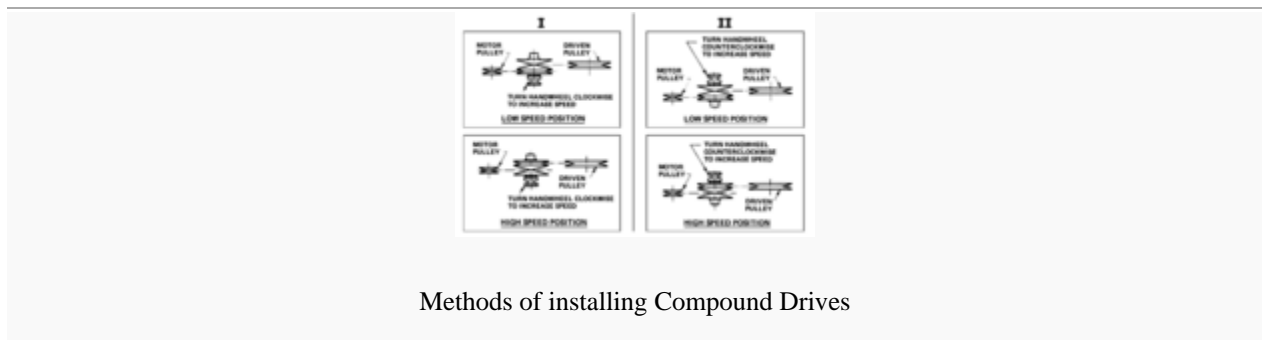


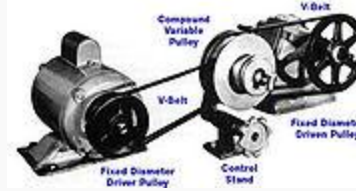
DRIVES, COMPOUND AND FREQUENCY CONTROLLED DRIVES



Drives or Engines or motors are machines designed to convert energy into useful mechanical motion. Heat engines, including internal combustion engines and external combustion engines burn a fuel to create heat, which then creates motion. Electric drives convert electrical energy into mechanical motion, pneumatic drives use compressed air and others—such as clock work motors in wind-up toys—use elastic energy. In biological systems, molecular motors, like myosins in muscles, use chemical energy to create motion.

Compound Drives

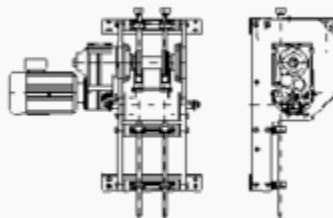




Compound Drives

Compound Drive is distinguished by extremely high densities of both electrical power and torque, making the motor ideal for automotive electro-mobility as well as aerospace applications and other fields where high torque and power in combination with low weight are crucial. In addition the motor needs much less rare-earth magnetic material than conventional motors.

Frequency Controlled Drives



Frequency Controlled Drives

Frequency Controlled Drive is a solid state power electronics conversion system consisting of three distinct sub-systems: a rectifier bridge converter, a direct current (DC) link, and an inverter. Voltage-source inverter (VSI) drives are by far the most common type of drives. Most drives are AC-AC drives in that they convert AC line input to AC inverter output. However, in some applications such as common DC bus or solar applications, drives are configured as DC-AC drives. The most basic rectifier converter for the VSI drive is configured as a three-phase, six-pulse, full-wave diode bridge. In a VSI drive, the DC link consists of a capacitor which smooths out the converter's DC output ripple and provides a stiff input to the inverter. This filtered DC voltage is converted to quasi-sinusoidal AC voltage output using the inverter's active switching elements. VSI drives provide higher power factor and lower harmonic distortion than phase-controlled current-source inverter (CSI) and load-commutated inverter (LCI) drives. The controller drive can also be configured as a phase converter having single-phase converter input and three-phase inverter output.

Source: <http://solidswiki.com/index.php?title=Drives>