



## OVERVIEW

# What are Crash-Ratings?

Crash ratings for perimeter barriers provide standardized measures of the ability to withstand vehicular impacts, crucial for protecting critical infrastructure and public spaces. These ratings evaluate barriers' performance under different collision scenarios based on factors like vehicle size, speed, and penetration depth. Understanding crash ratings is essential for selecting optimal barrier systems to mitigate unauthorized vehicular access and aggressive security breaches effectively.

## UNDERSTANDING RATINGS

# How Are Ratings Determined?

1

### Vehicle Weight

Example: up to 15,000 lbs

2

### Vehicle Speed

Example: 50 mph

3

### Penetration Depth

Example: Less than 3 feet



## CRASH-RATING STANDARDS

# Who Sets Rating Standards?



### Vehicle code

Small Car (SC) - up to 2,340 lbs  
 Full Size (FS) - up to 4,630 lbs  
 Pickup Truck (PU) - up to 5,070 lbs  
 Standard Truck (M) - up to 15,000 lbs  
 Class 7 Cab (C7) - up to 15,873 lbs  
 Heavy Vehicle (H) - up to 65,000 lbs

### Tested speed

30 mph (30 Rating)  
 40 mph (40 Rating)  
 50 mph (50 Rating)

### P = Rating for penetration

Less than 3 feet (P1 Rating)  
 3 to 20 feet (P2 Rating)  
 21 to 50 feet (P3 Rating)



## Department of State

### K = Rating for kinetic energy

15,000 LBS @ 30 mph (K4) = 450,900 ft-lbs  
 15,000 LBS @ 40 mph (K8) = 801,600 ft-lbs  
 15,000 LBS @ 50 mph (K12) = 1,252,500 ft-lbs

### Tested speed

30 mph (30 Rating)  
 40 mph (40 Rating)  
 50 mph (50 Rating)

### L = Rating for penetration

Less than 3 feet (L3 Rating)  
 3 to 20 feet (L2 Rating)  
 21 to 50 feet (L1 Rating)

## CRASH-RATING COMPARISON

# M-Rating vs K-Rating



\*Please note ASTM and DOS ratings are different and **NOT** interchangeable.