

Specification: **Inertial Actuator IFX22-200**

Rated Force:

70 N peak at 18 Watt at 70 Hz, with coil at 20°C, due to displacement limit. (mounted in a ≥ 50 lb block)
70 N peak at 18 Watt at 70 hz, with coil at 140°C.
110 Newtons per Ampere at 70 Hz; 11.5 Newtons per Ampere above 200 Hz, with coil at 140°C.
The force constant is independent of the direction and amount of current.

Electrical:

Coil resistance: 6 Ohm
Time constant: $\leq .9$ millisec

Temperature:

Drop in force constant for 100°C rise: 20%
Increase in resistance for 100°C rise: 39%
Internal temperature rise at 22 Watt input: 120°C (mounted on a 200 square cm X 2 cm thick aluminum)
Max internal temperature: 140°C

Static Armature Stiffness:

Internal spring constant: 43.4 Newtons per mm
Resonance frequency of armature 67 Hz. (unit mounted on a ≥ 50 lb block)

Mechanical:

Max armature displacement: ± 1.5 mm (internal hard stops)
Total weight: .58 Kg. Armature weight: .245 Kg
Dimensions: 60 mm diameter. 55 mm long.
Mounting: Four 8-32 screws on 38 mm circle
Housing completely sealed, no external moving parts

Fatigue Life:

Infinite fatigue life if armature amplitude does not exceed 1.0 mm.
This translates into a max force of 50 N at 70 Hz.
For other frequencies: $F \leq .01xf^2$, where F is the force in Newtons and f is the frequency in Hz.

Stray Magnetic Field:

Mounting surface: .04 Tesla max. Cylinder surface: .01 Tesla max



