

## **Process Motor Sizing**

The main motor driver for Process compressors will typically be a direct coupled electric induction motor or direct coupled electric synchronous motor. Drivers should be selected to provide enough power to meet the compression requirements. Best Practice and industry standard is to apply a 10% margin over the greatest compressor power demand for the driver selection. For electric motor drivers, this 10% margin can be applied to the motor rated horsepower, or to the Service Factor. If applied to the Service Factor, a specific review is required with the motor and motor controller suppliers to ensure continuous operation within Service Factor can be allowed. Users must also be aware and accept operation within Service Factor.

This 10% margin is a selection criterion to account for the variables affecting power demand and power supply. This is not meant to limit the use of the available driver power. Once installed, the full power rating may be used.

Refer to <u>Driver Power Rating</u> topic for information on what information is needed for quoting, purchasing and performing studies for electric drive compressors.

Motor driven reciprocating compressors typically require a <u>torsional response analysis</u>, current pulsation analysis and <u>starting torque analysis</u>. These studies will determine final coupling selection and if a flywheel is required.