



شركة حديد
التقنية العليا
HITECH
STEEL INDUSTRIES

ROOFTOP LIFELINE

1

Free-standing,
counterweighted design

2

Suitable for permanent
or temporary installation

3

Optional self-closing
safety gate



OVERVIEW:

This Engineered Horizontal Lifeline System provides rooftop workers with continuous freedom of movement while remaining securely connected to the lifeline at all times. The open-architecture design ensures every component is visually inspectable — no hidden parts, no hidden defects. Systems are engineered for multiple roof types, accommodate corners and varying building geometries, and include an in-line shock absorber to minimise structural loads in the event of a fall.



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Building no 3824, Nira Street, 2nd
Industrial area, Riyadh 14338 RSNB3824





ROOFTOP LIFELINE

TECHNICAL SPECIFICATIONS

PARAMETER	SPECIFICATION	STANDARD / NOTE
Wire Rope Material	AISI 316L Stainless Steel	Grade 316 – marine grade
Wire Rope Diameter	8 mm (5/16")	7×7 or 1×19 construction
Min. Breaking Strength	> 37 kN	ANSI Z359 / OSHA 1926.502
Post / Upright OD	42 mm OD	Galvanized carbon steel tube
Max. Span (Horizontal)	39 ft (11.9 m) between posts	Overhead system: up to 100 ft
Simultaneous Users	Up to 3 users per span	Overhead system: multiple users
Safety Factor	Minimum 2× design load	OSHA 1910.140(c)(11-22)
Fastener Rating	2× max. design load w/o failure	All anchor posts & brackets
Bracket / Traveller	Electro-polished Grade 316 SS	Two-wheeled pass-through traveller
Surface Finish	Galvanized + electro-polished	Corrosion resistant, low maintenance
Shock Absorber	In-line, visual deployment indicator	Limits end load on structure
Tension Indicator	Physical / visual inline gauge	Field-verifiable correct tension

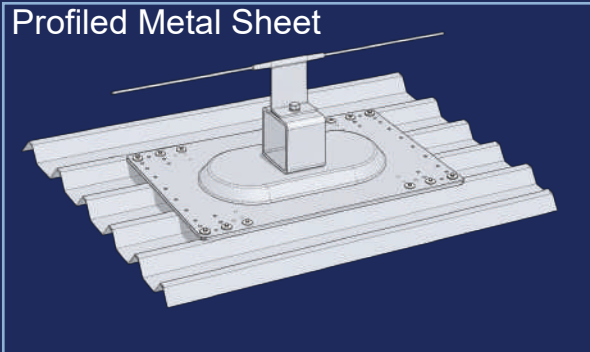


ROOFTOP LIFELINE

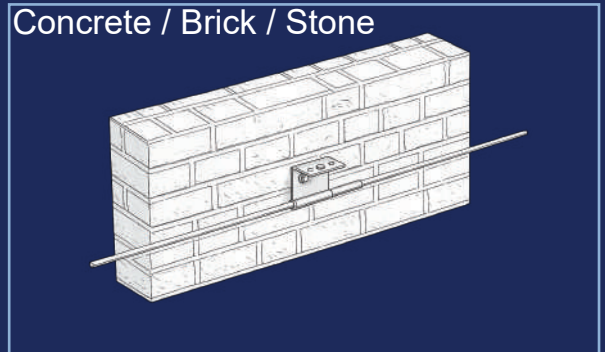
ROOF TYPE COMPATIBILITY

ROOF TYPE	MOUNTING METHOD	PENETRATION
Membrane / Flat Roof	Dedicated base plate & ballast	Non-penetrative available
Profiled Metal Sheet	Seam / rib clamp bracket	Non-penetrative
Standing Seam Metal	Standing seam clamp	Non-penetrative
Concrete / Brick / Stone	Direct anchor bolt to structure	Penetrative – engineer approved
Steel Structural	Beam clamp or weld plate	Non-penetrative option available

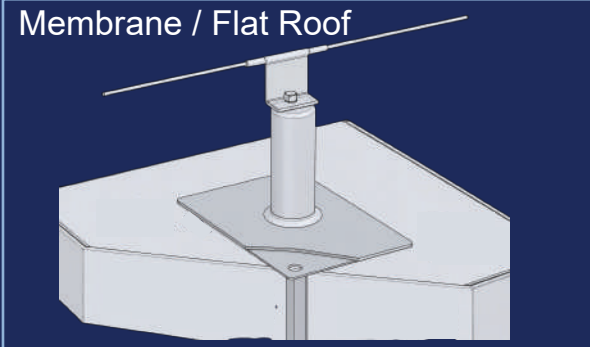
Profiled Metal Sheet



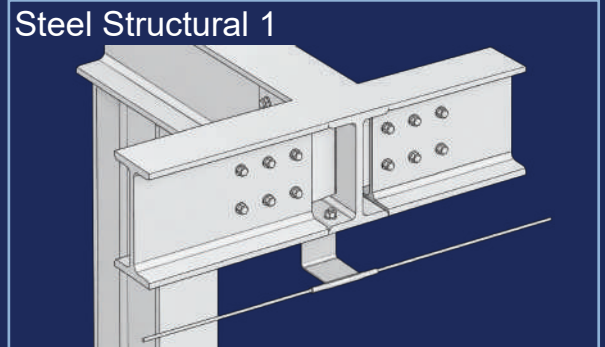
Concrete / Brick / Stone



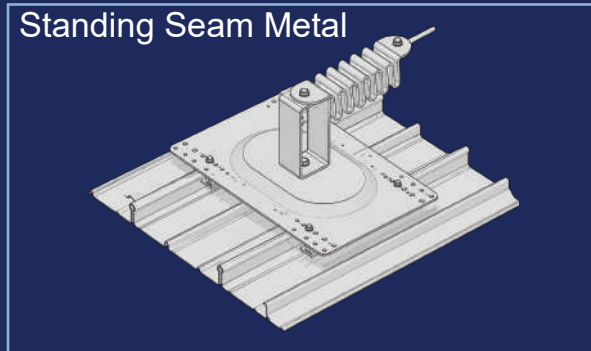
Membrane / Flat Roof



Steel Structural 1



Standing Seam Metal





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STANDARDS & COMPLIANCE

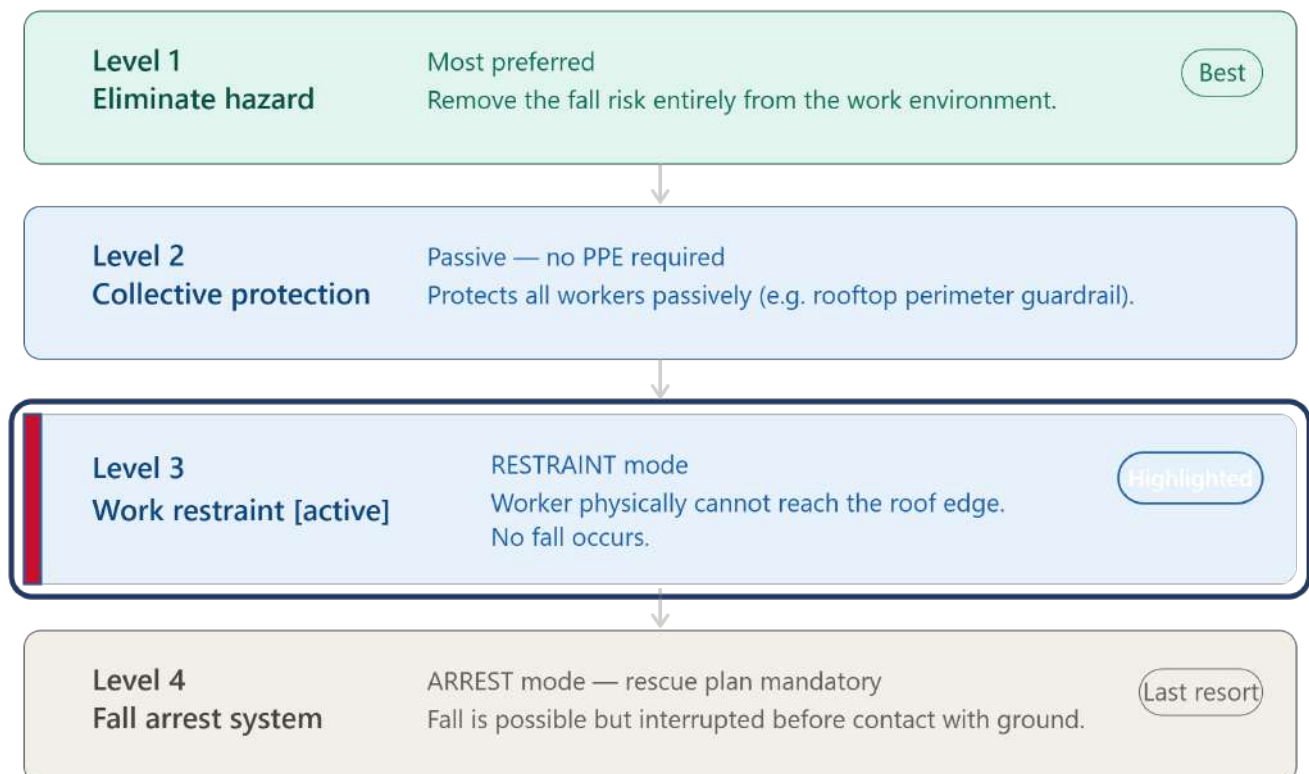
STANDARD	DESCRIPTION	SCOPE
OSHA 1910.140	Personal Fall Protection Systems	Horizontal lifelines
OSHA 1926.502	Fall Prevention – Criteria & Practices	Construction sites
ANSI Z359	Fall Protection Code (current edition)	All components
CSA Z259	Fall Protection Equipment	Canadian requirements
ISO 9001	Quality Management System	Manufacturer QC program
ASTM A36-05a	Carbon Structural Steel	Fabricated anchorages



ROOFTOP LIFELINE

FALL PROTECTION HIERARCHY

LEVEL	TYPE	DESCRIPTION
1	Eliminate Hazard	Most preferred — remove the fall risk entirely from the work environment.
2	Collective Protection	Protects all workers passively (e.g., rooftop perimeter guardrail — no PPE required).
3	Work Restraint [Active]	RESTRAINT mode — worker physically cannot reach the roof edge. No fall occurs.
4	Fall Arrest System	ARREST mode — fall is possible but interrupted before contact with ground. Rescue plan mandatory.



All systems must be installed by certified fall protection installers.
Annual inspection required for compliance.