Unlocking the Benefits of SynRM Technology: A recent study reveals the low bearing temperatures achieved by the ABB SynRM motor. Lower temperatures play a crucial role in increasing energy and cost efficiency, as well as promoting sustainability.

Optimizing Bearing Performance with SynRM Motors
Through comprehensive testing of both SynRM and induction motors together with a drive, compelling evidence regarding bearing temperature emerges. These findings strongly support the statement that the bearing temperature at D-end of a SynRM motor is typically 5-15°C lower compared to an induction motor operated with a drive.

Extend Bearing Lifetime
The consequential impact of this temperature differential is either to maintain the existing grease intervals and get an extended bearing lifetime, or leverage the temperature margin to get longer re-greasing intervals.

Elevate Efficiency and Reliability
Lower temperatures increase the reliability, prolong the motor lifetime, and reduce the need for maintenance. Lower energy usage and maintenance needs also result in a lower total cost of ownership, increasing not only energy efficiency but also cost efficiency.

Lower bearing temperatures are an important factor in reducing life-cycle costs because bearing failures account for about 70% of unplanned motor outages.

Moreover, maintaining optimal operating temperatures not only enhances the motor’s performance but also contributes to a more sustainable operation.

- Lower temperature
- Extended bearing lifetime
- Longer re-greasing intervals
- Save money - less lubrication rounds
Lubrication plate comparison

As a result of the latest test data, lubrication intervals have been adjusted accordingly. This update is reflected in the lubrication plate for SynRM motors as well as in the table presented in the most recent SynRM catalog.

Below, a side-by-side comparison of the new lubrication plate on the left and the previous version on the right. There is a substantial enhancement in re-greasing intervals at 1500 rpm, from 9600 hours to an impressive 16000 hours.

ABB SynRM motors are engineered for ultra-premium IE5 efficiency, with up to 40% lower losses than regular motors.