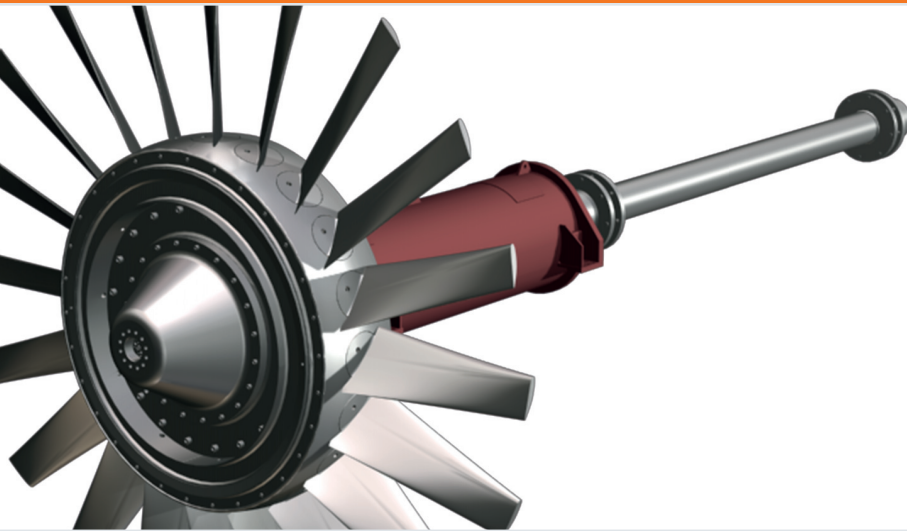


Upgrade of coupling



For further information on axial fan retrofit solutions please visit www.howden.com or contact your local Howden company.

An upgraded coupling will not only be maintenance free, it will also reduce vibrations and extend service intervals and it will reduce the axial forces to the hub and main bearing assembly.

Maintenance free coupling

The flexible disc coupling or spacer coupling is the best solution for both single stage and two stage fans for one simple reason: It is lightweight and maintenance free.

Misalignments arise in all rotating machinery due to various reasons, like temperature variations, bearing wear, foundation settling, etc. However, for this coupling type the all steel disc packs allow higher limits for misalignment than other coupling types.

Since the middle of the 1970s this coupling type has been a standard solution for many axial fans. Fans supplied to the power stations in the 1950s and 1960s were equipped with either a gear coupling or a rubber sleeve coupling.

Gear coupling (tooth coupling)

The gear coupling was used for both single stage and two stage fans. The disadvantage of gear couplings is their heavy weight and limited lifetime caused by wear inside the gear and the risk of lack of grease. The vibration level is often high and difficult to reduce. Furthermore, axial forces caused by thermal expansion will be transferred to the main

bearing assembly. The demand for alignment of the gear coupling is very high.

Spare parts for the gear coupling are rather expensive and have long delivery times because it is a rare and old product.

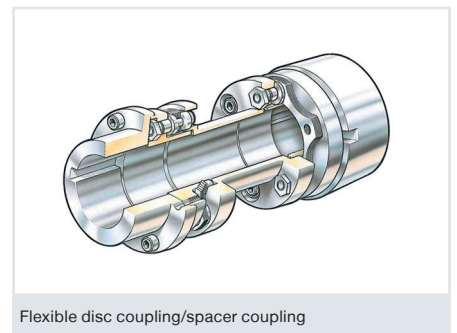
Rubber sleeve coupling

The rubber sleeve coupling is only used for single stage fans as it needs the main bearing shaft and the motor shaft to be close together. It can be a very useful alternative to the gear coupling although it is still necessary to replace the rubber sleeves from time to time because of wear (according to the Maintenance Manual).

The retrofit solution

Whether the need is to upgrade the coupling of a single stage fan or a two stage fan, let Howden assist you in evaluating the possibilities, calculating the coupling dimensions and stiffness, and measuring the dimensions of the fan shaft and motor shaft.

Absence of the correct coupling dimensions will cause inexpedient vibrations and severe consequential problems.



Flexible disc coupling/spacer coupling



Gear coupling (tooth coupling)



Rubber sleeve coupling

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