



METAL CRASH BARRIERS



PENNAR INDUSTRIES LIMITED



30
YEARS OF
EXPERIENCE

1,000
PRECISELY
ENGINEERED
PRODUCTS

300
CUSTOMERS

2,500
TOOLS
AND DIES

1,200
EMPLOYEES
AND THE
COUNT IS ON !



Pennar Industries Limited (PIL) is one of the leading engineering organizations in India renowned for providing global innovative engineering solutions. An epitome of quality, precision and perfection, Pennar is a professionally managed company of more than 1200 strong team members, driven by an unrelenting desire to excel with experience and expertise spanning over three decades. Pennar is now a multi-location, multi-product company manufacturing cold rolled steel strips, precision tubes, cold rolled formed sections, electro static precipitators, profiles, railway wagon and coach components, press steel components and road safety systems.

METAL CRASH BARRIERS

Metal Crash barriers are basically Road safety system which prevents vehicles from colliding with obstacles such as boulders, walls, buildings and also prevents vehicles entering into large storm drains, steep slopes or deep water. Pennar Industries is the is first company to introduce the Metal Crash barriers concept in India and we have been supplying from past 20 years to all leading infrastructure companies more than 3000 kms.

FEATURES

- Our tested and proven barriers ensure minimum damage to the vehicle and its occupants.
- During collision the W beam absorbs maximum energy by flattening out and laterally restrains the vehicle from veering over.
- Prevents the vehicle from skidding back onto the carriageway by controlled exit angles by gradual deceleration and effective redirection of the vehicle back onto the road.
- Provides a good visual guide to the drivers especially in the night.
- Enables quick repairs in case of accidents.
- All components are hot dip galvanized for longer life.

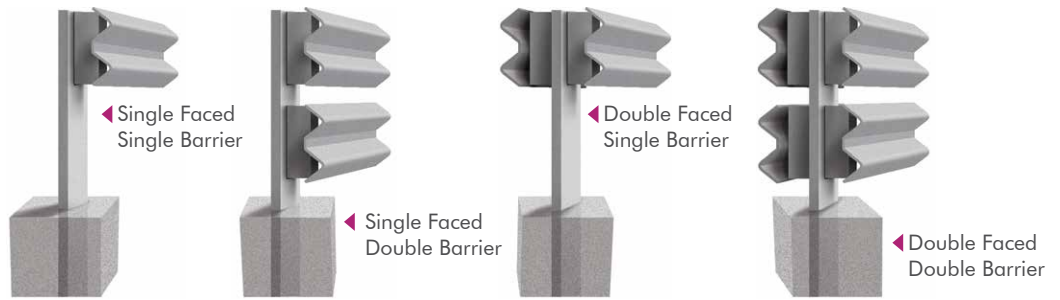
APPLICATIONS

- As restraining barriers on embankments of Expressways & Highways.
- As containment barriers on medians and grade separators of four/six lane roads.
- As protection barriers/containment barriers for hilly terrains and ghat roads.
- As racecar crash guards on car racing tracks.
- For interior traffic safety at Airports, Plants handling hazardous chemicals, mines, collieries, etc.,
- As fencing barriers for country border lines, expanse lands, water bodies, bridge piers, signposts, rocky areas etc.,

TYPES OF BARRIERS

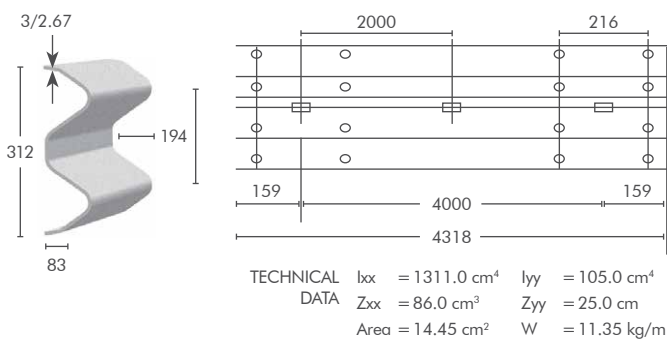
Metal crash barriers conforming to all major specifications like:

- Ministry of Road Transport & Highways, India (MORTH)
- American (AASHTO M 180)
- Euronorm (EN 1317 – 1&2)

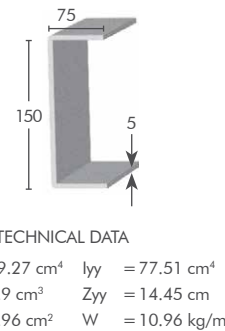


STANDARD SPECIFICATIONS

W Beam



Post & Spacer



Metal Crash Barrier as per "The Ministry of Road Transport & Highways, India" (MORTH), Clause 810 and:

- Circular No. RW/NH/33022/1/94 DO: III dated 24th June 1994
- Circular No. RW/NH/33044/2/88/S & R: dated 9th May 2000

COMPONENTS OF METAL CRASH BARRIERS

W Beams

- Cold roll formed in thickness of 3.00 mm/2.67 mm
- Raw material conforming to IS 5986 Grade: Fe 360/Fe 410/ Fe 510, IS 10748 Grade II or eqvt.
- Hot dip galvanized to 550 gms/sq.m

End specials

- 3 mm/2.67 mm thick turned down end terminals.
- 3/2.67 mm thick press formed end terminals (Fish tail)
- 3/2.67 mm U shaped terminals as median end terminals

Fasteners

- M20 and M16 fasteners as per IS 1367 Grade 4.6/8.8
- Hot dip galvanized

Posts & Spacer

- Cold roll formed in thickness of 5.00 mm/4.2 mm
- Raw material conforming to IS 5986 Grade: Fe 360/Fe 410, IS 10748 Grade II or eqvt.
- Hot dip galvanized to 550 gms/sq.m.

Anchorage

- Anchored in ground as per Clause 810
- Anchored in concrete on shoulders (If specified)
- Anchored in concrete with base frame on bridges

QUALITY

Accredited with the ISO 9001 - 2000 procedures, the quality of the products supplied are governed by the self-imposed discipline code of the company which ensures:

- Respect for the contract obligations.
- Quality of design
- Guaranteed characteristics of the product and its performance
- Traceability of the input materials
- Transparency of product inspections





STEEL PRODUCTS



Purlins



Decking



Roofing



Sheet Piling



ESP Electrodes



Steel Strips

SYSTEM & PROJECTS



Railway Coaches



Railway Wagons



Storage Solutions



Solar PV Mounting Solutions

TUBES



CDW/ERW

INDUSTRIAL COMPONENTS



White Goods

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