# Static limiting load curve

## WD-L 0343

Customer: Date: 10. Aug. 2011

Ident-Nr.: Person: Moßner

Projekt:

Fixing bolts: Outer ring: 18 x M16 - 10.9 / Bolt tightening torque: 246 Nm

Inner ring: 24 x M16 - 10.9 / Bolt tightening torque: 246 Nm

Load type: **Suspended axial load**

The static limiting load diagramm is based upon the application factor $f_a$ = 1 , upon the tightening factor factor $\alpha_A$ = 1,6 , upon the clamping length ratio $l_k/d$ >=5 and upon the bolt preload of 90% of tension at the yield point of bolt material $R_{p\,0,2}$.
Factors, which increase the load on the slew drive, or e.g. test loads have to be considered.
The operation point ($F_{axD}$;$M_{kD}$) has to be under the limiting load curves for the race way and fixing bolts.
Please pay strict attention to the technical background section of IMO's Slew Drive Product Catalog !

The static limiting curve can be used, if this demand is met:

$$F_{rad} \le 220 \times \frac{M_k}{1000} + 0.5 \times F_{ax}$$

$$F_{axD} = F_{ax} \times f_a$$

$$M_{kD} = \left( M_k + 1.73 \times F_{rad} \times \frac{DL}{1000} \right) \times f_a$$

$F_{ax}$ = *axial load [kN]*
$F_{rad}$ = *radial load [kN]*
$M_k$ = *tilting moment [kNm]*
$f_a$ = *application factor [-]*
$DL$ = *raceway diameter [mm]*

$F_{axD}$ = *equivalent axial load incl. $f_a$ [kN]*
$M_{kD}$ = *equivalent tilting moment incl. $f_a$ und $F_{rad}$ [kNm]*