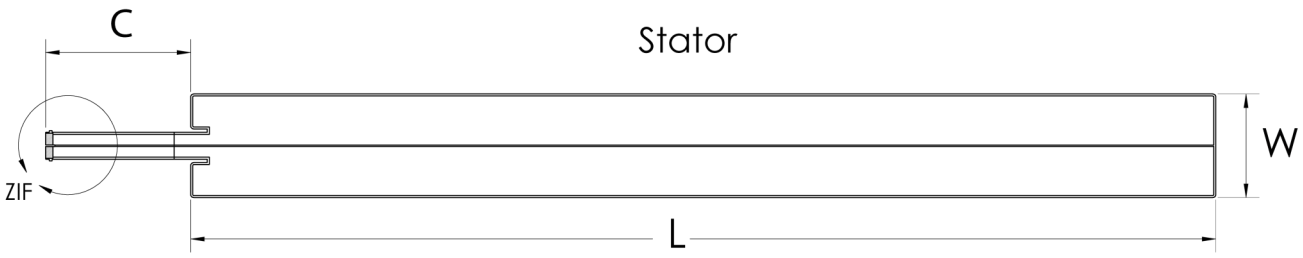
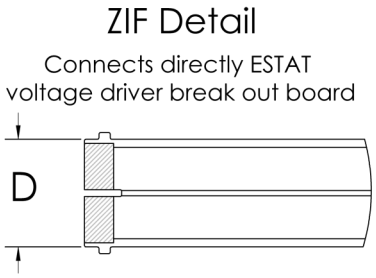
ESTAT
ACTUATION

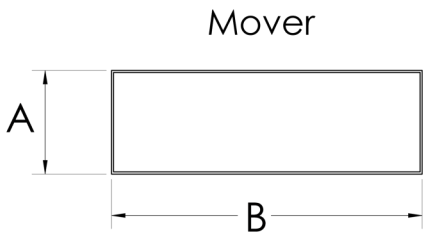
Compact motion starts—and stops—with us

UltraSlim Linear Brakes and Electroadhesive Samples

UltraSlim Linear Brakes fit where no other brake can fit. They can be as thin as 0.4 mm (.015”), consume negligible power, generate no heat, and experience silent, vibration free operation. Two standard evaluation brake sizes are available with customization possibilities. The electroadhesive sample can be used to grip smooth, clean conductive surfaces.



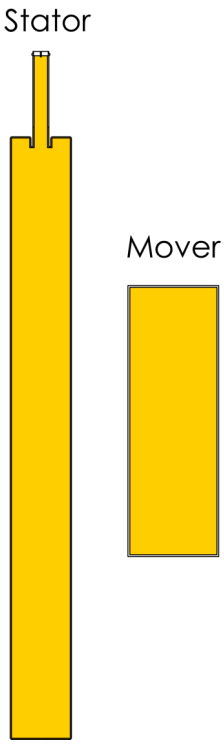




	Model			
Technical Specifications	**50 mm Evaluation**	**29 mm Evaluation**	**Electroadhesive Sample**	**Custom Max— Min**
W—Stator width (mm)	50	29	50	10—120
L—Stator Length (adjustable to order +/- 2mm)	50-1000	50-1000	200	10-1000
C—Tail length	70	70	70	10-100
D—Tail Width	13	13	13	13
A—Standard Carriage lengths (mm) Rated loads (N) for each length	100, 150 [50 , 75]	100, 150 [29, 43]	N/A (see reverse)	10-1000 (see reverse)
B—Standard Carriage Width	50	29	50	≤ Stator Width
Ideal Gap between moving and stationary components (not including the brake)	0.77 mm	1.14mm	N/A	0.4—2.0 mm
Compatible voltage supplies	All ESTAT drivers	All ESTAT drivers	All ESTAT drivers	All ESTAT drivers

**Power consumption at one Hz cycling is the average power consumption experienced by the clutch when it is activated for 0.5 seconds and deactivated for 0.5 seconds in a repeating cycle.*

UltraSlim Brake overview:

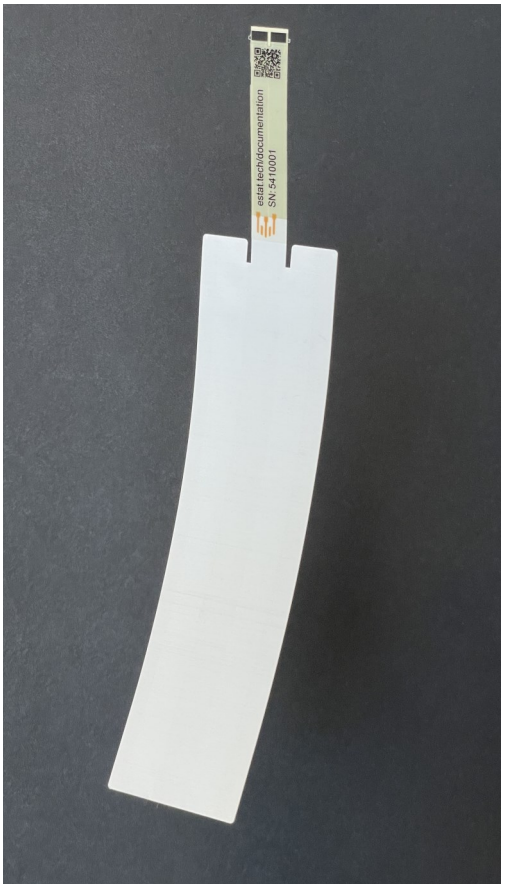


The **UltraSlim Linear Brake** allows users to experience ESTAT's electroadhesives within minutes of unboxing. The pre-applied Pressure Sensitive Adhesives make installation easy and fast. (Ask us about our gecko adhesive options if multiple installations and removals are anticipated).

The brake is composed of a stator and a mover. Only the stator requires an electrical connection to our matching voltage driver. It is typically mounted to the stationary portion of the system. The mover is shorter and passive. It does not require connection to power.

Holding force:

The holding force of the brake is proportional to the area of overlap between the stator and the mover. 1 N/cm^2 of overlap gives a good estimation of holding force.



Device operation and installation:

To install an UltraSlim brake, simply peel back the paper backing to reveal the adhesive and apply to a clean, dry surface, just like you are applying a decal or screen protector .

The brakes themselves are extremely compact. Our standard evaluation products are 0.76 mm thick (0.030 inches) and are available in 0.4 mm (0.015 inch) thicknesses for custom orders. We recommend the 0.76 mm models for ease of handling and installation.

UltraSlim brakes pair with an ESTAT voltage driver. The brakes engage when voltage is applied. If a "normally closed" configuration is desired, a Power-Off-Engage (POE) circuit can be provided. See our white paper to learn more. Additionally, the voltage driver can be controlled to enable the brake to be used as a "mechanical fuse" with controllable break away load. Each brake ships with a break out board to simplify connection to our voltage drivers while still allowing the thin tail to be fed through small gaps and slots.

Electroadhesive Samples

Don't limit our UltraSlim Brakes to braking! Think of them as "silent, controllable Velcro." They can act as a gripper, lock, or latch. While the strongest connections are between a "stator" and "mover," the stator of an UltraSlim brake can be used to adhere to clean/smooth conductive materials. Holding force is highly dependent on the substrate and as such we provide a quick and easy to use sample for testing on your materials.