

# BOLLARDS & BARRIERS



PERIMETER SECURITY  
SOLUTIONS TO PROTECT  
WHAT MATTERS MOST



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**AMERISTAR®**

**ASSA ABLOY**

# BOLLARDS



*Ameristar's line of fixed, retractable and removable security bollards are available in a variety of styles and crash ratings to fit your project's needs.*



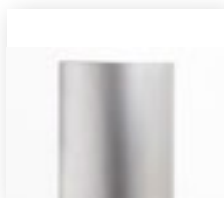
- ✓ **ENGINEERED SOLUTIONS AVAILABLE**
- ✓ **FINISH OPTIONS: GALVANIZED / BLACK (PAINTED) / ADDITIONAL COLORS AVAILABLE**
- ✓ **CUSTOM SLEEVE OPTIONS AND REFLECTIVE BANDING AVAILABLE**



## STANDARD SLEEVE OPTIONS



Dome



Flat

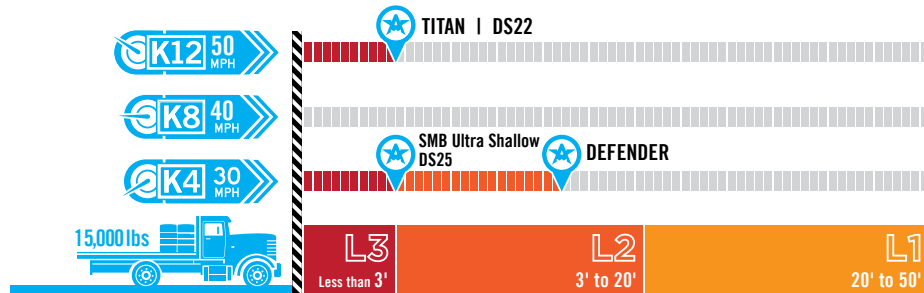


Slant



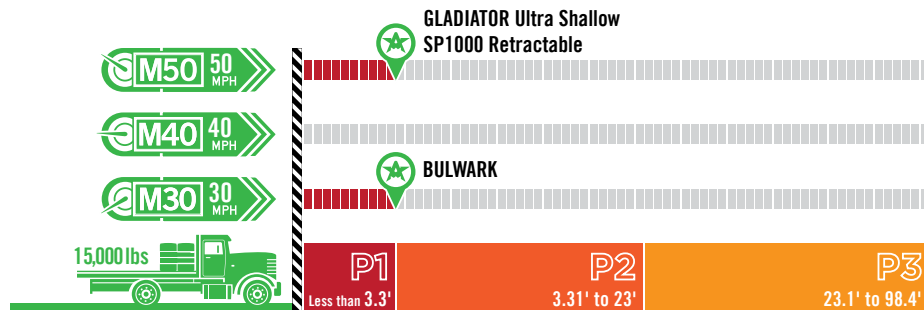
# ANTI-RAM RATINGS

## DEPT OF STATE STANDARD (OLD RATINGS)



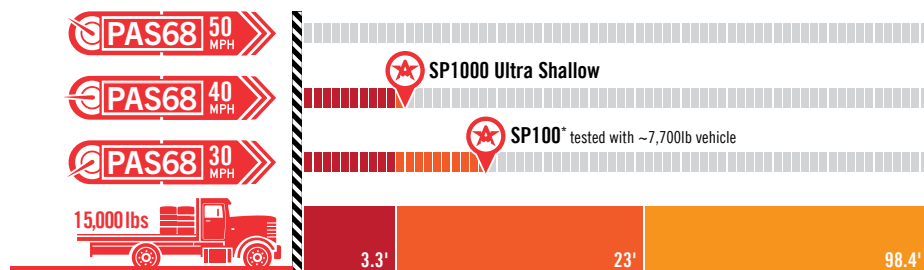
The U.S. Department of State published SD-STD-02.01 Certification Standard: Test Method for Vehicle Crash Testing of Perimeter Barriers and Gates during 1985. The standard was comprised of three vehicle speeds and reported three static penetration distances measured from the front bumper of a medium duty truck of  $\leq 3.3'$  (L3),  $\leq 20'$  (L2) &  $\leq 50'$  (L1). Revised in 2003, the standard was updated to measure kinetic penetration from leading edge of truck bed and only recognized a penetration distance of  $\leq 3.3LF$  (L3).

## ASTM F2656 STANDARD (NEW RATINGS)



ASTM International introduced F2656 Standard Test Method for Vehicle Crash Testing of Perimeter Barriers during 2007. This comprehensive standard includes six test vehicles with as many as four speed variations per vehicle and three penetration zones that report distances greater than 98LF. The DOS has adopted the use of F2656 thus no longer requiring their standards.

## PAS 68 IWA-14 EUROPEAN STANDARDS



The British Standards Institution developed PAS 68 as its first impact test specification during 2005. Similar to F2656, the PAS 68 standard allows for multiple test vehicles at various speeds, yet indicates the specific vehicle penetration distance and debris measurement.

In 2013, several agencies collaborated to develop the IWA-14 standard; this standard combines elements from F2656 and PAS 68. The distinct differences being minor vehicle weight variations, the location point for measuring at the barrier and no debris value.



# FIXED BOLLARDS



*Traditional shallow mount and ultra shallow bollards are ideal for locations that require the security of an anti-ram bollard but are limited by excavation depth.*

- ✓ **LOW MAINTENANCE COST**
- ✓ **REMOVABLE & SELF-EJECTING OPTIONS AVAILABLE** (Self-ejecting not available with DS22 or DS25)
- ✓ **AVAILABLE WITH INTERNAL LOCKING MECHANISM ON REMOVABLE OPTION**

	DIAMETER	HEIGHT	DEPTH	FOUNDATION	CENTER SPACING
Bulwark M30	8-5/8"	38"	13"	72" x 144"	N/A
Bulwark M50	10-3/4"	46"	14-1/2"	96" x 150"	N/A
DS22	10-3/4"	39"	48"	177" x 31-1/2"	58"
DS25	8-5/8"	39"	30"	30" x 30"	58"
Gladiator	12"	48"	10"	121" x 273"	59"
SP1000	12"	41"	6"	74" x 192"	59"
SMB	12"	43"	8"	98-1/2" x 215-3/8"	N/A

## Shallow Mount

### BULWARK

**M30/P1** *single bollard*

**M30/P2** *three bollard array*

**Eng. M50/P1** *single bollard*



## Department of State

### DS22

**K12/L3** *three bollard array*

### DS25

**K4/L3** *three bollard array*



## Ultra Shallow

- Reduced environmental impact
- Avoid underground utilities
- No rebar
- Minimal disruption due to fast install



### GLADIATOR

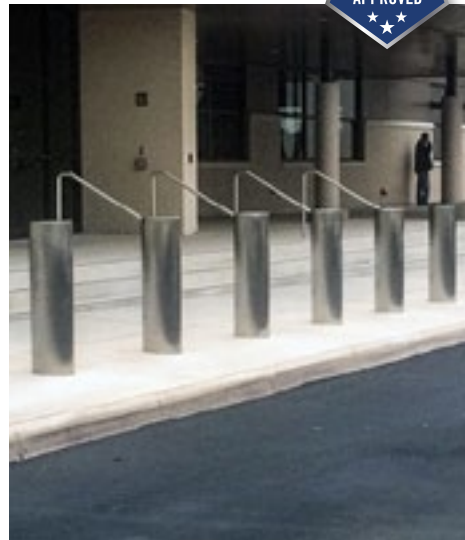
**M50/P1** *five bollard array*



### SP1000

**M40/P2** *equivalent*

*PAS68 tested - three bollard array*



### SMB

**K4/L3** *single bollard*



# RETRACTABLE BOLLARDS



*Ameristar's line of manual and retractable security bollards are available in a variety of styles and crash ratings to fit your project's needs.*

- ✓ **ENGINEERED SOLUTIONS AVAILABLE**
- ✓ **CUSTOM HPU ENCLOSURES AVAILABLE** (i.e., color, climate controlled, ballistic, etc.)
- ✓ **HPU WITH WEATHER RESISTANT ENCLOSURE FOR AUTOMATIC RETRACTABLE BOLLARDS**
- ✓ **FLUSH WITH THE ROADWAY WHEN RETRACTED**

	DIAMETER*	HEIGHT	DEPTH	FOUNDATION*	CENTER SPACING
SP100	5-5/8"	35-1/2"	Retractable: 56"	29-1/2" x 29-1/2"	N/A
			Fixed: 21-3/4"		
			Removable: 23"		
Titan	10-3/4"	38"	66"	112" x 72"	32"
Defender	10-3/4"	30"	54"	108" x 48"	36"
SP1000	12"	39-3/8"	79"	222" x 80"	60"

\*Note: Bollard diameters subject to change with sleeve options. Foundations vary based upon number of consecutive bollards.

## Anti-Ram Manual Retractable

- Fixed and removable options available
- Exceeds ASTM F3016 test standards
- No rebar required for retractable
- Lightweight manual operation
- Attack resistant locks

### SP100

**PU30/P2** equivalent

*PAS68 tested at 7700lbs - single bollard*



## Anti-Ram Automatic Retractable

- Manual operation available
- Custom control options available
- Hydraulic operation with optional EFO
- Stainless steel sleeve options



### TITAN

**K12/L3** three bollard array



### DEFENDER

**K4/L2** three bollard array



### SP1000

**M50/P1** single bollard



# BARRIERS



*Ameristar's line of crash-tested barriers offers exceptional security and access control to defend your facility against vehicular threats.*



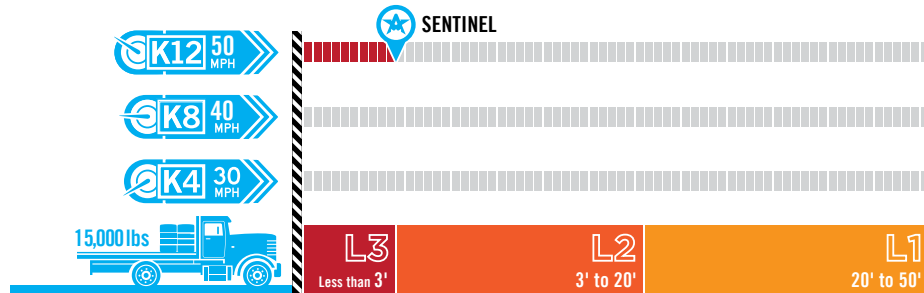
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- ✓ **CUSTOM HPU ENCLOSURES AVAILABLE** (i.e., color, climate controlled, ballistic, etc.)
- ✓ **HPU WITH WEATHER RESISTANT ENCLOSURES**
- ✓ **ACCESS CONTROL INTEGRATION**
- ✓ **COLD WEATHER KITS**





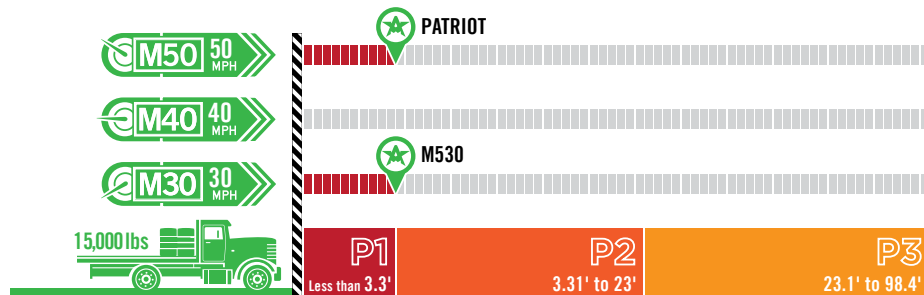
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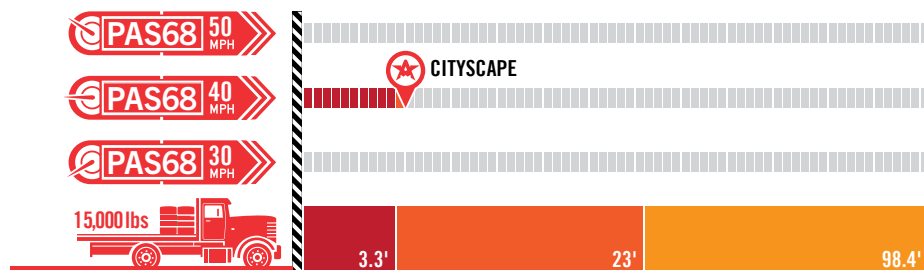
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# ACTIVE BARRIERS



## Rising Beam

### PATRIOT

**M50/P1**



- Customizable controls
- Standard openings 12'–24' in 2' increments
- Protects against two impacts — same barrier hit twice 15,000# at 50 mph, second impact M50/P1

## Vehicle Wedge

### SENTINEL

**K12/L3**



- Shallow foundation
- Flush with roadway when retracted
- Customizable controls
- Standard openings 8', 10', 12' & 14'

	PATRIOT	SENTINEL
Deployed Height	36" ht.	38" ht.
Depth	69"	19"
Foundation	346"x 84" (for 24' barrier)	138"x 188" (for 8' barrier)



## Drop Arm

### M530

#### M30/P1

- Deep & shallow installation options
- Galvanized enclosure
- Customizable controls
- M30/P1 capable of spanning 12'–26'

## Manual Gate

### CITYSCAPE

#### M40/P2 *equivalent*

*PAS68 tested*

- Shallow foundation
- Lightweight manual operation
- Simple immediate access for emergency services
- Capable of spanning distances up to 24'



	M530	CITYSCAPE
Deployed Height	2'-8" ht.	49-1/2" ht.
Depth	36" / 12" (shallow)	18"
Foundation	60" x 60" / varies by barrier length	213" x 40"

# Why Choose Ameristar?

## KNOWLEDGE AND EXPERIENCE

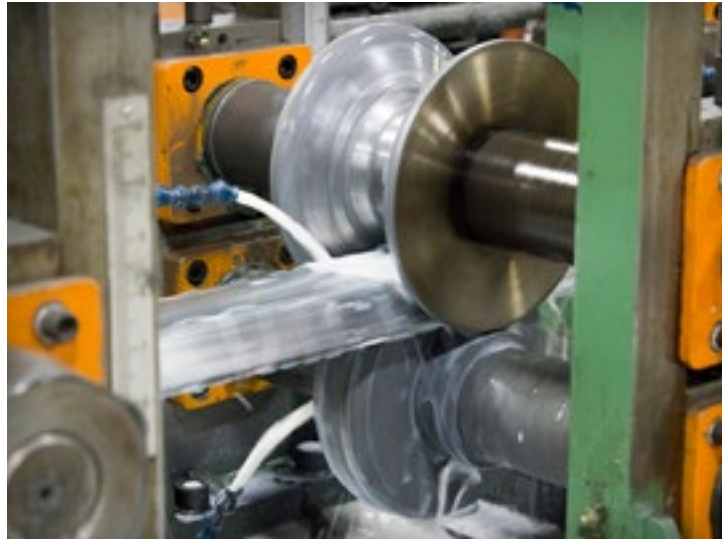
For over 30 years we've delivered aesthetically pleasing, high-quality and innovative fencing products with superior design strength and easy installation.

## PROVEN CAPABILITIES

Our integrated in-house processes, extensive raw materials and finished goods inventory translate into quality, on-time delivery.

## INDUSTRY LEADERSHIP

We continually raise the bar in manufacturing customer-focused solutions. Our high standards produce premium products that go beyond merely meeting minimum industry standards.



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