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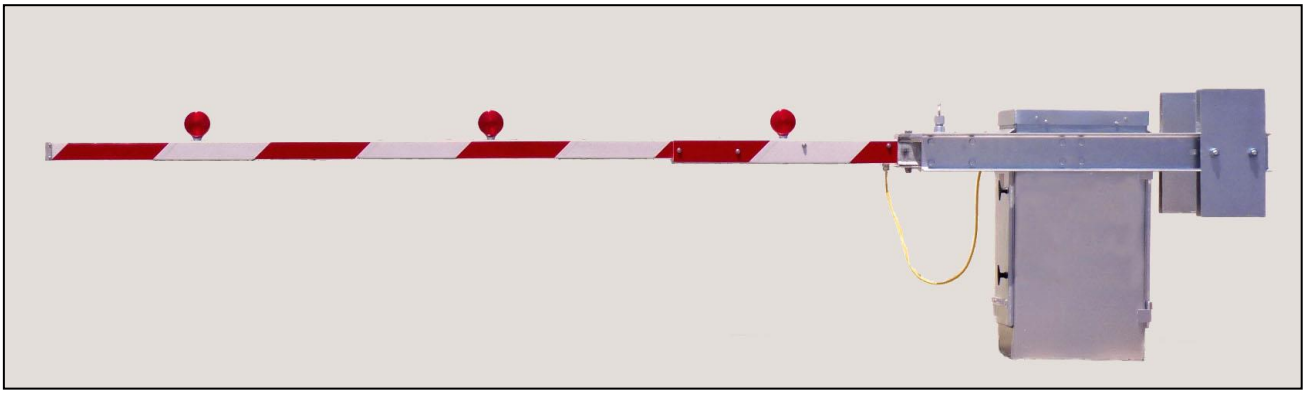
VW-2 VERTICAL WARNING GATE
Specifications



GENERAL: The warning gate shall be Model VW-2, as manufactured by B&B Roadway, (888) 560-2060.

APPLICATIONS: The gate shall be designed for use as a warning, traffic control and access control gate. The gate shall be explicitly designed for traffic control on movable bridges, HOV and reversible lanes, industrial/commercial access control and similar applications.

HOUSING: The operating mechanism and main control components shall be contained in a weatherproof housing. The housing shall be constructed of .188" (4.8mm) carbon steel, hot dip galvanized after fabrication. Exterior surfaces shall be painted aluminum. All fasteners shall be corrosion resistant. Shaft openings shall incorporate O-ring seals. Access panels shall be bolt-on and fitted with a gasket.

MOUNTING: The gate shall be fixed to a suitable foundation, as specified by the project engineer, using four 1/2" (13mm) diameter minimum anchor bolts. The gate housing base shall provide four 3/4" (19mm) holes, spaced 9-3/4" (248mm) x 17-3/4" (450mm).

ARM: The gate arm shall be 4" (102mm) square, 6005-T5 aluminum extruded tubing. [*option: with 3" square end section of high-strength UV-resistant fiberglass* or *3" square extruded aluminum.*] Maximum arm length shall be 24' (7.3m) from the centerline of the housing. Front and rear arm surfaces shall be covered with alternating red and white high intensity reflective sheeting. Stripes shall be 16" (406mm) wide, and vertical according to MUTCD. Remaining exposed surfaces shall be painted white.

Truss cables shall not be used for any length arm.

ARM BASE: The arm base shall be designed with a shear pin mechanism to minimize damage to the gate and vehicle in the event of a collision. In the event of an impact, the shear pin shall break, allowing the arm to swing approximately 60 to 80 degrees. At the full open position, a spring-loaded latch shall engage, preventing the arm from swinging back into traffic. Arm shall be easily reset by manually releasing the latch, rotating the arm back into position and replacing the shear pin.

ARM MOUNTING CHANNELS: A pair of carbon steel channels, hot dip galvanized, painted aluminum, shall be rigidly affixed to the ends of the main arm shaft. The channels and a steel crossmember shall provide a sturdy mount for the arm, arm base assembly and counterweights.

COUNTERWEIGHTS: At the rear end of the side arm channels, hot dip galvanized counterweights shall be mounted to balance the arm. Counterweights shall be sectional and shall permit at least 10% adjustment.

ARM SHAFT: The main arm shaft shall be 1-1/2" (32mm) diameter AISI 4140 high strength alloy steel with a minimum tensile strength of 140,000 psi. The shaft shall be mounted in heavy duty relubricable ball bearings.

OPERATING MECHANISM: The warning arm shall pivot in the vertical plane via a mechanical 4-bar linkage. The linkage shall utilize cranks keyed to the main arm shaft and transmission shaft and an adjustable connecting rod between a pair of self-aligning spherical rod ends. The connecting rod shall be of 3/4" (19mm) diameter AISI 4140. The linkage shall be driven by a fully enclosed, double reduction, worm gear speed reducer. Gear ratio used shall produce an operation time of 8. *[Option: Consult manufacturer for other available operation times.]*

The velocity of the arm shall follow a sinusoidal pattern to provide smooth operation. The arm shall begin and end its full motion path with zero velocity and accelerate smoothly to maximum velocity at mid-travel.

MOTOR: The motor voltage and phase shall be as specified by the customer. The motor horsepower shall be ½ hp. The motor shall be a C-face design and shall be mounted directly to the transmission. The motor shall be instantly reversing and overload protected.

BRAKING MECHANISM: The motor shall be equipped with a solenoid-release, automatic brake. The brake shall have a manual release lever to permit manual operation of the gate during emergencies or setup.

LIMIT SWITCH: The gate limit switch assembly shall be a self-contained unit. The assembly shall provide 4 independent SPDT control switches. Switches shall be rated for 15 amps, 480 VAC. Switches shall be controlled by individually adjustable cams. The limit switch assembly design shall permit adjustment of all cams with the gate in any position. The limit switch assembly shall have a removable cover to help prevent accidental contact with switch terminals. Shaft, cams, bushings and housing pieces shall be of non-ferrous corrosion resistant materials.

SAFETY SWITCHES, TERMINAL BLOCKS AND WIRING: A manual disconnect switch shall be provided, pre-wired at the factory to break the main motor leads, to protect personnel during service. Safety switches shall be installed and set at the factory to break the control circuit when an access panel is opened. Safety switches shall have a pull-to-override feature for test operation and shall automatically reset when doors are closed. Pressure-type, modular terminal blocks shall be fully labeled and clearly coded to wiring diagrams. All control wiring shall be clearly coded to wiring diagrams and shall terminate at the terminal block. Conductors shall be type XHHW #14 AWG stranded, minimum.

ACCESSORIES AND MODIFICATIONS: All common accessories and modifications shall be available. Custom modifications and accessories shall be available through coordination with manufacturer.

WARRANTY: A 1 year warranty shall cover the gate and related equipment against defective material and components. Manufacturer shall furnish replacement parts for a minimum of 10 years. Replacement parts for standard components shall normally be available within 1 working day. Lamps, fuses and other components designed for a life less than 1 year shall be covered for the rated life of the component or the warranty period of the component manufacturer.

PARTIAL LIST OF AVAILABLE OPTIONS:

Aluminum or Stainless Housing
Anchor Bolts (provided by manufacturer)
Mounting Template
Vibrating Bell
Arm Finishes, Striping Materials and Colors
Fiberglass Arm Section (at end of arm)
Arm Lights
Flasher

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