

## Load capacity:

The load capacity of the ball bearing is specified as load rating C in daN and tested under following conditions:

- 200mm roller length (short roller)
- axis fixed restrained
- rotational speed 100min<sup>-1</sup> - 200min<sup>-1</sup>
- 1.000.000 revolutions (load change)

## Service life:

From the load capacity the service life of the ball bearing could be calculated with following formula:

$$Lh = \frac{1000000}{60 \times n} \left( \frac{C}{P} \right)^p$$

Herein are:

- L<sub>h</sub>: nominal service life [h]
- C: dynamic load rating [N]
- n: revolutions [min<sup>-1</sup>]
- P: dynamic bearing load [N]  
(P = C in case of radial load only)
- p: exponent of service life equation  
(for ball bearing is considered p=3)

## Plastics:

Polypropylen (PP)

- good mechanical characteristic
- excellent shock resistance

Polyacetal (POM)

- high hardness and stiffness
- low absorption of humidity
- good friction and abrasion characteristic

Polyamid (PA)

- tenacious/rigid
- very good mechanical characteristic and abrasion resistance

Antistatic Plastics

- PP
- POM

The use of antistatic plastics is only permissible in the provided temperature range. We can not give any guarantee for the conductivity.

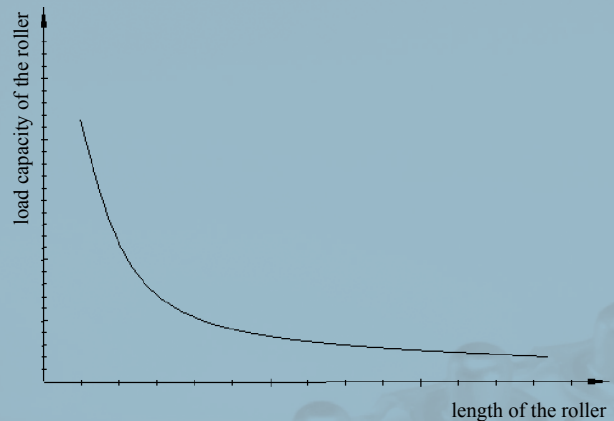
**Attention: Do not use in explosion-proofed areas !!!**

## Affecting conditions:

Under different conditions the roller manufacturer has to determine the real new load capacity of the roller by himself. Kindly note that the service life and the load capacity of your roller will be determined by:

- roller length
- axis diameter
- style of the axis
- environment influences

Influence of the roller length for the load rating:



## Lubricants:

Our ball bearings are equipped with high quality lubricants. Furthermore our special greases and oils can reach a temperature range from -35°C to +180°C. Our tested lubricants are best proved for many years under every conditions. In a given case please ask for the optimal lubricants recommended by MARKES..