

Chapter 12

Adjustable-Speed Drives

Chapter Objectives

When you have finished Chapter 12, “Adjustable-Speed Drives,” you should be able to do the following:

1. Define an adjustable-speed drive.
2. List three reasons adjustable-speed drives are used.
3. List eight specific questions to ask and answer when evaluating the possible benefits of adjustable-speed drives.
4. Describe four adjustable-speed drive applications.
5. Differentiate between open-loop and closed-loop systems.
6. Explain the features and applications of belt and chain drives.
7. Differentiate thyristor from transistor characteristics.
8. Define 16 terms and functions unique to adjustable-speed drives.
9. Describe the features and applications of traction drives.
10. Describe the features, rating, and application factors for eddy-current, wound-rotor, and DC adjustable-speed drives.
11. Describe the features, types, ratings, and application factors for AC adjustable-speed drives.
12. Explain four categories of application criteria, regardless of drive technology.
13. Differentiate between a servo drive, its application, and a standard drive system.
14. Define and describe five terms that explain how a drive performs.
15. Summarize some of the major performance capabilities of common drive types.