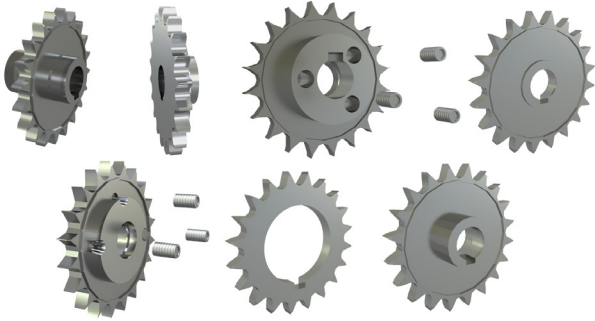


SPROCKET BASICS

eLearning courses designed to increase productivity and profits



Learning Made Simple, Visual, and Interactive

The THORS *Sprocket Basics* course explains the fundamentals of sprockets, which cover the terminology and nomenclature. The course offers an interactive learning experience that allows learners to gain an in-depth understanding of different types of sprockets based on various criteria, such as number of strands of teeth, function, detachment, hub design, shaft mounting, and materials. A visually engaging overview of the manufacturing methods, such as casting, machining, stamping, and powder metallurgy is also covered.

Credit Hours **2**

Learning Objectives

- Develop an understanding of the various specifications of sprockets, such as terminology, tooth profile, and nomenclature.
- Identify the different materials used in manufacturing sprockets along with their corresponding operating environments.
- Recognize the importance of industry standards in sprocket selection.
- Classify the different types of sprockets based on the number of strands, function, detachment, and hub design of the sprocket.
- Compare and contrast the manufacturing and heat treatment methods of sprockets.

Table of Contents

I. Sprocket Specifications

- Terminology
- Tooth Profile
- Nomenclature
- Industry Standards

II. Sprocket Types

- Based on Number of Strands
 - Simplex Sprocket
 - Duplex Sprocket
 - Triplex Sprocket
 - Quadruplex Sprocket
 - Double Single Sprocket
- Based on Function

II. Sprocket Types (Cont.)

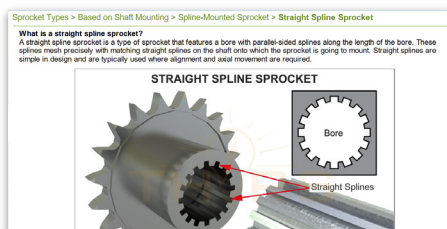
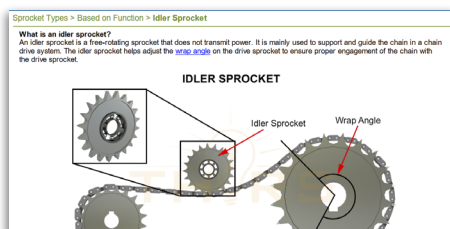
- Solid Center Sprocket
- Armed Center Sprocket
- Idler Sprocket
- Based on Detachment
 - Split Sprocket
 - Segmented Removable Rim Sprocket
- Based on Hub
- Based on Shaft Mounting
 - Key-Mounted Sprocket
 - Spline-Mounted Sprocket
 - Straight Spline Sprocket
 - Involute Spline Sprocket
 - Bolt-Mounted Sprocket

II. Sprocket Types (Cont.)

- Based on Materials
 - Cast Iron Sprocket
 - Steel Sprocket
 - Aluminum Sprocket
 - Titanium Sprocket
 - Bronze Sprocket
 - Engineered Plastic Sprocket

III. Sprocket Manufacturing

- Manufacturing Methods
 - Casting
 - Machining
 - Stamping
 - Powder Metallurgy
- Heat Treatment



Sprocket Manufacturing > Manufacturing Methods				
What are the factors used to determine the method of manufacturing sprockets?				
The factors used to determine the method of manufacturing sprockets are the sprocket material, production volume, precision, and cost.				
Manufacturing Method	Sprocket Material	Production Volume	Precision	Cost
Casting	Cast Iron and Aluminum	High Production Volume	Low Precision	Low Cost
Machining	Steel, Aluminum, and Bronze	High Production Volume	High Precision	High Cost
Stamping	Steel and Engineered Plastic	High Production Volume	Medium Precision	Low Cost
Powder Metallurgy	Titanium and Bronze	Low Production Volume	High Precision	High Cost

Manufacturing Methods

Casting Machining