

ManSafe for Industrial Applications



Applications:

Warehouses
Factories
Petrochemical Plants
Steel Works
Metal Pitched Roofs
Flat Roofs
Walkways
Gantries
Offshore

Latchways

Latchways plc is the world leader in the design and manufacture of cable based fall arrest systems offering continuous protection to individuals working at height.

Our ManSafe® products are made using the highest quality components and meet or exceed all appropriate international standards. They are distributed and installed in many countries around the world including the USA, Canada, Australia and throughout Europe.

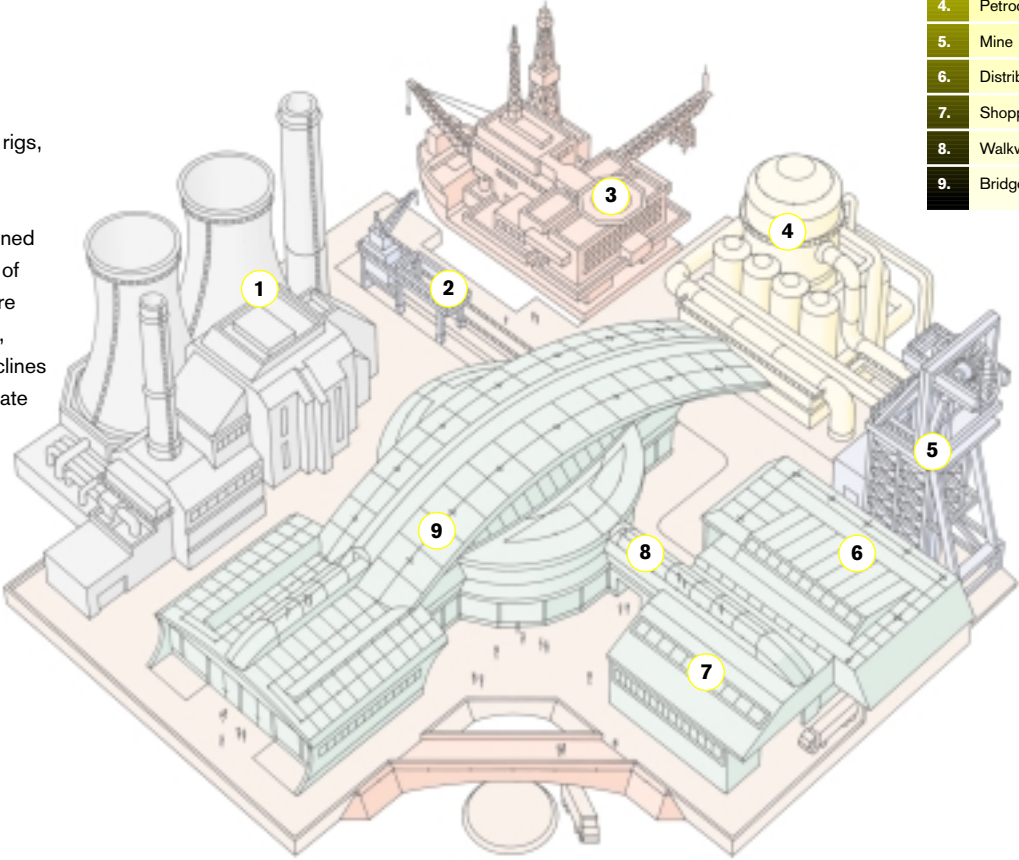
ManSafe for Industrial Applications

Applications for ManSafe products in industry range from a single cable system across an industrial unit roof through to complex systems in petrochemical, iron and steel works, and underground systems in mines. Key features include:

- Exceptional flexibility. Systems can be installed horizontally, go around corners, traverse inclines and accommodate vertical sections.
- Can be retrofitted or included as part of a new build programme.
- Systems can be designed to support up to six workers on a single line.
- Unique Latchways Transfastener™ with patented starwheel design will rotate freely through intermediate cable supports to enable hands free operation.
- Latchways patented shock absorber limits end loadings.
- Components are made from marine grade 316 stainless steel for durability.
- Comprehensive range of components for fixing to many different types of roofs and structures. Includes top fixing brackets for built-up on site, standing seam and composite roofs.
- Latchways purpose written, Windows™ based modelling software simplifies and verifies system design, loads and deflections.

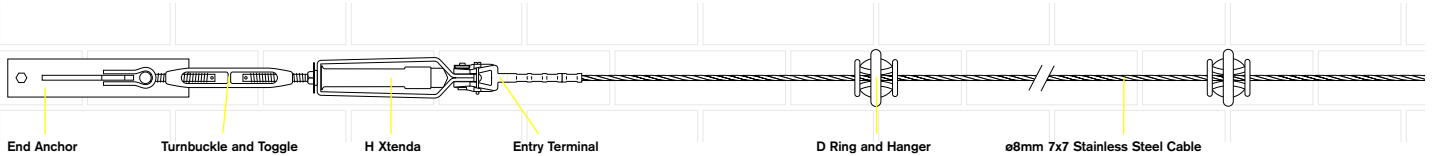


ManSafe systems for industrial applications include petrochemical works, industrial units, coal/potash mines, oil rigs, industrial sheds and distribution centres. Systems can be designed to follow the contours of the building or structure by running horizontally, around corners, up inclines and may also incorporate vertical sections.

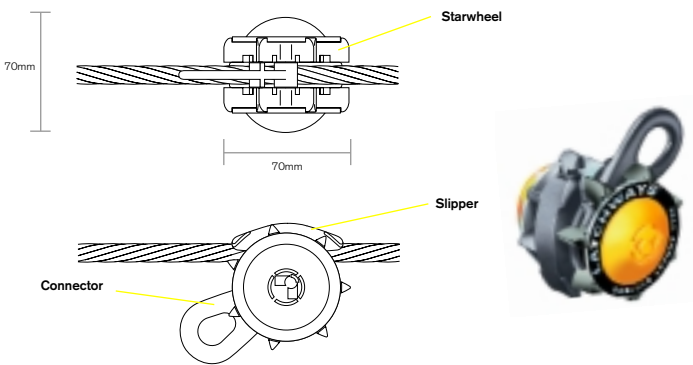


1.	Power Station
2.	Gantry Crane
3.	Offshore Platform
4.	Petrochemical Plant
5.	Mine
6.	Distribution Centre
7.	Shopping Centre
8.	Walkway
9.	Bridge

End Anchor Configuration



Components



The Transfastener incorporates the patented Latchways starwheel design which rotates freely through the intermediate wire guides.

	Heavy Duty D Ring Used as an end anchor for systems fitted onto structural steel and concrete.		H Xtenda Shock absorber which limits end loads in the event of a fall.
	D Ring and Hanger Provides support for the cable. The Transfastener rotates freely over the hanger to ensure continuous protection.		Turnbuckle and Toggle Provides method of tensioning the cable. Indicator disc shows when correct pre-tension is achieved.
	BUOS Bracket Bracket fixes through the top skin to the metal spacer system via toggle bolts.		Composite Bracket Bracket fixes through the composite panel to the purlin via toggle bolts.

Configuration

ManSafe® systems are suitable for many different industrial applications. As a result, each system retains the inherent Latchways qualities of simplicity of installation and ease of use whilst also having additional functionality to meet specific application and environmental criteria.

Horizontal and Inclined Systems

A wide range of components is available for fixing ManSafe systems to a variety of structures and building materials. The system will provide continuous protection around bends, up inclines and can accommodate vertical sections.

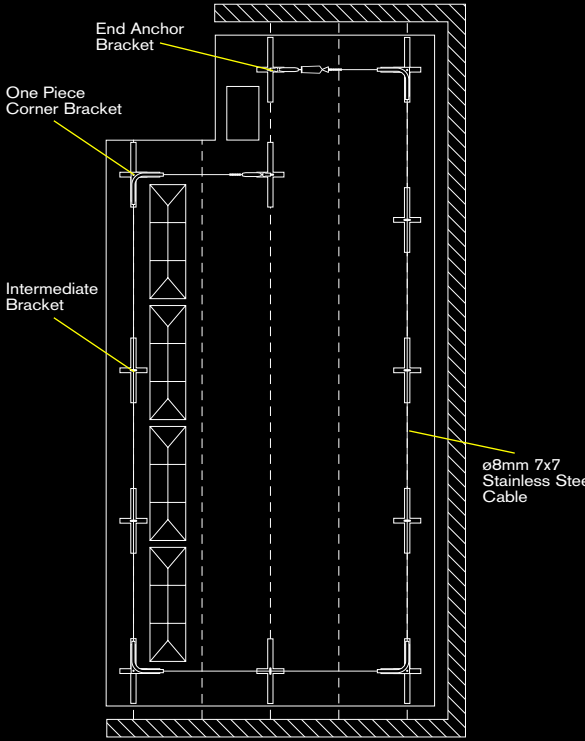
Roofing Systems

Latchways has developed unique load absorbing top fixing brackets for built-up on site, standing seam and composite roof panels. System specification and installation are simplified because the top fixing method eliminates the need for roof piercing posts and location with the structural steel framework. The system will run horizontally, around corners and up inclines to provide safe access to all points on a roof.

Transfastener

At the heart of the ManSafe system is the Latchways Transfastener™ which is based on a unique patented starwheel design. The Transfastener rotates freely through intermediate supports and cable guides to allow permanent attachment to the system. There are different Latchways Transfasteners available for specific applications:

- Standard or Removable Transfastener for all horizontal applications.
- ClimbLatch™ Transfastener for inclined and vertical applications.
- HiLatch™ Transfastener to eliminate lateral swing on long lanyard systems such as in aircraft hangars and lorry or rail loading bays.
- Load carrying Transfastener can be used with fall arrest blocks up to 6kg.



Load Control

Load control is an essential element to consider in the design and installation of any horizontal cable based fall arrest system.

The capacity of a system depends on the strength of the structure, supports, components and cable, and how they all work together under stress.

The following steps must be taken before beginning the design process:

- Conduct a site survey to identify fixings, support materials and positions.
- Review work patterns to determine the numbers of users required to be on the system at any one time.
- Measure free fall distances to ensure worker safety on the system.

These parameters can then be entered into the Latchways modelling software which will calculate the loadings and verify the system design.

Cable pre-tension also plays a large part in system design because fall loads add to the tension. Latchways ManSafe systems include a tension indicator disk to ensure that the correct pre-tension is always achieved.

Latchways horizontal systems utilise $\varnothing 8\text{mm}$ 7x7 316 grade stainless steel cable because it assists in the control of end anchor loads. This is in addition to system shock absorbers which limit peak loadings in the event of a fall.



ManSafe is a registered trademark of Latchways plc.
Transfaster, HiLatch and ClimbLatch are trademarks of Latchways plc.
Windows is a trademark of the Microsoft Corporation.

Materials and Testing

During development, all products are subject to a range of tests to define their performance characteristics. These tests include static strength, corrosion, locking, conditioning and dynamic performance.

All system components undergo rigorous quality assurance procedures before leaving the factory:

- All critical cast components are made from 17/4 PH grade stainless steel, carry a unique serial number and are subject to 100% x-ray inspection and dye penetrant or magnetic particle analysis.
- All system bracketry and anchors are made from 316 marine grade stainless steel. All items are subject to 100% visual inspection and carry unique numbering to provide complete traceability.
- All bracketry anchors and cast components are subject to batch conformance testing to failure or to a maximum of 50 kN.

Latchways plc is a BS EN ISO 9002 certified company and a US Department of Defence approved contractor.

Latchways ManSafe systems are CE certified and meet all international safety standards including:

European Standard EN 795 1996
European Standard EN 353-1:1992
Australian Standard AS/NZS 1891.2
Canadian Standard CSA Z259.2
OSHA Standards including 1926.502 and 1915.159

Installation

ManSafe systems are professionally designed and installed by one of our international network of approved installers.

Ongoing advice and support is available from your local installer or from Latchways on +44 (0)1380 732700.

