
Motorsport industry

Hewland Engineering

Engineering consultancy service

Cylindrical roller bearings

Tapered roller bearings

Four-point angular contact ball bearings



Hewland Engineering develop winning transmissions

Hewland Engineering, one of the most famous brand names in global motorsport, has specified SKF bearings across its entire product range in order to continue to offer transmissions capable of the highest levels of performance available to its customers. As well as incorporating SKF's leading bearing technology, Hewland Engineering is sharing the knowledge engineering company's 100 years of invaluable experience and expertise.

Having invented the bespoke racing car gearbox, Hewland Engineering has supplied the world's racing car constructors with bespoke transmissions for fifty years. The company now supplies the leading motorsport teams across a diverse range of racing series worldwide.

Andy Scott, Design Director at Hewland Engineering, explained why the company chose to work exclusively with SKF for its bearing requirements, 'We were using a number of bearing manufacturers previously, but SKF stood out as the supplier that consistently offered components that combined the highest levels of performance and reliability, which

are two factors essential in transmissions designed for motorsport. For this reason, we decided to specify SKF bearings across our entire product range. Using a single supplier also offers the added benefit of standardisation, eliminating the problems that we experienced previously with small variations in specifications from different suppliers'.

Hewland Engineering uses SKF cylindrical roller bearings in its state-of-the-art transmissions, as well as tapered roller bearings and four-point angular contact ball bearings. With transmissions needing to be as compact and lightweight as possible in motorsport, the company specifies bearings with a small aspect ratio, such as SKF Explorer series. These single row cylindrical bearings can accommodate much heavier radial loads and higher speeds than conventional bearings, enabling a smaller bearing to be used than would otherwise be possible.



The roller end to flange contact within both SKF Explorer cylindrical and tapered roller bearings are specially designed to provide improved lubrication, reduced friction and consequently lower operating temperature. This results in increased performance and reliability as well as reduced sensitivity to misalignment, once again making the bearings ideal components for use in motorsport transmissions.

SKF's four-point contact ball bearings used by Hewland Engineering are radial single row angular contact ball bearings with raceways that are designed to support axial loads acting in both directions. These bearings take up considerably less axial space than double row bearings; a considerable benefit in high performance racing transmissions where space is at a premium.

As well as supplying bearings to Hewland Engineering, SKF also assist the company in re-manufacturing the inner and outer races of bearings to bespoke specifications when required by a particular design project. This enables Hewland Engineering to meet the requirements of its customers as closely as possible.

With the extremely aggressive environment of international motorsport resulting in bearings only being suitable for use once or twice before requiring replacement, Hewland Engineering are able to send the used bearings to SKF for expert analysis. Andy Scott explained, *'SKF offers us much more than bearings, its technical support is invaluable. It helps us to continue to develop world-leading transmissions and to reduce the time, resource and money required for research and development'*.



SKF Explorer tapered roller bearing



SKF Explorer cylindrical roller bearing

SKF (U.K.) Limited

T: 01582 490049

marketing.uk@skf.com

www.skf.co.uk

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