



T-Solid – Smart retrofit kit for prematurely failing pitch bearings



Field issues

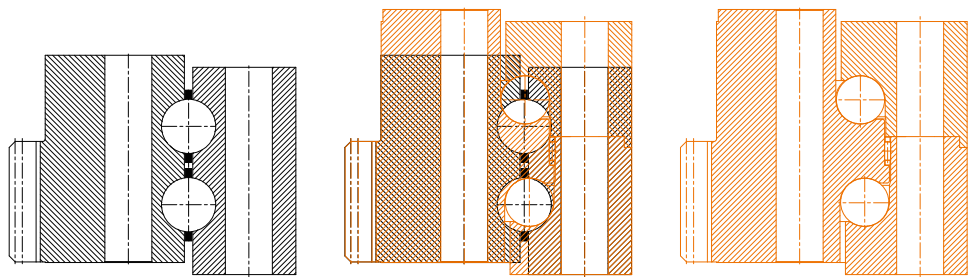
- Several 4-point contact pitch bearings fail prematurely and need to be replaced
- Neither blade root nor hub can be fundamentally reinforced on site
- Excessive deformations result in higher torque which may cause frequent pitch errors
- Often a replacement only temporarily fixes the issue until another costly pitch bearing replacement is required

Change in paradigm

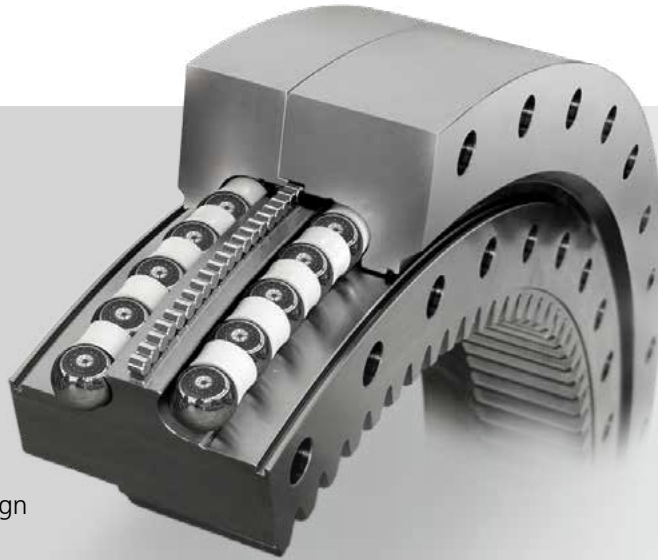
If you cannot avoid the detrimental deformation effects, choose a bearing design which can simply withstand it!

Solution – IMO's T-Solid retrofit kit

- Safe operation even under heavy deformations thanks to its advanced 3-rings/3-raceways design
- No ring expansion due to no additional radial forces from load transmission
- No edge loading, no raceway spalling, no cage overload, no leakage issues
- Same hub and blade bolt circle diameters, same gears! Exact replacement, only bearing height increases slightly
- Higher efficiency due to reduced friction torque
- Manufacturer independent design, suitable for all fielded turbines and pitch bearings – can be tailored to your individual requirements
- Designed by industry experts
- Field proven in 2-3 MW wind turbines



T-Solid (in orange color) compared with 4-point contact pitch bearing to be replaced – same bolt pattern, same gearing! Longer bolts are required due to slightly increased bearing height.



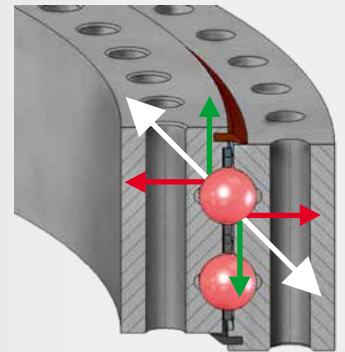
Specifications

- 3-rings/3-raceways design
- Inner or outer ring split
- Double row axial raceways
- 90 deg ball contact angle
- Single row radial raceway
- 0 deg roller contact angle
- Ball separation by spacers
- No filling plug required
- For electric & hydraulic pitch

Retrofit kit includes pitch bearings, new bolts, nuts & washers

Your advantages

- Easy retrofit, same form, fit & function
- 20 year service life
- Improves your AEP (annual electricity production)
- Ensures your ROI (return on investment)



In 4-point contact pitch bearings the forces always result in radial loads which periodically widen the outer bearing rings.

By contrast, in IMO's T-Solid bearings the dominating axial forces will be directly passed through.

