Bearings - Linear - Frelon® Lined
Information Sheet

BEARING LOAD:
- Frelon lined bearings can tolerate up to 105 kg/cm2 over the portion of the bearing that is carrying the load.
- These bearings can carry 4 to 8 times the load of ball bearings.
- A 12 mm Frelon bearing will carry as much load as a 25 mm ball bearing.

WEAR RATE:
- Although wear rates are affected by the surface finish, shaft hardness, length of travel, contamination and lubrication, these bearings last on average 4 to 8 times longer than ball bearings.

BEARING PV:
- P = Pressure or kg/cm2 on the projected area.
- V = Velocity of the wear surface in m/min.
- The maximum PV is 214 kg/cm2 = m/min.

BEARING SPEED:
- The maximum average speed without lubrication is:
  70 cm/sec – continuous
  200 cm/sec – intermittent
- When lubricated, the maximum speed is 200 cm/sec

CANTILEVERED LOADS:
- The distance between the bearings and the drive source or load should not exceed a maximum ratio of 2:1.

SHAFT FINISH AND HARDNESS:
- A shaft finish with an 0.2 to 0.3 µm Ra and a hardness of HRC 50 is recommended for best results. Acceptable performance can be attained with a finish of 0.3 to 0.4 μm R_a and a minimum hardness of HRC 35.
- Softer shafting will cause an accelerated wear to both the shaft and the bearings.
- Optional liners are available for both non hardened shafting and for use in food applications.

RUNNING CLEARANCES:
- **Precision Series –** approximately .025 mm. High precision, similar to a preloaded ball bearing.
- **Standard Series –** approximately .075 mm. Excellent for parallel shaft applications, similar to a typical ball bearing.

LUBRICATION:
- Frelon lined bearings are self lubricating.
- Additional lubrication reduces friction up to 50%, minimizes wear, reduces heat, allows greater speed, and extends wear life.
- Acceptable lubrication includes 3-in-1 oils, way lube oils and petroleum-based greases.
- DO NOT USE PTFE FLUOROCARBON AND/OR SILICONE OILS, GREASE, SPRAY, OR WD40.

NO CATASTROPHIC FAILURE:
- No shaft scoring or shock load damage. Liner dampens shock loads and vibration. These bearings provide more surface contact area than ball bearings.
- No corrosion or rust.
- No temperature induced bearing seizure. Temperature range of -240°C to +260°C. Operates with consistent friction and load bearing characteristics throughout temperature range. Liner allows heat to dissipate through the shell.