

Worm Gear :-

Advantages and Disadvantages of Worm Gear Drives :-

Advantages :-

- * The worm gear drives can be used for speed ratios as high as 300:1.
- * The operation is smooth and silent.
- * The worm gear drives are compact compared with equivalent spur (or) helical gears for the same speed reduction.
- * The worm gear drives are Irreversible. It means that the motion cannot be transmitted from worm wheel to the worm. This property of irreversible is advantageous in load hoisting applications like cranes and lifts.

Disadvantages of worm gear drives:-

- * The efficiency is low compared to other types of gear drives.

- * They are costly.

- * Since sliding occurs, the amount of heat generation is quite high.

- * The Power Transmitting Capacity of worm gear drive is low (upto 100 kW).

Tooth Proportions of worm gears:-

The various proportions of the worm and worm gears are tabulated in Table 8.1.

Table 8.1 databook P. No 8.43.

Basic dimensions of worm gears from databook P. No 8.43.