Extremely precise positioning of an apparatus is a common challenge in many industries. Unfortunately, in many cases the system’s environment tends not to favor any sort of stability. Such is the case when Burchfield Automation desired effective dampening of their Pan & Tilt positioning systems in a bumpy, shaky environment.

Fitting a camera to a jarring machine such as an ATV would generally produce undesirable video quality. This becomes even more difficult when the camera is required to pan and tilt or stay focused on a certain object. Both of these obstacles have been overcome with the use of Animatics Class 5 SmartMotor™ servos.

Phase offset adjustments are just one of the many programming features available to users of SmartMotor™ technology. With the SmartMotor™ solution, Burchfield was able to achieve an impressive resolution of 0.1° in heading, pitch, and roll directions. With the availability of multiple on-board I/O’s, programmable as inputs or outputs from 5-24V, the use of SmartMotor™ technology truly allows for full machine development. For example, Burchfield Automation’s Pan & Tilt systems are capable of performing tracking operations wherein a camera will stay focused on one area while the Pan & Tilt base moves with the vehicle. The result is a camera that can lock onto a target and hold it in focus regardless of vehicle movement.

Furthermore, with Class 5 motors achieving an IP65 rating, numerous environments are suitable for precise positioning systems that need to maintain stability.