

Galloping and Vibration Control for Shield Wires
Smaller Overhead Distribution Lines



APPLICATIONS

A vibration control and anti-galloping damper, this solution for shield wires twists by inertia offset, both statically and dynamically. Vibration control is achieved by allowing the eccentric weight to move against the vibration. By providing an ultra-light weight solution to control galloping on today's shield wires, the AR Twister|MOD VII can also meet the unique needs of distribution feeder lines.

Since the severity of the galloping phenomenon is a function of span length, sag, conductor geometry and mechanical properties, each AR Twister|MOD VII is engineered to address the unique features of the line.

HOW IT WORKS

The AR Twister|MOD VII reduces or eliminates galloping of the wire by twisting and untwisting to unload its aerodynamic lift. Loose galvanized steel washers inside the unit rattle to create metal-to-metal friction, thus providing damping sufficient to control high-frequency Aeolian vibrations.

A single 5/8" bolt and ANCO pin nut secures the unit to the wire.

SPECIFICATIONS

Eccentric mounting of the damper twist the wire.

AR Twisters do not hang below the line but are mounted by clamping it vertically above the conductor or at an angle of 45 to 60 degrees below the vertical. Gravity forces make the device want to fall, thereby introducing an initial twist in the wire. When galloping begins under the critical ice and wind conditions, inertial forces act upon the AR Twister causing the shield wire to twist against its initial set. Twisting the wire when there is ice on it, enables the ice shape itself to also dampen; then the twisting of the ice shape acts as an aerodynamic damper. This counter twisting results in unloading of the aerodynamic lift of the ice layer.

Galloping Control. Twisting of the conductor and/or shield wire is a proven remedy to control galloping. Tests have shown that a small amount of twist - as little as 10 degrees – will reduce gallop amplitudes to harmless levels.

PERFORMANCE TESTED

AR Clamps have been strength tested to 5000 lbs.

CONSTRUCTION

Fabricated of aluminum throughout.

Model	Shield Wire	Clamp Sizes	Damper Weight	Application
MOD VII	0.25"-0.875"	½" to 1.0"	3 lbs.	Shield Wires
	0.625"-1.00"	1.0" to 1.25"	4 lbs.	Ultra-lightweight conductors