

M version – Cost-effective and robust

The balls and rings of M-series X-life High-Speed spindle bearings are manufactured from the proven 100Cr6 rolling bearing steel. This version provides a high-performance, cost-effective bearing solution for motor spindles.



Technical advantages

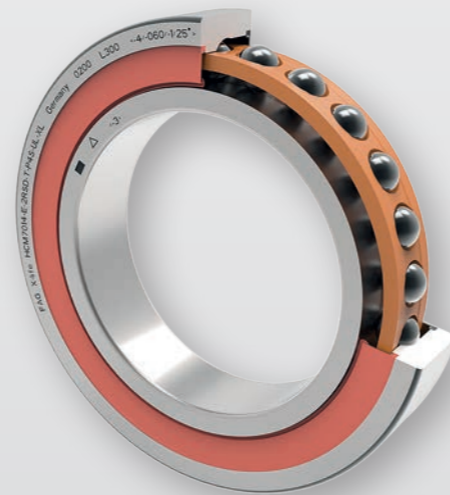
- Robustness and high performance
- Reduced bearing preload
- High operating and limiting speeds
- Available in open and sealed designs

Customer benefits

- Cost-effective bearing solution
- Longer machine running times
- Lower maintenance and unit costs

HCM version – For outstanding productivity

HCM-type X-life High-Speed spindle bearings are equipped with temperature-resistant ceramic balls and rings made from 100Cr6 rolling bearing steel. Thanks to their high performance capability and suitability for very high speeds, HCM spindle bearings allow the performance of motor spindles to be increased.



Technical advantages

- Robustness and high performance
- Reduced bearing preload
- Very high operating and limiting speeds
- Available in open and sealed designs

Customer benefits

- Higher performance
- Longer machine running times
- Very high productivity
- Lower maintenance and unit costs

VCM version – New degrees of freedom in design

The VCM version also features balls made from ceramic material, but with bearing rings made from the newly-developed Vacrodur high-performance material. This steel is characterized by its extremely high load carrying capacity, wear resistance, and very high temperature resistance. This material demonstrates its capabilities particularly in the case of abnormal lubrication conditions or contamination. VCM-type spindle bearings specifically open up new levels of freedom when designing main spindles compared to conventional spindle bearings.



Technical advantages

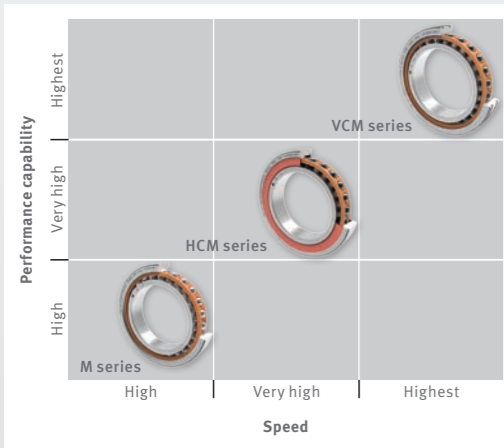
- Resistant to high temperatures of up to 400 °C
- 13 times longer nominal rating life with EHD lubrication
- 25 times longer nominal rating life under mixed friction conditions
- Highest operating and limiting speeds
- Available in open and sealed designs

Customer benefits

- Outstanding performance
- Significantly longer machine running times
- Outstanding productivity
- Highest possible machine availability

X-LIFE – PROVEN TO BE BETTER

The new M-series High-Speed spindle bearings



With its “M series”, Schaeffler presents a new, technically and economically sophisticated concept for increasing the productivity of machine tools.

Three X-life High-Speed spindle bearing versions offer great potential for increasing the load carrying capacity of motor spindles even further with regard to maximum speed, high machining forces, and high temperatures.

M version – cost-effective and robust

- Balls and bearing rings made from rolling bearing steel
- Cost-effective bearing solution for motor spindles

HCM version – for outstanding productivity

- Balls made from ceramic material, rings made from rolling bearing steel
- High performance capability and suitability for high speeds for increased performance

VCM version – new degrees of freedom in design

- Balls made from ceramic material, rings made from Vacrodur high-performance steel
- New degrees of freedom for the design engineer due to extremely high load carrying capacity, wear resistance, and very high temperature resistance

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Rolling bearings

Plain bearings

Linear technology

HIGH-SPEED SPINDLE BEARINGS

M Series

