

# Flash and Life Guard 40 Fall Arrest

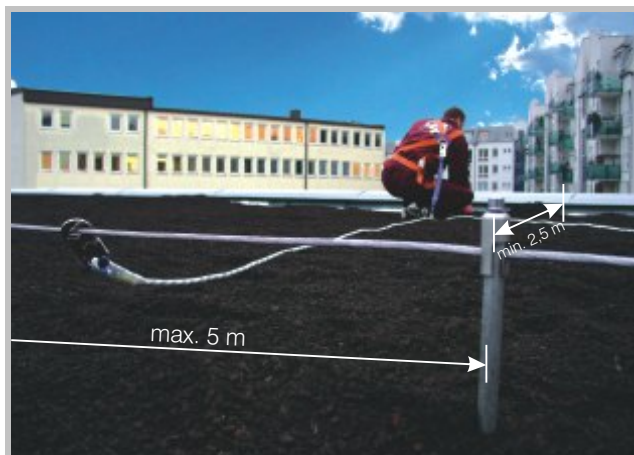


LIGHTNING PROTECTION  
AND  
FALL ARREST SYSTEM

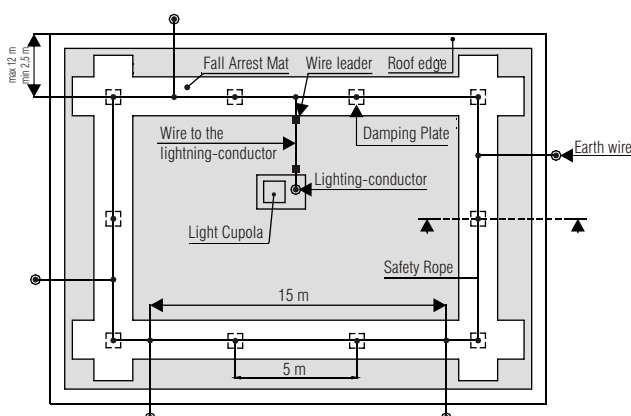


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## EXAMPLE INSTALLATION



## ADVANTAGES OF THIS SYSTEM OVER STANDARD TYPES

- Very simple installation
- No mechanical fixing necessary
- Insulation is not penetrated
- No cold-bridges are introduced
- Integrated lightning-protection
- Economical on filter-fleece
- No cable-jungle
- May be used on roofs with up to 5% inclination
- No prerequisites for the roof construction
- Emplacement is easy, even during renovations

## FLASH AND LIFE GUARD 40 (FLG-40)

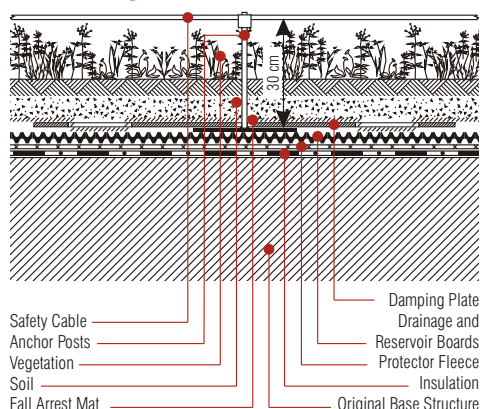
The FLG-40 is the only lightning-protection installation which serves also as a fall arrest system. Installation of the system requires neither penetration of the roof insulation nor mechanical fixing to the fabric of the roof. The FLG-40 is held in place by its own weight and may be used on green, gridded, or paved roofs with up to 5% inclination. The Flash and Life Guard has been tested against relevant standards for safety on most types of superstructures and roof insulations. The system is suitable for roofs with a minimum load of bulk goods of 80 kg/m<sup>2</sup>. The features of the combined fall and lightning conduction protection system are utilised to full advantage when they are planned into the lines of the roof garden system from the first. There is no upper length limit for the system. The "Single Point" system, on the other hand, permits one or several independent attachment points to be placed at particular points across the roof. In this case, the minimum requirements for the roof are dimensions of 5m x 8m. All system components are corrosion-proof and rot-proof. APP's Flash and Life Guard 40: Lightning Protection and Fall Arrest System has been approved to Class E standard according to EN 795 and 795/A1 and has been patented as a registered design.

## LEGAL BACKGROUND

To protect building or maintenance personnel, fall arrest equipment is required for any work on freestanding roofs of 3m or greater height, or closer than 2m to the a roof's edge. Fall Arrest equipment must be set up at least 2.5 metres from the edge.



## COMPONENT LAYERS



## JOB SPECIFICATION - "COMPLETE" SYSTEM

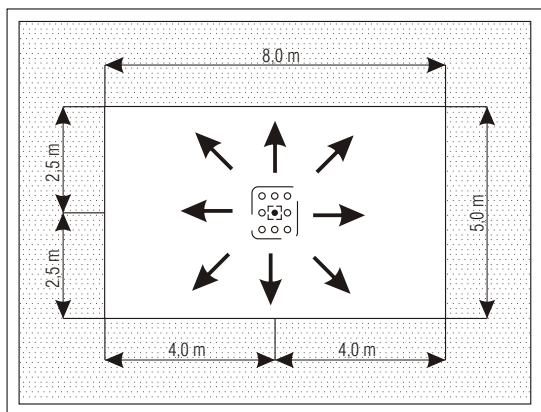
APP® Flash and Life Guard 40 FLG-40.

To supply and install Lightning Protection and Fall Arrest System, on a suitable base layer, on flat roofs with up to 5% inclination, and to load with a minimum load of 80 kg/m<sup>2</sup> roof-greening, gravel or paving. The first, last and intermediate Anchor Posts will be installed no more than 5 metres apart and will combine to provide a path for the Safety Rope which will receive the carabiners from the workman's personal safety harness. The system will be able to absorb energy from any direction and will comprise: stainless-steel Locking-Heads; galvanised steel Anchor Posts (25x25x30 cm); aluminium Lightning Protection and Fall Arrest cables; a Fall Arrest Mat (5m wide) which will double as a Filter Fleece; Damping-Plates made from recycled material; an Inspection-Tag and comprehensive documentation. The system will conform to EN 795:1996 and EN 795/A1:2000 Class E.

## "SINGLE POINT" SYSTEM

On roofs where localised energy-absorption nodes are required, the Anchor Posts are equipped with Securing Rings to receive the carabiner from workman's personal safety harness. Such energy-absorption nodes can absorb energy from any direction. The "Single Point" System includes a 5mx8m (40m<sup>2</sup>) Fall Arrest Mat with a small hole in the middle. The entire system can be installed in a few minutes without tools. The inspection-tag should be clipped to a Securing Ring.

## EXAMPLE INSTALLATION



## SERVICE

Once you purchase the system, a comprehensive service is at your disposal. Please contact us if:

- You or your team require instructions;
- You require a CAD layout plan;
- Roof penetrations will be obstructed by the fall arrest mat;
- The inclination of the roof is greater than 5%;
- Anchor Posts are required in different heights or quality;
- Special roof superstructures are present or planned.

We will be happy to help further!



## PERSONAL PROTECTION EQUIPMENT

Compatible fall-cushioning equipment including moveable leads (conforming to EN353-2) with an 15 metre rope and a universal cushioning harness (conforming to EN361 and EN358), supplied in a practical metal box.



## TOOLSET FOR SYSTEM INSTALLATION

- Cable cutter • Allen key
- Punch • Hammer
- Cutter • Spanner



## JOB SPECIFICATION - "SINGLE POINT" SYSTEM

APP® Flash and Life Guard 40 "Single Point" System

To supply and install Lightning Protection and Fall Arrest System, on a suitable base layer, on flat roofs with up to 5% inclination, and to load with a minimum load of 80 kg/m<sup>2</sup> roof-greening, gravel or paving. One or more Anchor Posts, each equipped with a Securing Ring to receive the carabiner from the workman's personal safety harness, will be installed. The system will be able to absorb energy from any direction and will comprise: one or more stainless-steel locking-heads, galvanised steel Anchor Posts (25x25x30 cm) and galvanised steel Securing Rings; a Fall Arrest Mat (5m x 8m) which will double as a Filter Fleece; Damping-Plates made from recycled material; an inspection-tab and comprehensive documentation. The system will conform to EN 795:1996 and EN 795/A1:2000 Class E.



## SET THE CROWN ON YOUR ROOF!

FLG-40 is especially appropriate for the following APP® Roof-garden Systems:

- Extensive roof-garden set Diadem-150
- Simple intensive roof-garden set Diadem-350
- Intensive roof-garden set Diadem-750
- Underground garage roof-garden set Diadem-1200

## TECHNICAL DATA

System Components	Dim.	FLG-40	
		"Complete" system	"SinglePoint" system
Anchor Post	Material	Galvanised steel	
	Footprint	25 x 25	
	Height	30 (other heights on request)	
Locking-heads	Material	Stainless steel	
	Material	Aluminium	
Safety Rope	Diameter	9	
	Material	Galv. steel	
Securing Ring	Diameter	9,5	
	Material	Galv. steel	
Cable Clamp	Width	5	
	Length	50	
	Max. lengthways resistance	11,5	
	Max. lateral resistance	11,5	
Damping-Plate	Porosity	105	
	Material	Recycled Polyethylene	
	Dimensions	120 x 100	
	Thickness	10	

\*No additional filter-fleece is required

## SYSTEM COMPONENTS



### ANCHOR POST

A galvanised steel pole of circular (ø 20mm) section and with a square base. Its purpose is to hold the Safety Rope and to transfer kinetic energy to the Damping Plates. If a fall occurs, the pole bends, thus further damping the fall.



### LOCKING-HEAD

Made from stainless steel, the Locking-Head fixes the Safety Rope – or, in the "Single Point" System, the Securing Ring – to the Anchor Post. The hexagonal nut on the Head must be fully tightened.



### DAMPING-PLATE

These specially-designed plates, manufactured from recycled material, are intended to absorb the kinetic energy resulting from a fall and to slow any descent. This will be effected by a slight shift of the plate under the soil layer.



### FALL ARREST MAT

This 5-metre-wide mat is supplied - folded once - in 2.5-metre-wide rolls. The mat collects the bulk goods, brakes the movement of the Damping-Plate and prevents the leaching out onto the roof of fine particles from the soil.



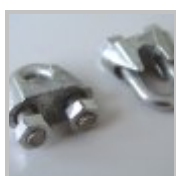
### SAFETY ROPE

An aluminium rope (ø ca. 9mm) which runs between the individual Anchor Posts and connects via a carabiner to the workman's personal safety harness, and which also acts as a discharge outlet for the lightning protection feature of the system.



### SECURING RING

The ring, used only for the "Single Point" System, is made from galvanised steel, and permits the workman's personal safety harness to be connected to individual attachment points on the roof. The inspection tag is also attached to the Securing Ring.



### CABLE CLAMP

This is a critical requirement for the FLG-40 system. The Aluminium rope must, at the outset, be secured to the main Anchor Post with a clamp, and again with at least one more at the end.



### INSPECTION TAG

A plastic tag attached to either the Safety Rope or to the Securing Ring. It contains important information such as serial numbers, inspections carried out, building project details etc.

## LAYOUT PROCEDURE

### STEP ONE

The Fall Arrest Mat is laid out according to the plan on the base layer. The direction of roll is determined by the way the mat has been folded. The Anchor Posts are subsequently placed along the fold-lines.



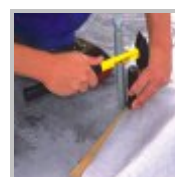
### STEP TWO

The anchor posts are slid through the central holes of the Damping Plates, which are then put into their planned position, along the fold of the mat.



### STEP THREE

Half-circles are cut into the mat along the fold with the punch. This operation can be carried out resting on the Damping Plates.



### STEP FOUR

The mat is now unfolded and the Anchor Posts are slid through the holes in the mat. In the case of multi-layered roof-garden installations, no further filter-fleece is required for the surface on which the Fall Arrest Mat is laid.



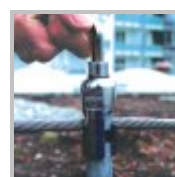
### STEP FIVE

The mat is fixed in place by bulk goods, grit or paving. Ensure that a minimum of 80 kg/m<sup>2</sup> is applied consistently across the mat.



### STEP SIX

The Safety Rope is extended and placed into the Anchor Posts. The Locking-Heads, with bayonet fixture, are put on top of the Anchor Posts and drawn tight.



### STEP SEVEN

The Safety Rope is looped around the main Anchor Posts at the beginning and end of the system and fixed into place in each by two Cable Clamps.



### STEP EIGHT

An electrician should install other parts of the Lightning Protection System. The Inspection Tag is put in place and the system can be used.

