



## Why is the standard grease fill 25% to 35%?

by Mike Mortensen - Director of Engineering RBI-USA

Our standard bearings are used in a wide variety of application conditions, each requiring a proper grease fill to optimize bearing life. As the life of the bearing is impacted greatly by grease life, how do we obtain more grease life? The answer to this question may be to add more grease.

Perhaps the next question would be how much grease to add. Can we fill the bearing up 100%? This would not be a practical solution, because once the bearing rotates, the rolling elements and cage would force their way through the grease and cause it to displace somewhere - typically out through the seals or shields. So, the initial fill of grease is not as important as the resultant fill.

For slower speed applications grease fills from 50% to 70% may be provided. In contrast, high speed applications often require a smaller grease fill, perhaps 15% to 20%. In high speed applications, excessive heat generation and grease churning due to the extreme dynamic forces experienced by the bearing can actually cause bearing failure when grease fill is too high.

The balance is to provide enough grease to provide adequate grease life but not so much that the grease purges or causes the bearing to overheat. To optimize bearing life for the wide range of our customer applications, RBI has chosen a grease fill of 25% to 35%. This range offers good bearing life and minimizes the likelihood of purging. For more demanding applications, non-standard grease fills may be specified to achieve desired bearing operation.

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