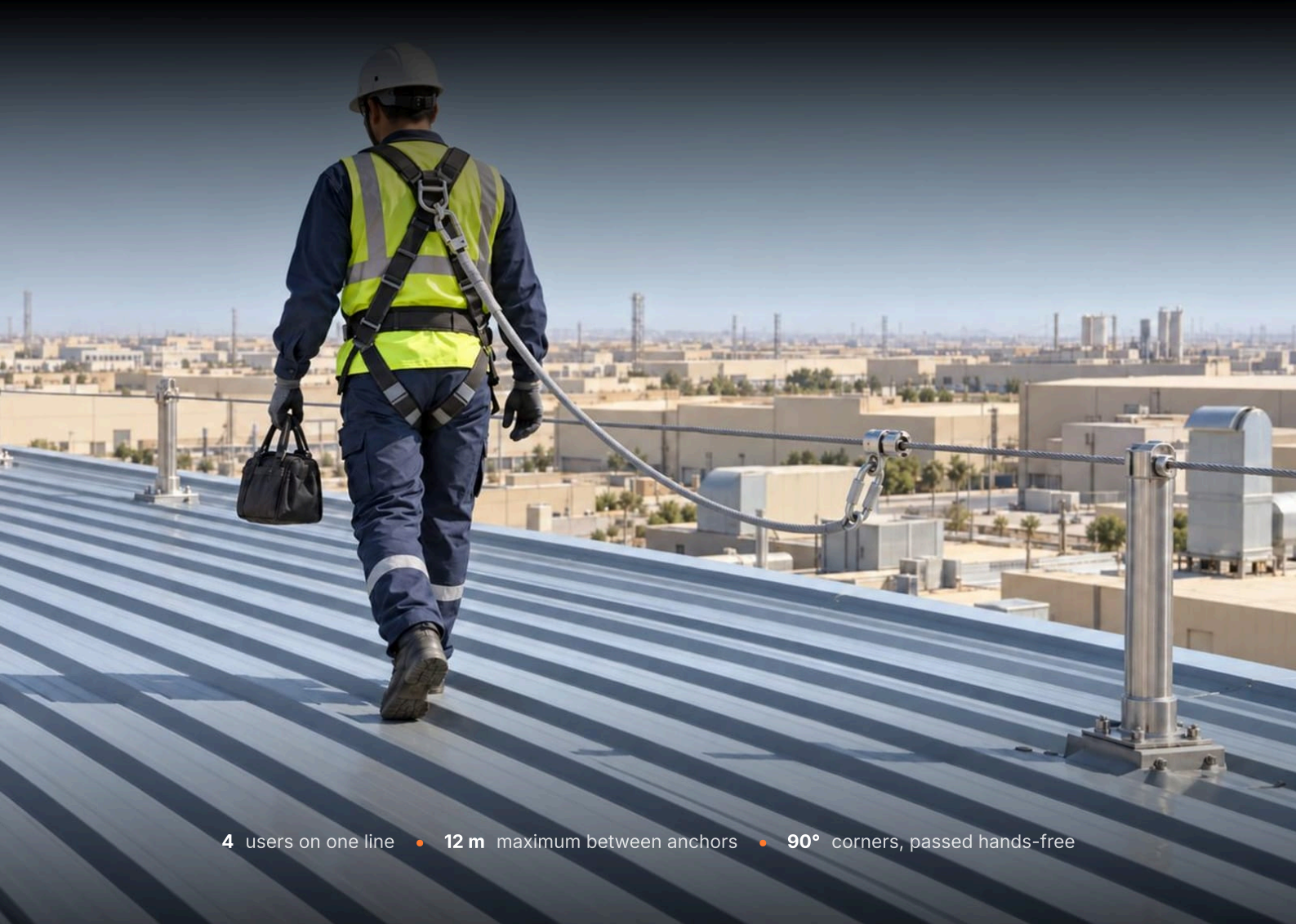
OK Works

ENGINEERED BEYOND THE BLUEPRINT

Technical document

Smart Lifeline System



4 users on one line • **12 m** maximum between anchors • **90°** corners, passed hands-free

Technical document

Why a lifeline

Falling from height is one of the main causes of death and serious injury at work. Roofs are where it happens most: fragile sheeting, skylights that look solid, edges with nothing at them, and maintenance work that takes people up there every week.



Where work at height can't be avoided and a guardrail isn't practical, a horizontal lifeline gives every person on the roof a continuous anchor. They clip on at the access point and stay connected along the whole route.

Safety starts long before the job does. The line is designed for the roof it sits on, the number of people who will use it and the work they go up to do.

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The system at a glance

Horizontal Lifeline System

A permanent stainless-steel cable along the roof, so everyone who works up there is tied off from the moment they step onto it to the moment they step off — and never has to unclip to get past a post or round a corner.

4
users on one line

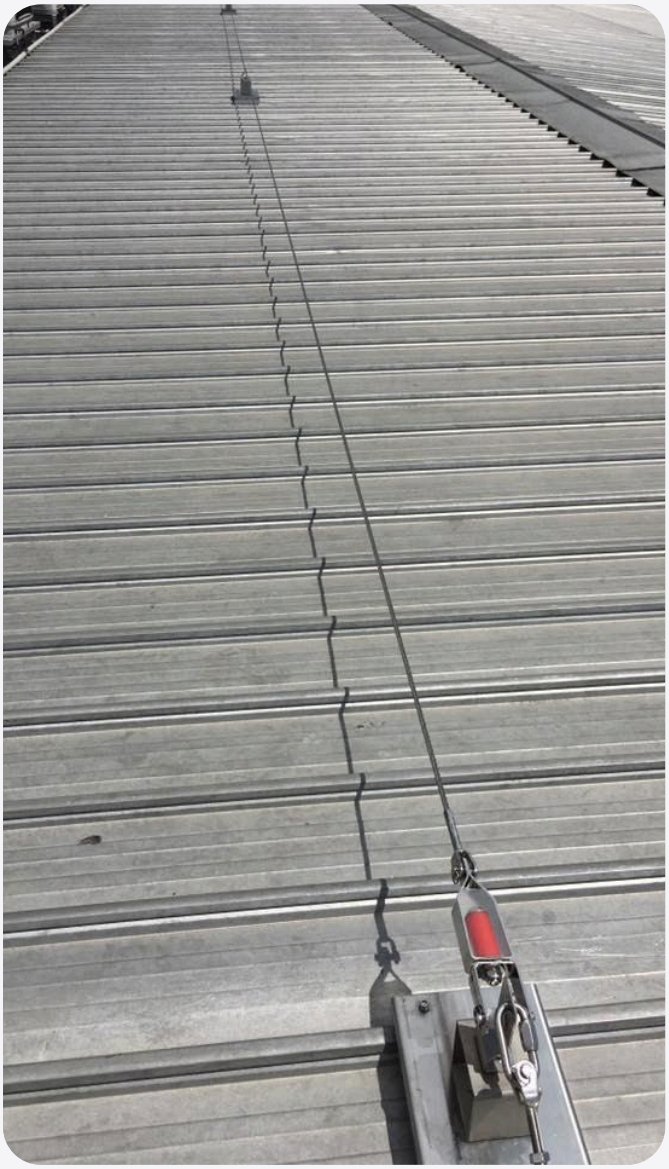
12 m
maximum between anchors

90°
corners, passed hands-free

22 kN
intermediate anchor rating

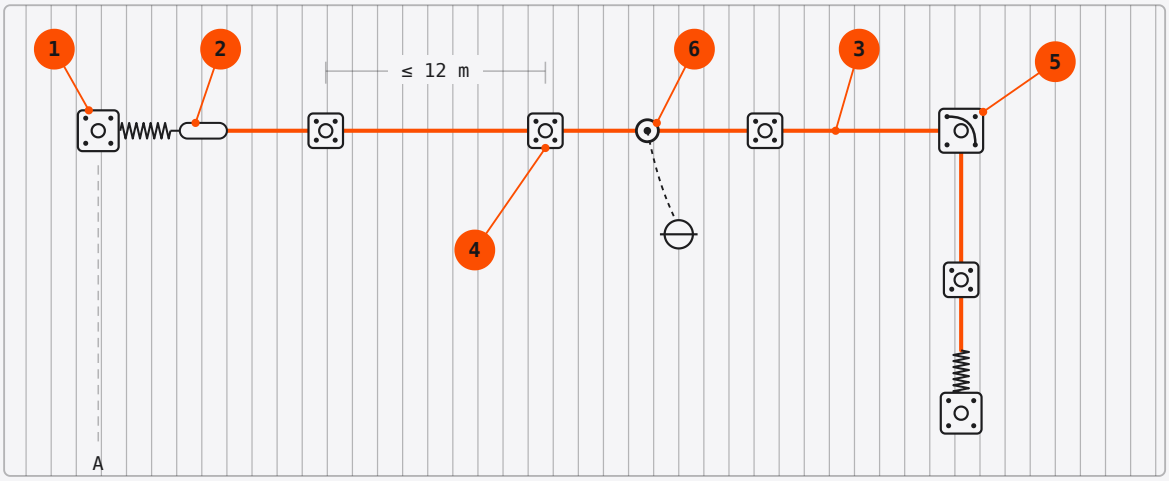
Ø 8 mm
stainless-steel cable

12 kN
minimum static load at any point





How it works



1 End anchor with energy absorber
Terminates the line at each end. Its energy absorber takes the shock of a fall so far less force reaches the roof.
Stainless steel · 3 mm base plate

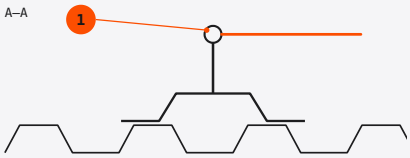
2 Tensioner
Sets the cable's tension at installation and keeps it there, with an indicator that shows it at a glance.

3 Stainless-steel cable
The line itself: marine-grade stainless steel, run the length of the roof.
Ø 8 mm

4 Intermediate anchors
Support the cable along its length, with a shock absorber built in. The slider runs straight over them.
22 kN · every 2–12 m

5 90° corner anchor
Turns the line round a corner of the roof without breaking it, so the route follows the work rather than a straight line.

6 Slider
Travels with the worker the full length of the line, past every intermediate and corner. It can be fitted or removed anywhere on the cable, and cannot come off while a karabiner is clipped to it.
Stainless steel · 22 kN



Section through an anchor bracket

How it works

What the energy absorber does

The energy absorber is the part that makes a cable line safe on lightweight roofs. Combined with the shock absorbers in the intermediate anchors, it cuts the force a fall sends into the roof, which is what lets the line go onto sheeting and structures that could not take it otherwise. It was tested to 9 kN at the Faculty of Engineering, Cairo University.

1. **Absorbs the energy of a fall**
2. **Holds the line at its working tension**
3. **Shows the tension in the line**
4. **Shows that a fall has happened**

Hands-free travel

The slider passes intermediate anchors and corners on its own. Nobody unclips, nobody reaches for a second lanyard.

Up to four people

Four users on one system and two in any one span, with a minimum safety factor of two worked out for each layout.

Kind to the roof

Brackets spread the load over the sheet, energy absorbers limit it, and no part deforms permanently in a fall.

Watertight

Every bracket is sealed to the sheet with EPDM or bituminous tape and fixed with stainless fasteners, so the roof stays a roof.

Moves with the sheet

The line takes up the expansion and contraction of metal sheeting through an Egyptian summer and winter.

Built not to corrode

Marine-grade, electro-polished stainless steel throughout, for long life in hot, humid and coastal air.

Fewer holes in the roof

Spans of up to 12 m between anchors mean fewer penetrations through the sheeting.

Tested every year

Each anchor is designed to take a 12 kN vertical pull test without harm, so the annual inspection can prove every one of them.

The lifeline family



Rooftop horizontal lifelines

The system on this page: a permanent line along the roof of a factory, warehouse or plant.



Overhead lifelines

A cable overhead on steel gantries, for people working on top of tankers, trailers and loading bays.



Vertical lifelines

Cable lifelines and ladder davits with self-retracting lifelines, fitted to new or existing ladders.

Roof types

- Corrugated and trapezoidal metal sheet
- Sandwich panel roofs
- Cold-deck roofs
- Flat roofs
- Sloped and steeply pitched roofs

Standards and testing

Designed and tested to these standards. The energy absorber was tested at the Faculty of Engineering, Cairo University, and every installation is examined by an approved third party before handover.

EN 795:2012 Type C
Horizontal flexible anchor lines

CEN/TS 16415:2013
Anchor devices for more than one user

OSHA 1910.66 App. C · 1926 Subpart M
Personal fall arrest — slider design

ANSI Z359.6 · CSA Z259.16 · AS/NZS 1891.2
Active fall-protection system design

01
Roof survey
We read the sheet profile, the purlins under it, the access points, and every hazard on the roof — edges, skylights, plant.

02
Layout and calculation
The route, the anchor spacing, the corners and the number of users, calculated for the roof it will sit on.

03
Installation
Fitted by trained, authorised crews: brackets fixed and sealed, the cable run, tensioned and checked.

04
Examination and handover
A thorough examination by an approved third party, then handover with the layout drawing, the certificate and user training.

05
Every 12 months
A competent inspection of the whole system, with a 12 kN pull test on the anchors, to keep it certified.



Using it safely

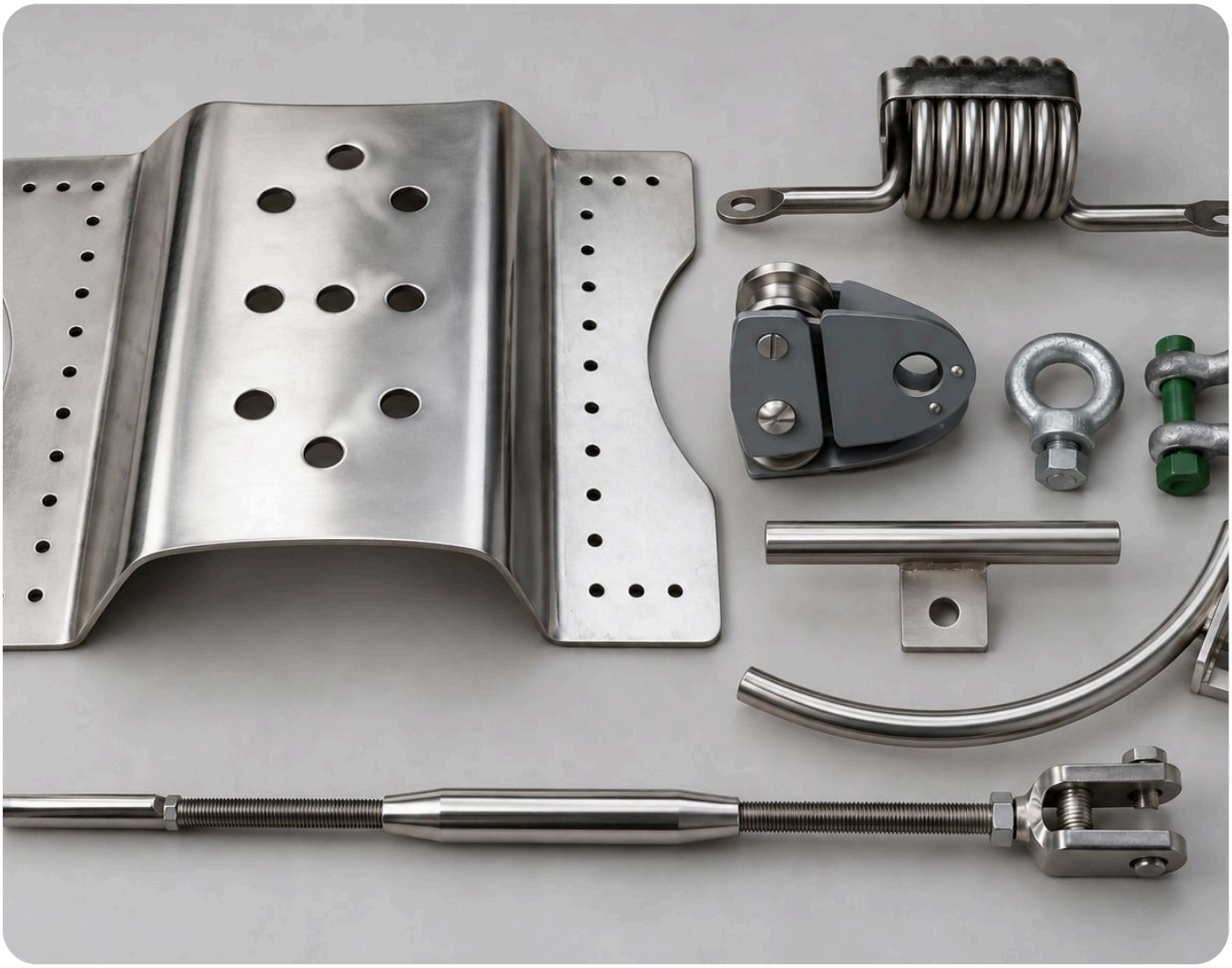
Before anyone goes up

Using it safely

- Wear a full-body harness and connect with an energy-absorbing lanyard or a self-retracting fall arrester.
- Never more than four people on one line, or two in one span.
- Check the line and the indicators before every use.
- Have a rescue plan in place before anyone goes up.
- After any fall, take the line out of use until it has been inspected.

What a typical supply includes

- Supply and installation of the complete stainless-steel system
- Anchor points for the end, intermediate and corner positions, with their brackets and seals
- Sliders that pass every intermediate and corner, for continuous travel by up to four people
- Self-retracting fall arresters, where the work calls for them
- Component certificates and a thorough examination by an approved third party
- A 10-year warranty on the system





OK Works
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Talk to us

Send us a photo of the roof.

Send us photos of the roof and its rough size, and we will come back with an outline route and a quotation.

Email	info@okworks-eg.com
Phone	+20 11 5988 0593
Web	okworks-eg.com