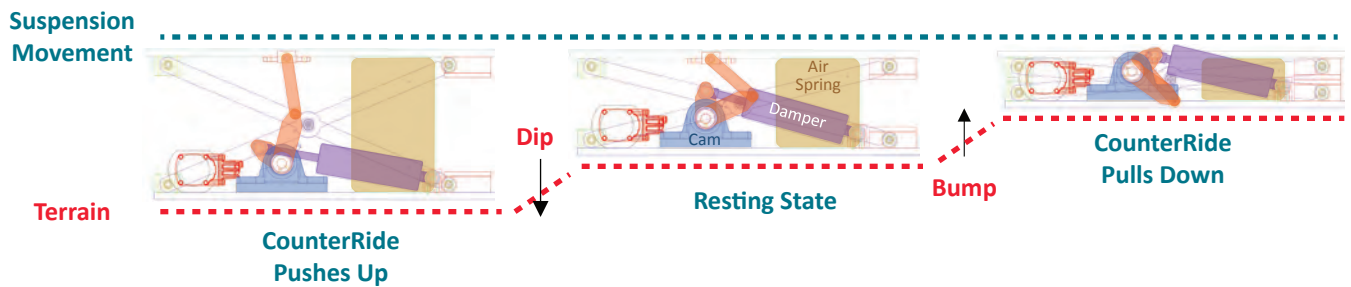


More than the sum of its parts, Suspension Systems Technologies’ (SST’s) CounterRide™ is a groundbreaking, passive, and low-profile suspension that provides unparalleled shock, movement, and vibration mitigation. Our economical design exceeds the performance of most conventional suspensions and rivals much more costly and complex active suspension performance.

**How CounterRide Works**

A horizontal damper, a circular cam and three interconnected lever arms form the heart of the SST suspension. When encountering small dips or bumps, CounterRide’s lever arms move the payload or occupant in the opposite direction of the terrain—and cancel out almost all movements and vibrations.



Our patented and patent pending functionality might at first seem counterintuitive, but it’s no mistake. CounterRide is truly unique and behaves in a fundamentally different way compared to all other commercially available suspensions.

*The figure to the right highlights the contributions provided by CounterRide’s lever arms and cam. When traveling over bumps and potholes, the cam and lever arms work synergistically to rapidly engage the damper. The rapid engagement means that a damper with much lower resistance can be used—dramatically reducing suspension friction. On rough surfaces, the levers and cam work together to cancel out the visible movements. On-road, the cam and lever arms work together to reflect the vibrations away from the occupant or payload back into the air-spring.*

| Bumps & Potholes        | Rough Surfaces        | On-Road                |
|-------------------------|-----------------------|------------------------|
| Rapid Damper Engagement | Movement Cancellation | Vibration Cancellation |
|                         |                       |                        |

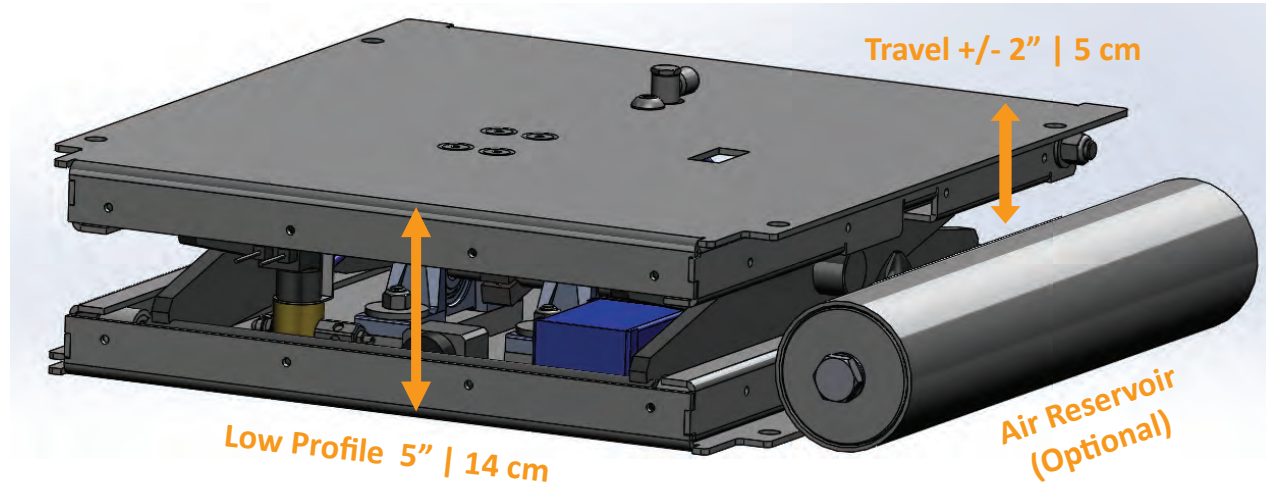
**CounterRide exploits the circular cam and lever arms to deliver a “one-two” suspension punch.**

It first provides unparalleled shock mitigation due to the cam and lever arms rapidly forcing compound engagement of the damper. Most shocks are absorbed horizontally rather than being transmitted up through the suspension. Second, the cam and the suspension’s ultra-low friction enable superior on-road vibration mitigation.

more...

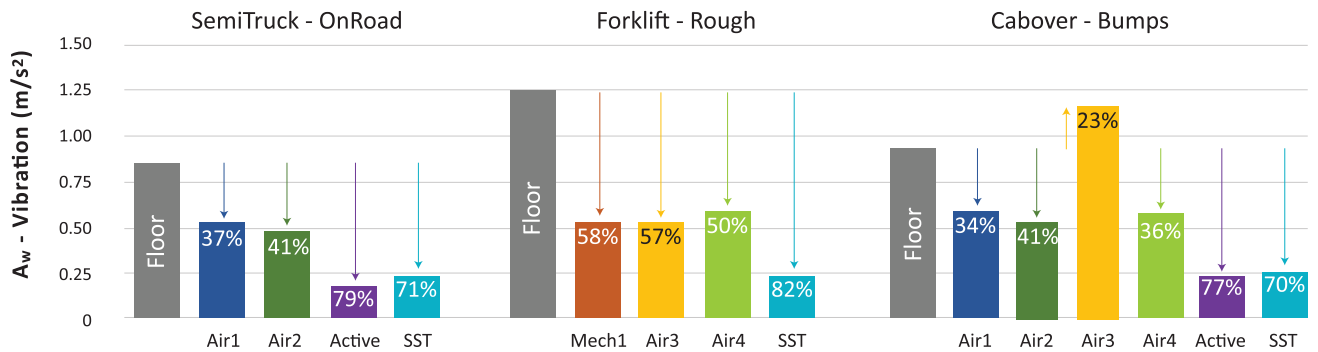
# CounterRide™ Smooth Suspension

Passive Movement and Vibration Cancelling Technology



## Design Advantages

- Superior performance and minimal travel in a low-profile package
- A lower cost and completely passive system with no electronic controllers
- Friction decreased ~30 fold due to low resistance damper and cam
- Horizontal rather than vertical bump absorption
- Comprehensive mitigation from continuous to impulsive vibration
- A flexible design that can be optimized for on- or off-road conditions



SST's CounterRide technology has been tested in a controlled, lab-based environment that recreates actual field-measured vehicle vibrations. The figures above illustrate vibration reduction under diverse operating conditions. Each figure shows the performance of a seat with an SST suspension, as well as other commercially sold mechanical, air-ride and active suspension seats. The same SST suspension—both design and damper—was used in all tests.