Choosing Motor Package Sizes

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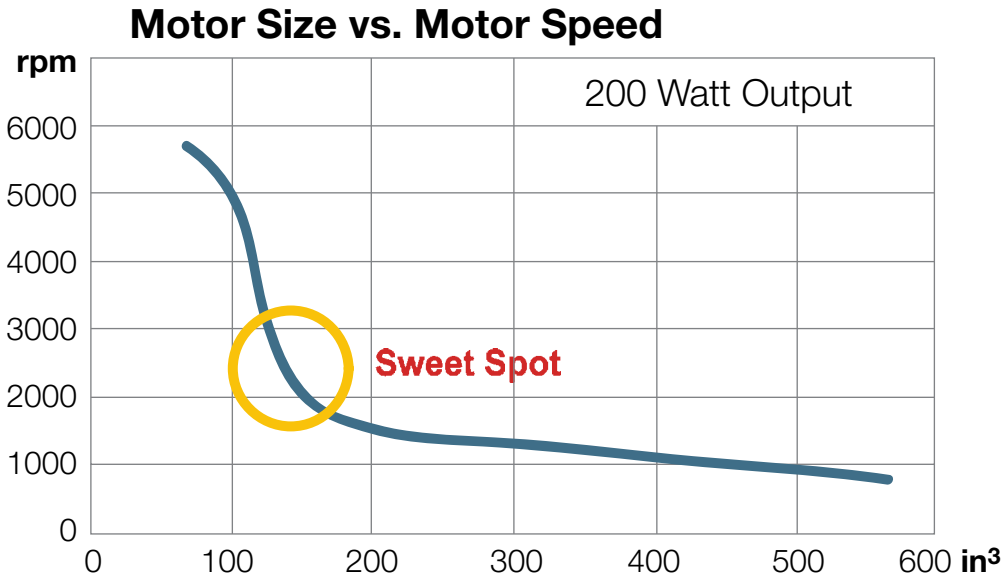
For a given output power, design engineers must analyze the motor size and speed needed to meet the output requirements.

A small motor running at high speed can output the same amount of power as a large motor running at a slow speed. The designer must weigh the application requirements against the general performance of the motor type to determine which frame size best meets the application needs.



For example, an application requiring a 200 watt output was analyzed to determine the “sweet spot,” or the area where the motor size and speed were best optimized. A 500 cubic inch motor must run at 1000 rpm to meet the power requirements. A general-purpose motor could be run at 100 rpm to meet the specification, but the motor would likely be unreasonable for most projects in both size and cost. Selecting a motor in the “sweet spot” allows the designer to choose the ideal motor package size while keeping project costs in check.