



High Visibility Pallet Rack Upright Guard





The Problem:



Accidental fork lift impact to unprotected Pallet Racking uprights

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The Potential Consequence:



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...or much worse:





Applicable Industry Standards:

FEM 10.2.02 The Design of Static Steel Pallet Racking Section 2.6

EN 15512-2009 Steel Static Storage Systems Section 6.4 Accidental Impacts

AS 4084-2012 Steel Storage Racking Section 2.4.1 Accidental Actions

Minimum requirements for protection of uprights stated as being

- ❖ An upright protector with a height of not less than 400 mm (16") shall be positioned at the end upright of each run of racking between cross-aisles
- ❖ Upright protectors required at all aisle and gangway intersections
- ❖ Corner upright protector shall be designed for an energy absorption of at least 400 Nm in any direction at any height between 100 mm to 400 mm (4" to 16") from ground level
- ❖ Upright protector must absorb the specified impact without damage to the upright
- ❖ Intermediate uprights to be protected in a direction normal to the aisle

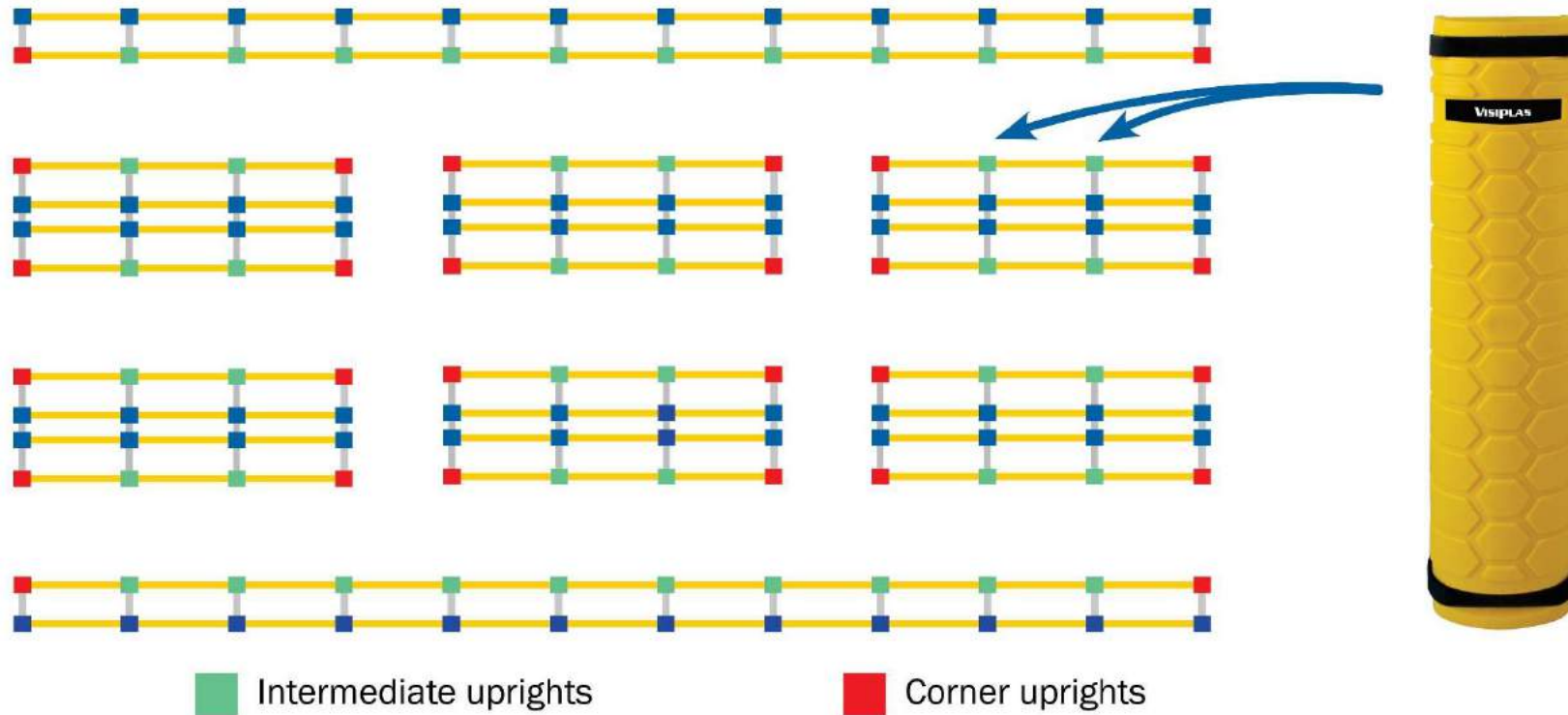


Design Recommendations

- For High Risk Corner Uprights use steel guards, independently fixed to floor so impact forces are not transmitted to the rack.
- For Lower Risk Intermediate Uprights use VISIPLAS upright protector



Upright Terminology



Corner Upright Impact Characteristics



- Tends to be direct impact by forklift
- Use steel guard with independent fixings
- High risk of impact
- Design for impact from side and front

Intermediate Upright Impact Characteristics



- Tends to be indirect impact by pallet or product
- Use VISIPLAS upright protector
- Lower risk of impact
- Design for frontal impact only to minimise intrusion into bay clear entry



VISIPLAS Solution:



- Exceeds requirements of Industry Standards.
- Fits all commonly-used rack upright profiles & slot patterns.
- Fast 'fit & replace' attachment using Cable Ties.
- Does not reduce clear entry access to racking bay.
- Energy absorbing material distributes collision load.
- Most competitively-priced complying upright protector available.

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VISIPLAS Testing:



This photo shows the upright without VISIPRO prior to impact.



This photo shows the upright during the impact.



This photo shows the VISIPRO fitted to upright prior to impact.



*This photo shows the VISIPRO during the impact.
Note the deflection of the VISIPRO as the impact force is absorbed.*



VISIPLAS Compliance Certification:

Test results showed that the unprotected upright section in all cases exceeded the damage level allowed by AS4084-1993 and would require replacement. AS4084-1993 allows 3mm maximum bending of the upright section in 1.0metre gauge length in the direction normal to the aisle. The average amount of bending for the upright impacted without VISIPRO was 7.1mm, which is 235% of the allowable.

Certification Statement

I hereby certify that the VISIPRO Pallet Racking Upright Protector has been tested and conforms in accordance with the guidance of FEM 10.2.02 and Australian Standard 4084-1993 Steel Storage Racking.

Andrew Baigent.
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Date: *29/4/11*
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VISIPLAS Standard Sizes:



All VISIPLAS Upright Protectors are 20 inches high. There are nine widths to suit different face widths of pallet rack uprights

Type	To suit upright face widths	
S1	2.0" to 2.5"	To Order
S2	2.5" to 3.0"	To Order
A	2.8" to 3.3"	Stocked
B	3.1" to 3.6"	Stocked
C	3.6" to 4.1"	Stocked
D	4.1" to 4.6"	To Order
E	4.6" to 5.1"	To Order
F	5.1" to 5.6"	To Order
G	5.6" to 6.1"	To Order

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Applications

