

## Product Selection According to Usage Environment

When using the product in locations exposed to constant vibrations or under special circumstances such as in clean rooms, vacuums, and low/high temperatures, it may not be possible to use standard grease. In such cases, THK will recommend the optimal lubricant. Please contact THK for details.

Usage environment/ Conditions	Lubrication	THK product
Environments with spattering coolant	<ul style="list-style-type: none"> <li>– To stop the coolant from causing emulsification, use grease that does not easily wash away.</li> <li>– Use grease with extreme pressure and rust-proofing performance.</li> </ul> <p>Note: In environments where water-soluble coolants may spatter, there are occasions where certain types of coolant may cause emulsification or cause the grease to wash away, even if using medium-viscosity lubricant. This, in turn, may then reduce lubricity and prevent a proper oil film from forming. Check the compatibility between the lubricant and coolant.</p> <ul style="list-style-type: none"> <li>● Daphne Super Multi Oil (Idemitsu)</li> <li>● Mobil Vactra Oil No. 2 SLC (Exxon Mobil)</li> </ul>	<ul style="list-style-type: none"> <li>– Please note that applying coolant directly to THK products may have an adverse effect on components/parts made of resin, rubber, etc.</li> <li>– Consider using designs where coolant cannot come into direct contact with THK products (consider using covers or bellows).</li> <li>– Consider using some of the various dust-proofing options available in order to prevent coolant from getting inside THK products.</li> </ul>
High-temperature environment	<ul style="list-style-type: none"> <li>– Please note that the higher the temperature, the greater the risk of the grease separating and the lubrication performance dropping.</li> </ul>	<ul style="list-style-type: none"> <li>– Contact THK for a range of high-temperature specification products.</li> </ul>
Clean room	<ul style="list-style-type: none"> <li>– THK also offers a range of clean room-compatible grease products.</li> </ul> <ul style="list-style-type: none"> <li>● AFE-CA Grease (THK)</li> <li>● AFF Grease (THK)</li> <li>● L100 Grease (THK)</li> </ul>	<ul style="list-style-type: none"> <li>– Two reasons for the generation of dust are metal-to-metal contact and mutual friction between rolling elements. THK offers a range of products with a cage for minimizing metal-to-metal contact and mutual friction between the rolling elements. Furthermore, the cage is also structured in a way that maintains the lubricity, making it suitable for use in clean rooms.</li> <li>– Anti-rust oil is applied as standard, so please specify if it is not required.</li> </ul>
Vacuum environments	<ul style="list-style-type: none"> <li>– Use fluorinated lubricants for vacuums (vapor pressure varies by brand).</li> <li>– Using vacuum grease will make it more likely that the oil film will break due to its low extreme pressure resistance compared to general industrial grease. Be sure that there is a reliable feeding of oil to the raceways (by increasing the number of relubrications, etc.) in order to ensure that the oil film does not break.</li> </ul> <p>Note: If using vacuum greases, please note that some brands have starting resistances several times greater than general-purpose grease.</p>	<ul style="list-style-type: none"> <li>– Please note that under vacuum environments, there is a risk that gas given off by resin and rubber materials may cause the vacuum level to decrease.</li> <li>– Please consider using stainless steel or surface-treated products as a rust-proofing measure.</li> </ul>
High-speed moving parts	<ul style="list-style-type: none"> <li>– Use a lubricant with a low base oil kinematic viscosity to prevent heat generated by resistance from the lubricant.</li> <li>– THK offers a range of grease products with excellent high-speed specifications.</li> </ul> <ul style="list-style-type: none"> <li>● AFA Grease (THK)</li> <li>● AFG Grease (THK)</li> <li>● AFJ Grease (THK)</li> </ul>	<ul style="list-style-type: none"> <li>– Metal-to-metal contact and mutual friction between the rolling elements inside products may produce noise and quickly lead to damage.</li> <li>– THK offers a range of caged products with excellent high-speed and noise-dampening properties.</li> </ul>
Environments with water	<ul style="list-style-type: none"> <li>– Use grease with high water-proofing properties.</li> <li>– Use a lubricant with high extreme pressure resistance that does not easily wash away.</li> </ul> <ul style="list-style-type: none"> <li>● L700 Grease (THK)</li> </ul> <p>– Contact THK for instructions regarding lubricating in and around water.</p>	<ul style="list-style-type: none"> <li>– Consider using designs where water cannot come into contact with THK products. (Consider using bellows or covers.)</li> <li>– Consider using stainless steel or surface-treated products as a rust-proofing measure.</li> <li>– Consider using some of the various dust-proofing options available in order to prevent water from getting inside the product.</li> </ul>
Food machinery	<ul style="list-style-type: none"> <li>– Consider using grease that is made for food processing and that is safe for people.</li> </ul> <ul style="list-style-type: none"> <li>● L700 Grease (THK) (NSF H1 standard accredited)</li> </ul>	<ul style="list-style-type: none"> <li>– Consider using covers if there is the possibility of lubricant spattering.</li> </ul>
Micro-vibration	<ul style="list-style-type: none"> <li>– THK offers a range of grease products that work particularly well under micro-vibrations.</li> </ul> <ul style="list-style-type: none"> <li>● AFC Grease (THK)</li> <li>● AFJ Grease (THK)</li> </ul>	<ul style="list-style-type: none"> <li>– Oil films formed at the points of contact between the rolling elements and raceway are likely to break in environments with micro-vibrations.</li> <li>– By periodically overstroking, the lubricant will form an oil film at the points of contact between the rolling elements and raceway.</li> </ul>