To determine **Contamination Factor**; Enter a value between 0 and 1. See ISO 281 for details on how to calculate the **Contamination Factor**.

**Outputs and Interpretation**

With this tool, you can obtain the following outputs depending on where you selected the Timken or ISO 281:2007 method:

**Timken Method Outputs**

- **Catalog L10**: This is the L10 life in hours based only on bearing rating, applied loads, and speeds. Remember: L10 is the life that 90 percent of a group of apparently identical bearings is expected to meet or exceed before a fatigue spall develops.

- The **Lubrication and Low Load** life adjustment factors.

- The **Adjusted L10 Life**, which is the product of the Catalog L10 life times the life adjustment factors (lube and low load).

- **Viscosity at Operating Temp.**, which is the calculated lubricant viscosity based on the selected Lubricant and Operating Temperature chosen in the input section.

**ISO 281:2007 Method Outputs**

- **Adjusted Life L10a**: This is the product of the Catalog Life and the Life Adjustment Factors (lube and low load).

- **Lubricant Viscosity at Operating Temp.**, which is the calculated lubricant viscosity based on the selected Lubricant and Operating Temperature chosen in the input section.
ISO 281:2007 Method Outputs

- **Catalog L10**: This is the L10 life in hours based only on bearing rating, applied loads, and speeds. Remember: L10 is the life that 90 percent of a group of apparently identical bearings is expected to meet or exceed before a fatigue spall develops.

- **Adjusted Life L10 ISO**: this is the product of the Catalog Life and the ISO Life Modification Factor.

- **Fatigue Limit Load**: The bearing load under which the fatigue stress limit is just reached in the most heavily loaded raceway contact.

- **Kappa (=Viscosity ratio v/v1)**: This is the actual kinematic oil viscosity at operating temperature divided by the reference kinematic viscosity for adequate lubrication.

- **Viscosity at Operating Temp**, which is the calculated lubricant viscosity based on the selected Lubricant and Operating Temperature chosen in the input section.

- **ISO Life Modification Factor**: This output is calculated based on the applied Loads, Contamination Factor, calculated Fatigue Limit Load, and Kappa value. See the ISO standard for more details.

Still Need Help?

- Further information on the Timken method of calculating bearing life can be found in the [Timken Engineering Manual](#).
- Further information on the ISO 281: 2007 method of calculating bearing life can be found in the [ISO Standards](#).
- Contact your Timken sales office. Locate your local office by visiting [locations.timken.com](http://locations.timken.com).
- Email us at [TimkenEngineeringHelp@timken.com](mailto:TimkenEngineeringHelp@timken.com).

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