

AC Adjustable Speed Drives (ASD's)

Variable Speed Control

The simplest and least expensive way to control the speed of a process or piece of equipment is to operate all the equipment at full speed.

- C Many applications require the speed of a process or piece of equipment to be varied.
- C Prior to the advent of the AC Adjustable Speed Drive, many technologies have been used, although each has its inherent advantages and disadvantages.

Types of Variable Speed Control:

Control Valves, Dampers and Vanes
Fossil Fuel Engines
Eddy Current Clutches
Hydraulic Couplings
Variable Pitch Sheaves
DC Solid State Controllers
AD Adjustable Speed Drives

(ASD's)



AC Adjustable Speed Drives (ASD's)

AC Adjustable Speed Drives (ASD's) have become very popular variable speed control devices used in industrial, commercial and some residential applications.

- C These devices have been available for about 20 years and have a wide range of applications ranging from single motor driven pumps, fans and compressors, to highly sophisticated multi-drive machines.
- C They operate by varying the frequency of the AC voltage supplied to the motor using solid state electronic devices.
- C These systems are fairly expensive but provide a higher degree of control over the operation and in many cases, reduce the energy use enough to a least offset if not more than pay for the increased cost.
- C ASD's allow precise speed control of a standard induction motor and can result in significant energy savings and improved process control in many applications.
- C Can control the speed of a standard squirrel cage NEMA type B induction motor.
- C Suitable not only for new applications, but also for retrofit on existing motors.



