Title: **Basic Motor Controls and Single-Phase Motors** Worksheet: 3

Course: Intro to Automation Unit: Manual Motor Control CLO: 1

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade \_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**

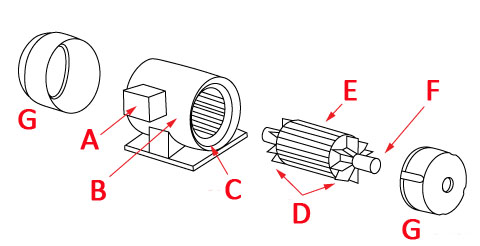
1. Student shall identify the basic components of an AC induction motor.
2. Student shall list items found on a single-phase motor nameplate.
3. Student shall calculate the acceptable input voltage range given the motors rated voltage.

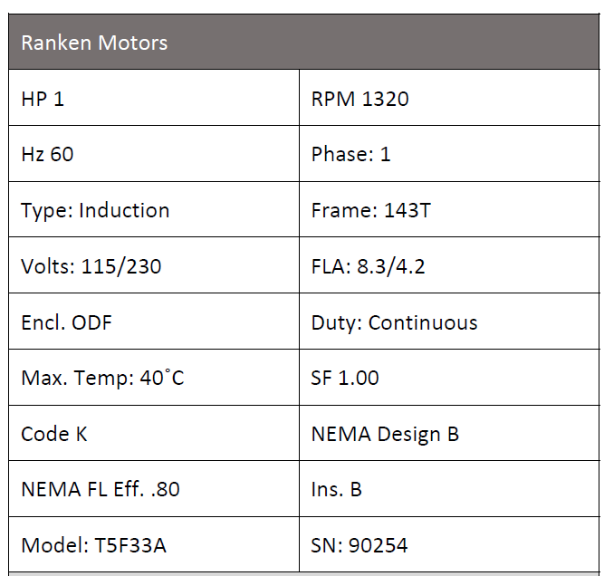
**Assessment**

Students shall demonstrate a comprehension of the objectives listed above by scoring a minimum of 75% on this Worksheet. Grading shall be based on the answer key.

**Instructions**

Identify each component of an AC single-phase induction motor.

1. Fans \_\_\_\_\_
2. Rotor \_\_\_\_\_
3. Terminal Box \_\_\_\_\_
4. End Bell \_\_\_\_\_
5. Stator \_\_\_\_\_
6. Shaft \_\_\_\_\_
7. Motor Frame \_\_\_\_\_

**Instructions**

Answer each of the individual questions below.

1. What is the RPM for this motor? \_\_\_\_\_\_\_\_\_\_\_\_
2. What nominal voltage level would you use to connect to this motor? \_\_\_\_\_\_\_\_\_\_\_
3. What is the acceptable range of voltage input to this motor? \_\_\_\_\_\_\_ to \_\_\_\_\_\_\_
4. What is the horsepower for this motor? \_\_\_\_\_\_\_\_\_\_
5. How many watts should this motor dissipate? \_\_\_\_\_
6. Select the two properties that will dictate the rotational speed of an AC motor.
7. Source voltage
8. Motor horsepower
9. Number of poles
10. Input frequency

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