

Specification: **Inertial Actuator IFX400-100**

Rated Force:

1334 N peak at 66 Watt at 120 Hz, with coil at 140°C, due to displacement limit. (mounted in a \geq 500 lb block)
250 Newtons per Ampere at 120 Hz; 36 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: 2.1 Ohm
Time constant: \leq .9 millisecc

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: 1120 Newtons per mm
Resonance frequency of armature 114 Hz. (unit mounted on a \geq 500 lb block)

Mechanical:

Max armature displacement: \pm 2 mm (internal hard stops)
Max armature displacement for infinite spring life: \pm 1 mm
Total weight: 4.8 Kg. Armature weight: 2.18 Kg
Dimensions: 94 mm diameter, 119 mm long
Mounting: Four 10-24 screws on 38 mm BC
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 1334 N at 120 Hz.
For other frequencies: $F \leq .093 \times f^2$, where F is the force in Newtons and f is the frequency in Hz.

Stray Magnetic Field:

Mounting surface: .07 Tesla max. Cylinder surface: .07 Tesla max



