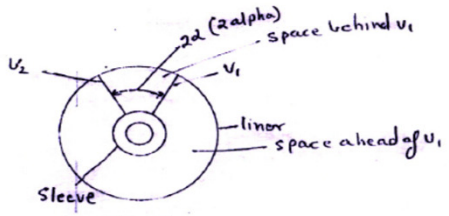


Fig. 6

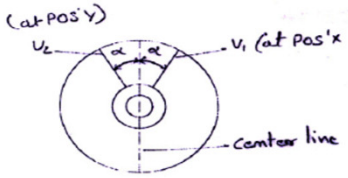


Fig. 7

- Initially v1, v2 are placed apart by 2 alpha degrees,
- v1, v2 lie on either side of the vertical plane,
- The vertical plane bisects the inclusive angle between v1 and v2,
- The position the vane v1 is referred to as POS'X and that of vane V2 as POS'Y.

The sequence pg2

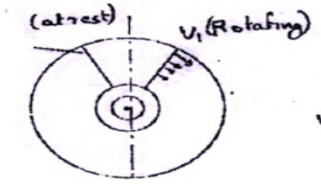


Fig. 8

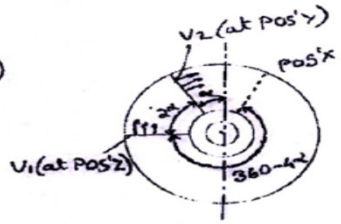


Fig.9

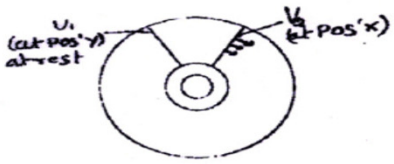


Fig. 10

- VS1 rotated about its central axis in clockwise direction.

  This leads to reduction of volume of space ahead of v1 and increase in volume of space behind v1.

- As V1 is rotated through 360 - 4 alpha degrees

  in a position POS'Z;

- Hereafter both VS1 and VS2 are rotated.

  When VS1, VS2 reach POS'Y, POS'X respectively, VS1 is stopped and only VS2 is rotated.

The sequence pg3

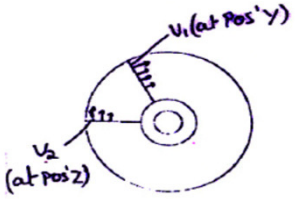


Fig. 11

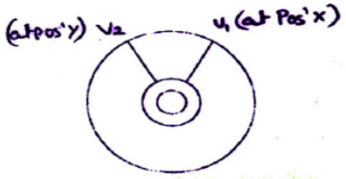


Fig. 12

- Like VS1 when VS2 attains POS'Z,

  then both VS1 & VS2 are rotated till they attain POS'X & POS'Y respectively.

- Now VS1 start's rotating and the full cycle is repeated

  On continuously rotating the vanes in this fashion, the two vanes are simultaneously at POS'X, POS'Y and POS'Y, POS'X alternately, once in every 360-degree rotation of any of the two vanes.