



A Leader in Electric Motor Testing

Tip Of The Week

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Insulation Temperature Limits

The National Electrical Manufacturers Association (NEMA) has established the average Insulation Life of motor insulation, based on maximum operating temperature, to be around 20,000 hours. NEMA classifies insulation into four different classes: **Class A** insulation has a recommended maximum operating temperature limit of 105 °C or 221 °F, **Class B** limit of 130 °C or 266 °F, **Class F** limit of 155 °C or 311 °F, and **Class H** limit of 180 °C or 356 °F. A good rule of thumb is for every 10° C rise above the established NEMA temperature rating, the motor insulation life may be reduced by half. The most common insulation class in the U.S. is Class B for 60 cycle motors and the most common class used internationally is Class F for 50 cycle motors.

To see effects of high temperature on motor insulation, view the *Some Like It Hot* video at:
<http://www.pdma.com/webinars/Hot/Hot/Hot.html>

Source: <http://www.engineeringtoolbox.com/>

You are invited to submit an Electric Motor Testing Tip of your own and receive a free PdMA® mug or hat if we publish it! Contact Lou at 813-621-6463 ext. 126 or lou@pdma.com.

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