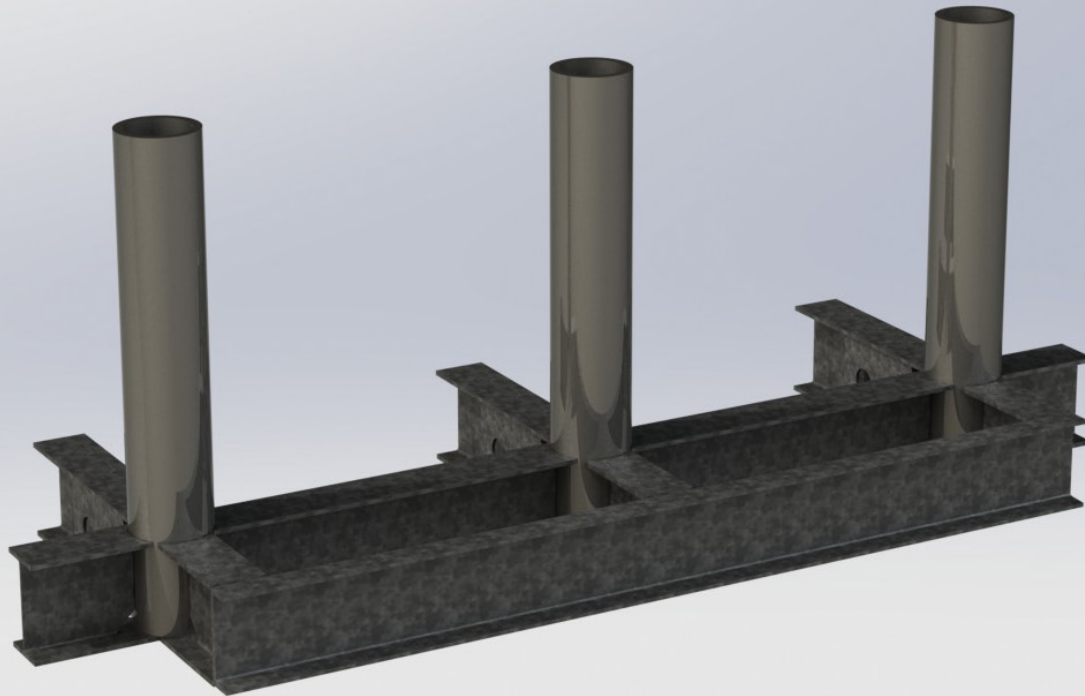


NMSB VI

K12/K8/K4 Fixed Shallow Mount Bollards



Nasatka Security bollards provide the highest level of security against unauthorized vehicle access (anti-terrorism functionality).

Nasatka Security bollard's unparalleled aesthetically pleasing designs also provide decorative flexibility (a very important aspect in an urban area). Nasatka Security bollards fit aesthetically into just about any architecture or landscape with minimal environmental impacts, construction efforts, and budget. The Nasatka Maximum Security Barrier (NMSB) VI-F (pronounced 6 F) bollards control vehicular traffic while maintaining unencumbered pedestrian traffic, architectural aesthetics, and the aesthetic-open-appearances-of-landscapes.

NMSB VI-F fixed bollards include K12, crash rated bollards, and K8 or K4 engineer rated bollards. Nasatka bollards K12/L3 and engineered K8 or K4 are constructed with superior quality steel and, in addition, are the only barriers that include hot-dipped galvanized steel as a standard feature, extending the durability of the bollard barrier system by a minimum of 15 years.

Nasatka NMSB VI-F fixed bollards are available for both shallow and full-depth installations. Nasatka NMSB VI-F fixed bollards are also available with 36 inch or 48 inch spacing.

Nasatka NMSB VI-F fixed bollards are optionally available in zinc coated primer at a reduced cost.

Features

- **High Levels of Security:**
 - K12 (15,000 lb/6810 kg at 50 mph/80 kph) / L3 (3 ft/915 mm or Less Penetration)
 - Listed on the DoD Anti-Ram Vehicle Barriers List
 - Engineer Rated K8 (15,000 lb/6810 kg at 40 mph/65 kph)
 - Engineer Rated K4 (15,000 lb/6810 kg at 30 mph/50 kph)
- 39-inches (1016 mm)
- 36 inch (915 mm) Height
- 36 inch (915 mm) or 48 inch (1.22 m) Spacing
- Available shallow or full-depth installations
- Provides Free Movement for Pedestrians
- Unparalleled Aesthetically Pleasing Designs
- Hot-dipped Galvanized Steel Standard
 - (Extends System Life a Minimum of 15 Years)

Benefits

- Endless Range of Aesthetic Designs
- Decorative Bollard Covers - Stainless Steel, Aluminum and Plastic Coated
- Available with Multiple Types of Lighting
- Selectable Security Levels
- Available in zinc coated primer
- Proven Strength and Durability
- Easy Installation Process
- Functional in Harsh Environments

Specifications

CRASH RATING

- K12 (15,000 lb / 6,800 kg @ 50 mph/ (80 kph) / L3 penetration (3 ft / 1.01 m or less) (Revision A criteria)
- Included on DoD Anti-Ram Vehicle Barriers List
- K8 engineered rated
- K4 engineered rated

IMPACT ENERGY

- K12 = 1,253 ft-kips/1,699 kJ
- K8 = 1,087 ft-kips/802 kJ
- K4 = 611 ft-kips/451 kJ

BOLLARD MATERIAL

- K12 or K8 – 10 inch (10.75-in/273 mm) SCH 140 steel pipe (1-inch/25 mm wall thickness)
- K4 – 8 inch (8.625-in/219 mm) SCH 160 steel pipe (0.906-inch/23 mm wall thickness)

BOLLARD HEIGHT

- 39-inches (915 mm)

BARRIER WEIGHT

- Individual bollard 1200 lbs (544.3 kg)
- Typical set of three bollards 3,800 lbs (1723.7 kg)

POWER REQUIREMENTS

- None (Except for bollards with optional lighting.)

FINISHES

- Standard finish is fully galvanized steel housing and bollard assembly
- Top plate made of aluminum tread plate
- A huge assortment of colors and decorative covers are available
- Optional zinc coated primer [Se Flag Note 1/ under Barrier Details (P/N)]

WARRANTY

- One Year
- Optional second and third year warranties available

BARRIER DETAILS (P/N)	BOLLARDS SPACING (Group of / Inches)	WEIGHT (Lbs.)	FOUNDATION ³ (L-W-D)	NOTES
1145-0100-0000	1/NA	1200	54 – 32 – 48	K12, Deep Mount
1145-0200-0000	2/36 or 48	2400	80/92 – 32 – 48	K12, Deep Mount
1145-0300-0000	3/36 or 48	3800	116/140 – 32 – 48	K12, Deep Mount
1145-0400-0000	4/36 or 48	4800	152/188 – 32 – 48	K12, Deep Mount
1145-0500-0000	5/36 or 48	6000	188/236 – 32 – 48	K12, Deep Mount
1146-0100-0000	1/NA	1200	54 – 72 – 12	K12, Shallow Mount
1146-0200-0000	2/36 or 48	2400	80/92 – 72 – 12	K12, Shallow Mount
1146-0300-0000	3/36 or 48	3800	120/144 – 72 – 12	K12, Shallow Mount
1146-0400-0000	4/36 or 48	4800	152/188 – 72 – 12	K12, Shallow Mount
1146-0500-0000	5/36 or 48	6000	188/236 – 72 – 12	K12, Shallow Mount
1145-0100-0800	1/NA	1200	54 – 32 – 48	K8, Deep Mount
1145-0200-0800	2/36 or 48	2400	80/92 – 32 – 48	K8, Deep Mount
1145-0300-0800	3/36 or 48	3800	116/140 – 32 – 48	K8, Deep Mount
1145-0400-0800	4/36 or 48	4800	152/188 – 32 – 48	K8, Deep Mount
1145-0500-0800	5/36 or 48	6000	188/236 – 32 – 48	K8, Deep Mount
1146-0100-0800	1/NA	1200	54 – 72 – 12	K8, Shallow Mount
1146-0200-0800	2/36 or 48	2400	80/92 – 72 – 12	K8, Shallow Mount
1146-0300-0800	3/36 or 48	3800	120/144 – 72 – 12	K8, Shallow Mount
1146-0400-0800	4/36 or 48	4800	152/188 – 72 – 12	K8, Shallow Mount
1146-0500-0800	5/36 or 48	6000	188/236 – 72 – 12	K8, Shallow Mount
1145-0100-0400	1/NA	1200	54 – 32 – 48	K4, Deep Mount
1145-0200-0400	2/36 or 48	2400	80/92 – 32 – 48	K4, Deep Mount
1145-0300-0400	3/36 or 48	3800	116/140 – 32 – 48	K4, Deep Mount
1145-0400-0400	4/36 or 48	4800	152/188 – 32 – 48	K4, Deep Mount
1145-0500-0400	5/36 or 48	6000	188/236 – 32 – 48	K4, Deep Mount
1146-0100-0400	1/NA	1200	54 – 72 – 12	K4, Shallow Mount
1146-0200-0400	2/36 or 48	2400	80/92 – 72 – 12	K4, Shallow Mount 1/
1146-0300-0400	3/36 or 48	3800	120/144 – 72 – 12	K4, Shallow Mount 1/
1146-0400-0400	4/36 or 48	4800	152/188 – 72 – 12	K4, Shallow Mount 1/
1146-0500-0400	5/36 or 48	6000	188/236 – 72 – 12	K4, Shallow Mount 1/

³ Thirty-six inch spacing shown add 12 inches to length for each adjacent bollard in an array for 48 inch spacing. Example: 2/48 would be 84.5 + 12 = 96.5 inches or 90 + 12 = 102 inches and 5/48 would be 192.5 + 12 + 12 + 12 + 12 = 240.5 inches or 198 + 12 + 12 + 12 + 12 = 246 inches.