

Weight Angel™

Protection Systems



Installation & User Manual

September 2015
V.1.1

INTRODUCTION

General Information

The fall protection system on this project has been installed to reduce the risk experienced by the users when carrying out light maintenance tasks in areas where risks of a fall have been identified.

It is imperative that the contents of this manual are read and understood by all potential users of the fall protection system.

The contents of this manual are intended as a reference guide for operatives that have received the relevant training for using the fall protection system.

This Manual contains safety information and instructions for installing the Weight Angel Safety system and should be stored in an area where it is accessible to installers and layout designers of the system.

Continued improvement and advancement of product design may have caused changes to the current Weight Angel Safety System, which are not included in this Manual.

Whenever a question arises regarding the Weight Angel, or this Manual, please consult the Bettersafe International website at www.bettersafeinternational.com for the latest available information.

Further information on the Weight Angel Safety System is available in training material and courses. Further enquiry regarding these materials and courses should be directed to: info@bettersafeinternational.com

Testing to EN795 carried out by

SATRA Technology Centre,
Wyndham Way,
Telford Way,
Kettering,
Northamptonshire,

Notified Body 0321

CUSTOMER SERVICE

Please contact the Bettersafe International for enquiries regarding the operation, periodic examination and recertification and repair of your Weight Angel Safety System. To request more information please contact Customer Service on

info@bettersafeinternational.com

www.bettersafeinternational.com

UK + 44 (0) 1260 217 437

NETHERLANDS + 31 (0) 183 820 280

For manuals in your countries language please contact us on the above.



IMPORTANT SAFETY INFORMATION

Do not install the Weight Angel Safety System unless you have read and understand the instructions and warnings in all Manuals and have been authorised by Bettersafe International to do so.

- Work at Height should not be attempted by a “lone” worker
- All fall protection systems are subject to an annual test and inspection as required under EN795 and PPE Regulations
- Before each use, all preliminary inspections should be carried out as stated in their end user training.
- The manual is NOT intended as a substitute for training.
- Failure to follow the instructions or heed the warnings or improper operation could result in injury or death.

WARNING: You must consult your doctor if there is any reason to doubt your fitness to safely absorb the shock from a fall arrest. Age and fitness levels have implications on a worker's ability to withstand falls. Pregnant women or minors must not use the system under any circumstances.

- Users must be capable of lifting 24kg safely. Muscular Injury from lifting not in accordance with Manual Handling regulations is possible.
- The Weight Angel shall not be used outside its limitations as described in this Manual, or for any purpose other than that for which it is intended.
- Only competent individuals who have been given appropriate training should use this safety equipment. In addition, the user must also be aware of the characteristics, application limits and consequences of the incorrect use of the equipment.
- A full body harness suitable for fall-arrest is the only acceptable body holding device that can be used with the Weight Angel Safety System.
- Suitable Fall Arrest or Restraint equipment tested to the relevant CE standard must be used to connect the harness to the Weight Angel to limit the load to 6kN
- The Weight Angel should not be used with a Self Retracting Lifeline (SRL) unless it has been tested as a system with the Weight Angel.
- Operators must carry out a Pre-Use Check of the equipment to ensure that it is in a serviceable condition and operates correctly before it is used.
- It is essential for safety that equipment is withdrawn from use immediately should any doubt arise about its condition for safe use.
- Do not tamper with or alter the Weight Angel in any way unless instructed to do so by the manufacturer or authorised representative.
- A rescue plan shall be in place to deal with any emergencies that could arise during the work
- SHARP EDGES: Avoid working where the connecting subsystem or other system components will be in contact with, or scrape against, unprotected sharp edges. If it is unavoidable to use the System near sharp edges, ensure adequate protection against cutting is provided whilst working over the exposed sharp edge.
- SWING FALLS: Swing falls occur when the anchorage point is not directly above the point where a fall occurs. The force of striking an object while swinging can be great and may cause serious injury.
- The Weight Angel is for Personal Protection only and should not be used as a lifting anchorage.



INSTALLATION LIMITATIONS

The Weight Angel Safety System is designed with the following limitations:

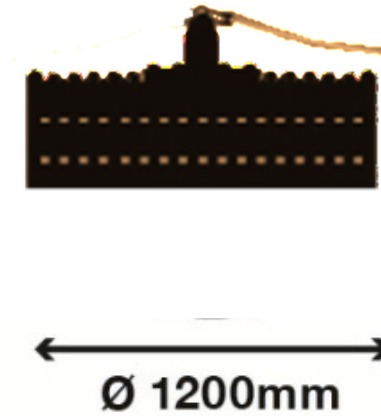
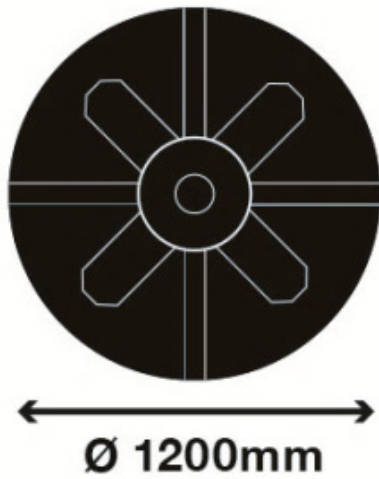
1. Fall Arrest for one (1) user
2. Maximum roof pitch of five (5) degrees
3. The roof area must be capable of retaining the at least 600kg static load in the area required.
4. The maximum applied load in the event of a fall is 6.9kN.
5. Roofing Materials (Wet and Dry)
 - i. Single Ply Membrane
 - ii. Single Ply Bitumen Membrane with stone covering
 - iii. Single Ply Membrane Bitumen
 - iv. Concrete Deck
6. Weather
 - i. Wet surfaces are tested
 - ii. Dry surfaces are tested
7. Placement
 - i. The maximum deflection of the Weight Angel is 650mm
 - ii. The Weight Angel should not be placed closer than 1000mm
 - iii. The Weight Angel should not be placed in an area where water can be caused to accumulate in order to remove slip hazards
 - iv. The Weight Angel should not be used where contaminants such as oil are present. If such contaminants are present then these should be cleaned away prior to installation.
 - v. The Weight Angel should not be used in freezing conditions or on icy surfaces.
 - vi. Should the surface be on loose stones or similar then these should be brushed away prior to installation.

USER NOTES

1. The Weight Angel Safety System is suitable for use with the following products
 - i. Full Body Harness conforming to EN361
 - ii. Self Retracting Lifelines conforming to EN360 and sharp edge testing
 - iii. Adjustable Lifelines conforming to EN353
 - iv. Horizontal single span lifelines conforming to EN795 Class C
 - v. Rescue Equipment and Descent controllers conforming to relevant EN standards
2. The Weight Angel Safety System should only be used by a maximum of one (1) user at any one time.
3. Care should be taken to only use karabiners and hooks that will not interact with each other and cause forced roll out. A screw gate type karabiner is recommended.
4. Installation via the following instructions must be performed completely prior to use.
5. Before each use, the user must examine the equipment to ensure it is in perfect operating condition. It is important to check for deformation, corrosion, sharp edges and abrasive areas on the metal and absorbing parts of the system or component.
6. If the system or one of its components fails the above visual check, it should be immediately removed from service. Only competent and skilled persons may decide on the possibility of return to service and this permission should always be given in writing.
7. Prior to a fall arrest system being used, it is essential to check the clearance under the user's working zone to prevent a collision with an obstacle or the ground in case of fall.
8. The Weight Angel is recommended to have the date of the next inspection displayed on the anchor directly.



KEY SPECIFICATIONS



Conforms to EN795:2012

Weight	300 kg
Individual Weights	24 kg
Qty Weights	12 units
Weight of posts /supports	12 kg
Width	1200 mm
Height	465 mm
Made from Recycled Materials	

MATERIALS

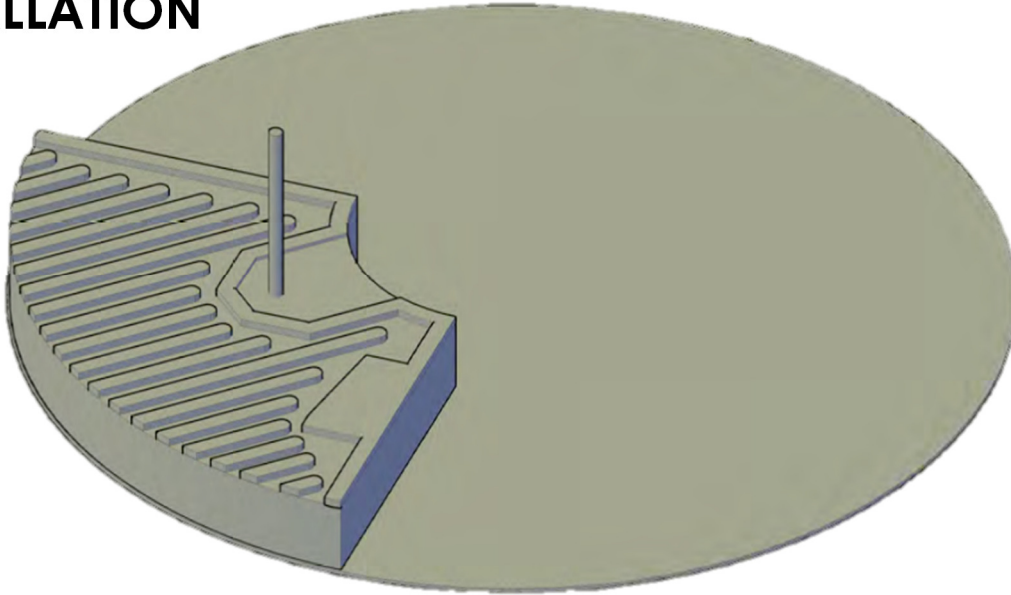
Post	Polyurethane
Eye Ring	SS 316
Cover	Aluminium
Bolts	SS 316

MATTING SPECIFICATIONS

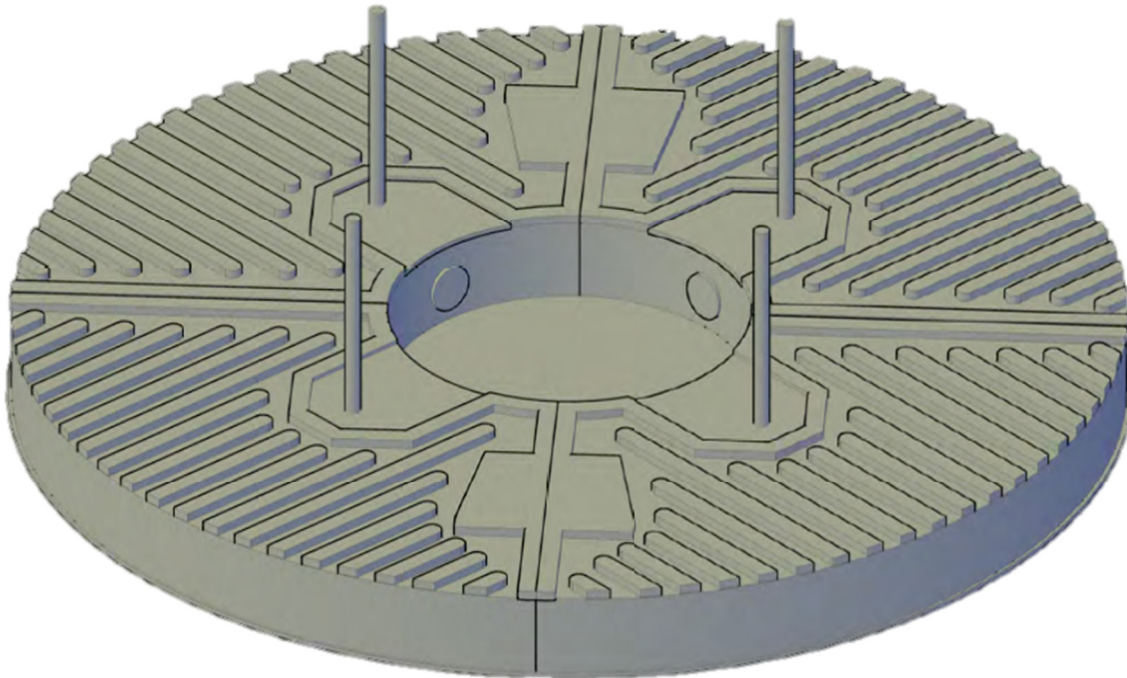
Elastomer	Natural
Colour	Black
Quality	Commercial
Grade	N02
Hardness	70° shore a
S.G.	1.55g/cm ³
Tensile MPA	4
Elongation	300%
Tear strength	12 kg/cm
Compression set	43%
Abrasion resistance	48/0 mm ³
Operating temperature	-20° / +70° c



INSTALLATION



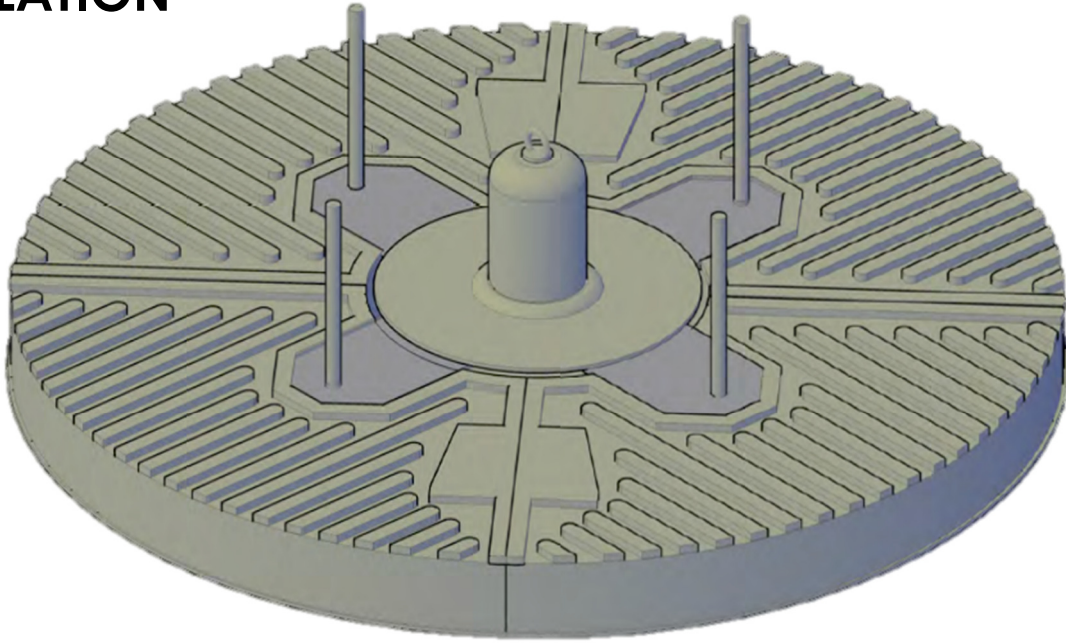
- 1) Lay rubber matting (WA 005) in accordance with BS EN 795 Class E
- 2) Insert M16 Rod Assembly Set (WA 001) through the underside of the recycled plastic weight (GA 02)
- 3) Position weight on to rubber matting



- 4) Repeat instructions 2 for the next 3 weights and position on the rubber matting as per above diagram

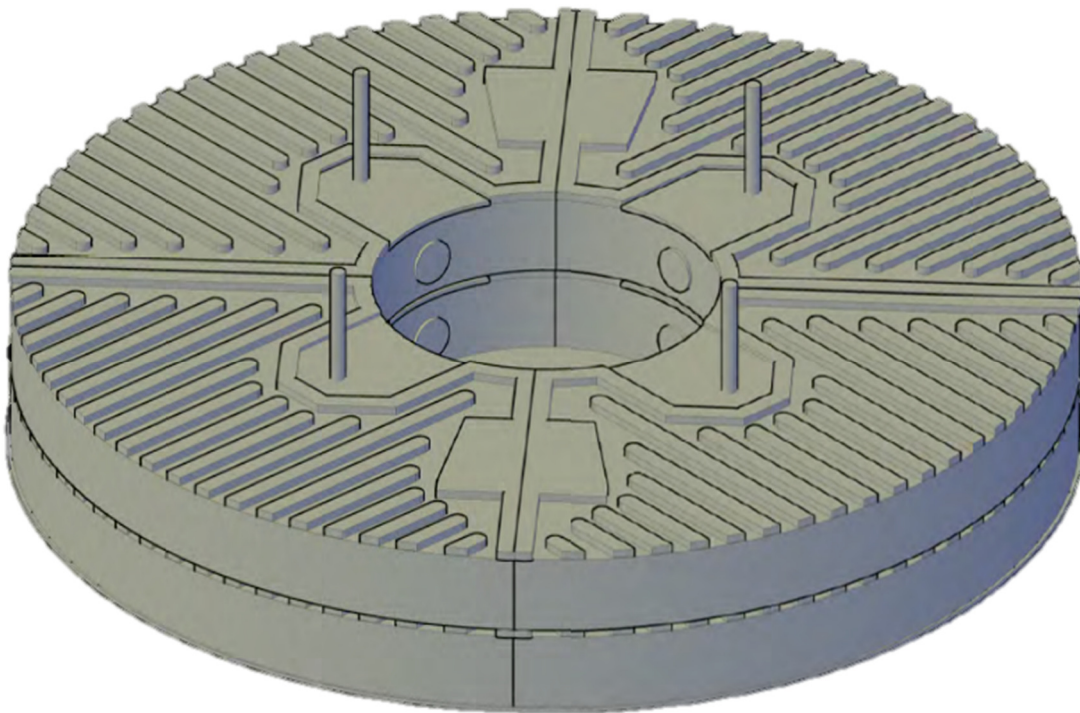


INSTALLATION



5) Place pre assembled crossover plates and posts on top, to ensure weights are aligned correctly

6) Remove pre assembled crossover plates and posts



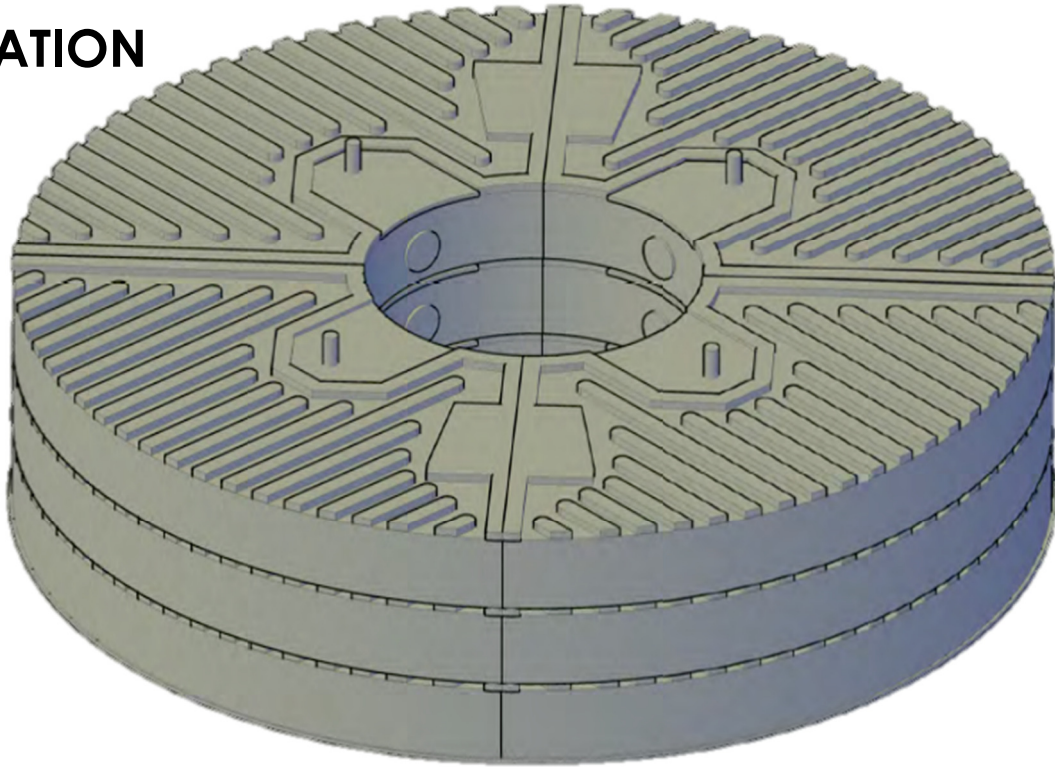
7) Position next layer of weights on top and through the M16 Rod.

8) Repeat instruction 5 to ensure correct alignment

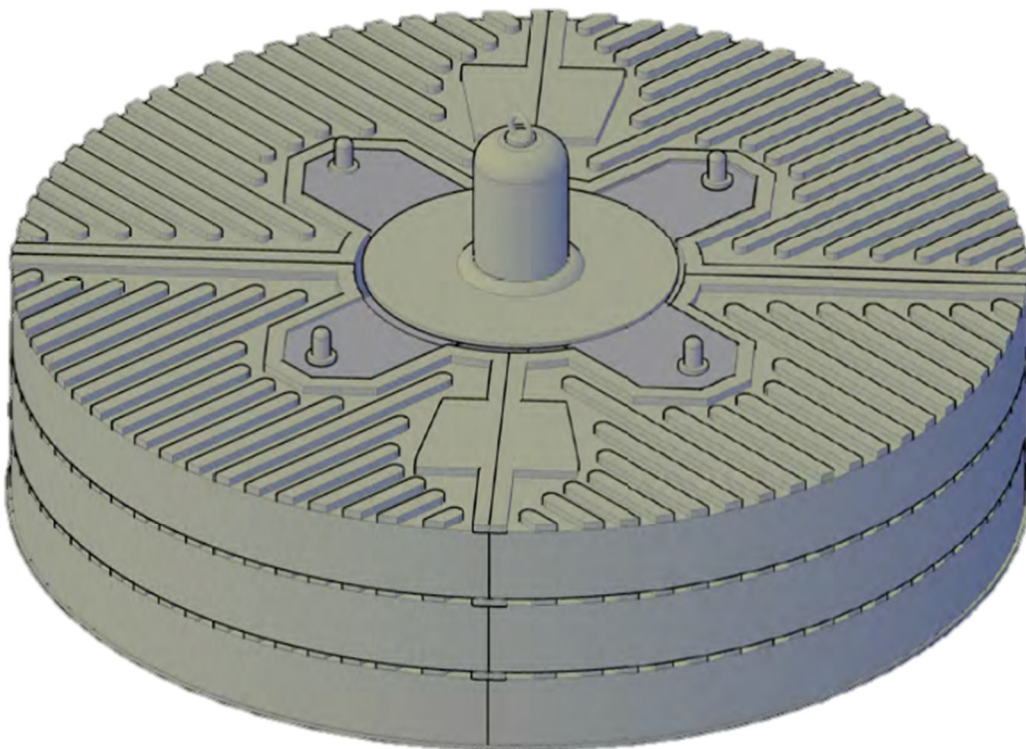
9) Repeat instruction 6



INSTALLATION



10) Position next layer of weights on top and through the M16 Rod,



11) Place pre assembled crossover plates and post on M16 rods and fix with M16 Dome hex set (WA 001)

12) Weight Angel is ready for use in accordance with BS EN 795 Class E



PRE-USE CHECKS

- Check the end post aluminium cover. If this has signs of damage then it is a key sign that the system has potentially undergone a fall loading.
- Ensure that all labels are clear, present and legible.
- Check for obvious damage to the other posts and componentry.
- Always notify the correct personnel that you intend working at height.
- Check that the PPE is in good order and that it has not exceeded the date of obsolescence. This date is dictated by the PPE Manufacturer – refer to the harness certification.
- Check that the supplied PPE meets the requirements of the restraint distances detailed in the method statement supplied by the system installer.

SYSTEM USE

Any necessary permit to work on the system must be obtained from the appropriate personnel (assumed to be the building manager) before using the systems. The appropriate personnel should ensure that all annual maintenance/inspections of the system are up to date and that warning signs are clearly posted.

Before use all users should carry out the above pre-use checks. This applies to each individual system.

If any of the above checkpoints are noted, the system must not be used and an immediate report should be made to the building manager. Systems should not be used again until the necessary checks have been carried out, and if required, repair works undertaken.

It is imperative that only full body safety harnesses and energy-absorbing lanyards are used with the Bettersafe International Fall Angel systems.

For fall arrest requirements of the system the user(s) MUST be attached directly to the anchorage points supplied on the Weight Angel, NOT to the Roof Angel system.

All PPE must comply with relevant EN Standards and bear the CE Mark. Fit the full body harness as per the manufacturer's instructions. All operatives that have received the end user training will be cognisant with the use of a full body harness.

Details of use of the PPE is supplied separately with each individual PPE item.

The following illustration shows an example of fall arrest areas when working directly from the Weight Angel Anchor rather than the Roof Angel Horizontal Lifeline.



ON-GOING MAINTENANCE

The Weight Angel has an expected life of 25 years. Any part that is damaged during this time may be replaced. After a fall it is recommended that the Weight Angel be taken out of service.

The Weight Angel may be cleaned using materials that will not react and damage rubber, polyurethane, aluminium, stainless steel or galvanised steel.

The Weight Angel may be stored in any environment that does not contain materials, or have substances in the air that may react and damage rubber, polyurethane, aluminium, stainless steel or galvanised steel.

It is a legislative requirement under EN795 that fall protection solutions are tested and re-certified annually by suitably qualified personnel, who are trained and approved by Bettersafe International BV.

Legislation states the following:

- Fall protection systems to be tested every 12 months (EN795) by a person considered competent by the manufacturer.
- PPE to be inspected every 12 months (EN365 & PPE Regulations)

LABELS



MAINTENANCE RECORD CARD

System Description	Test Date	Pass?	Inspection Company	Engineer	Comments	Signature





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