

Bearing Construction

The bearing consists of a self-lubricating woven Teflon fiber and polyester liner supported by a filament wound continuous fiberglass fiber and epoxy resin matrix.

Size range

Consult a Rexnord engineer.

Bore shapes

Helical hex and threaded.

Load Capacity

Consult a Rexnord engineer.

Motion

Duralon® bearings convert linear motion to rotary motion and rotary motion to linear motion.

Friction

Duralon® bearings offer low-friction operation. Friction decreases with increasing load. Friction coefficients vary from .16 @500 psi to .07 @ 20,000 psi.

Self-lubricated

The bearing operates self-lubricated by Teflon® transfer to the shaft surface caused by relative movement between the shaft and bearing liner under load. Lubrication can be used if desired. Consult a Rexnord engineer for approved lubricants.

Electrical Properties

The filament wound back-up material is an electrical insulator. Its dielectric strength is about 300 volts per mil. Since the back-up material is electrically non-conducting, electrolytic or galvanic action will not take place between it and the housing or the shaft.

Chemical Properties

Duralon® bearings are typically resistant to most chemicals. Due to the wide range of exposures, specific conditions must be checked. Consult a Rexnord engineer for specific chemicals.



Mechanical Properties

The mechanical properties of Duralon actuator nuts and helical bearings depends on the design. Consult Rexnord engineers for your specific application.

Temperature Ranges

| Continuous | | Intermittent |
|------------|--------|--------------|
| Min °F | Max °F | Max °F |
| -65° (3) | 325° | 400° |

(3) Duralon® bearings can be used in cryogenic applications. Consult a Rexnord engineer.

Thermal Properties⁽⁴⁾

| | Duralon® | Aluminum | Steel |
|---|-------------------------|-------------------------|------------------------|
| Expansion (in / in / °F) | | | |
| Axial direction | 15.0 x 10 ⁻⁶ | 13.3 x 10 ⁻⁶ | 6.0 x 10 ⁻⁶ |
| Hoop direction | 7.0 x 10 ⁻⁶ | 13.3 x 10 ⁻⁶ | 6.0 x 10 ⁻⁶ |
| Conductivity (BTU in / Ft ² °F Hr) | 1.4 | 610 - 1100 | 95 - 185 |

(4) Comparative values of the coefficient of expansion for the filament wound back-up material, aluminum and steel are given in table 2. The similarity between steel and Duralon bearings in the hoop direction should be noted. A higher value for thermal expansion is realized in the axial direction because of the fiberglass filament orientation.