

**User Instruction Guide for
RoofGuard Kits:
HG-KIT-08
RGC-KIT-09
RGC-KIT-18V**



All Point Distributors Ltd.

WARNINGS

This system is part of a site-wide fall protection system. The user must read and follow all guidelines in this manual. These instructions must be provided to the user(s) of this system. The user(s) must read and understand these instructions or have them explained to them prior to using the system.

Alterations or misuse of this system, or failure to follow instructions may result in serious injury or death. If you have any questions on the use or care of this system, please contact All Point Distributors Ltd at 1-306-537-1019

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1.0 Application

- 1.1 The RoofGuard Kits are designed to be installed on a flat roof (up to 5% grade) to provide protection for workers near the edge or an exposed opening in the roof.

Depending on the roof surface, a rubber pad, or ultra-light paving stone may be used under the base plates to facilitate safe/stable contact with the roof surface. As freestanding systems rely on friction between the base plates and the roofing materials; base plates MUST NOT be set on ice or snow or other substances which may permit excessive sliding, especially where a parapet wall is not present; users MUST clear the area prior to placing the RoofGuard base plates.

- 1.2 The RoofGuard Kits are designed to protect workers on rooftop areas, or near an opening into which they may fall. It is not intended to protect areas with public access or large gatherings of people.

2.0 System Requirements

- 2.1 The HatchGuard Standard System is designed to be used on hatches with a lid opening of up to 36" square or smaller. For larger hatch openings a custom kit can be provided. The roof around the hatch must be relatively flat, and the hatch must be at least 4-feet from the roof edge to allow the system to fit between the hatch and the roof edge, and keep the worker back 6-feet from the roof edge at all times. If near the roof edge, the gate should also open away from the roof edge. See Appendix **DIAGRAM 1**

- 2.2 RoofGuard Kit RGC-KIT-09 is designed to provide protection from a roof edge along a straight section of roof. The corners of the kit should not be placed within 6-feet of another perpendicular roof edge (corner) as this would require another 'leading edge' protection section (see RGC-KIT-18V). See Appendix **DIAGRAM 2**

- 2.3 RoofGuard Kit RGC-KIT-18V is designed to provide protection along 18-feet of roof edge. The ends of the system should not be placed within 6-feet of a parallel edge. The kit has a variable angle fitting in the center and can be used to fit onto a corner between 90 and 180 degrees, or cover an 18-foot straight section of roof edge. See Appendix **DIAGRAM 3**

3.0 Components

- 3.1 RoofGuard Kits consist of Base Plates, Vertical Posts, horizontal pipes and gates (HatchGuard Kit Only).
- 3.2 Base plates are cast steel with a galvanized coating for long-term outdoor use. Cone point Stainless Steel set screws secure the vertical rails into the base plates. The set screws come installed in each available hole of the baseplates to ensure the threads are clogged by the galvanizing material.



Figure 1: RoofGuard Base Plate with set screws and a tool.

Users may select which hole of the baseplate to use. For the outside hole, two set screw options are provided. While both may be tightened, the hole in the post must line up with one.

3.3 Vertical posts are supplied with fittings and caps for a variety of configurations: Each “Post” is labelled with a Letter sticker to identify where it is used in the kit.

A – End Post – Used where the horizontal pipes end at a vertical post, at the ends of the system and ends of the tie-backs. (2 in each Kit)

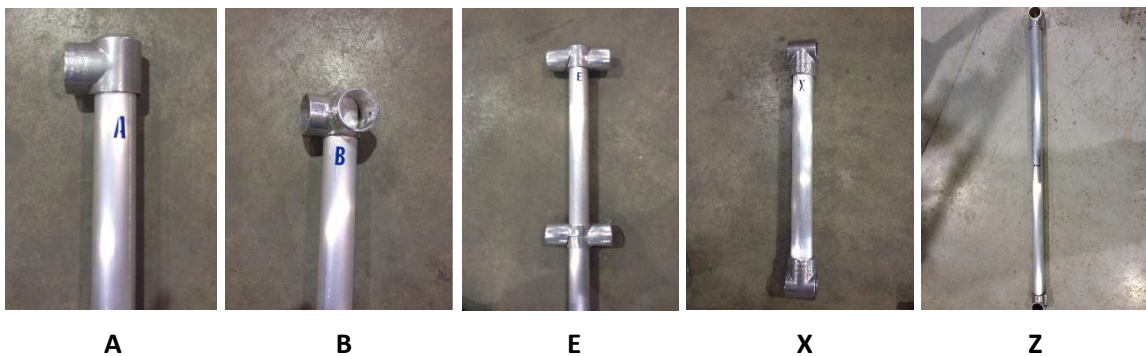
B – Corner Post – Used where the horizontal pipe makes a 90-degree corner. (2 in each Kit)

E – Variable Angle – Used in the 18-foot kit to make a straight 18-foot run, or two 9-foot sections with an angle (such as at a corner of a rooftop). (1 in RGC-KIT-18V only)

X – Intermediate support – Used in the centers of 9-foot horizontal rails to provide additional support. (1 in RGC-KIT-09, and 2 in the RGC-KIT-18V)

Z – Hatch Support – This horizontal piece is used in the Hatch kit to keep the two sides of the hatch parallel as one end is open for the gate. (1 per HG-KIT-08)

Figure 2: Labelled Components



3.4 The self-closing gate is hot-dip galvanized for corrosion resistance and durability.

3.5 Horizontal Rails are available in three standard sizes, 4-foot, 6-foot and 9-foot. For other required sizes, the aluminum pipe is suitable for cut-to-fit on-site with various tools for non-ferrous metals.

- Four-foot sections are included for the 3 sides of the HatchGuard Kit (6 pcs per HG-KIT-08)
- The 6-foot sections of rail are used for the tie-backs to provide the counterweight for the system. (4 pcs in each of the RGC-KIT-09 and RGC-KIT-18V)
- The 9-foot sections of rail provide the leading edge protection. To meet stringent building code load requirements, the 9-foot sections of rail use a stiffener (Post “X” to connect the top/mid rail).
- RGC-KIT-09 has 2 pcs of 9-foot pipe and one POST “X”
- RGC-KIT-18V has 4 pcs of 9-foot pipe and two of the POST “X”
- HG-KIT-08 has 6 pcs of 4-foot pipe for 3 sides of the hatch and one POST “Z” for stability

4.0 System Layout

- 4.1** For the RGC-KIT-09 and RGC-KIT-18V, the baseplates should be placed against the parapet of the ‘hazard’ edge. If there is no parapet wall, the base plates should be positioned with the edge of the plates at least 18” from the roof edge. **See Appendix Diagram 2 and 3, respectively.**
- 4.2** For the HG-KIT-08 the baseplates are placed in a 4-foot square with the closed hatch at the center. The location of the gate would be determined by the access from the hatch, usually a ladder. Typically the system would be setup so the worker comes up the ladder and exits directly through the Self-Closing Gate. (SCG) **See Appendix Diagram 1.**

5.0 Installation HG-KIT-08, see Appendix Diagram 1

- 5.1 When assembling the RoofGuard Kits, workers should be a safe distance from the roof edge (per local regulations), have the hatch lid closed, and/or be attached to a suitable fall protection system until the setup is complete.
- 5.2 Base Plates should be set in a square (four feet between holes) in piles of TWO, with the hatch opening in the center of the square. Care should be taken to see if the hatch lid will contact the rails once assembled. Any of the 3 main holes in the Base Plate can be used to adjust how tight the Posts get to the edge of the hatch.
- 5.3 One side of the square is where the Self-Closing Gate will be added (last step), which should be located so workers exiting the hatch can easily exit the system. On each side of the Self-Closing Gate side, one Post "A" should be inserted into the base plates. The pilot hole in the bottom of the Post should line up with one of the set-screws in the Base Plate. Base Plate set screws should be torqued to 25 ft-lbs.
- 5.4 The other two areas with Base Plates should both have Post "B" installed. The pilot hole in the bottom of the Post should line up with one of the set-screws in the Base Plate. Base Plate set screws should be torqued to 25 ft-lbs. **See Figure 3.**
- 5.5 There are 3 pairs of 4-foot rail for the two sides and the 'back' (opposite the gate) of the Hatch system. There is also one Rail "Z" stiffener to join the two top rails of the sides. This stiffener helps keep the sides parallel and strengthen the gate connection. The "Z" Rail stiffener should be slid onto the top rails of the sides, prior to placing them between Post "A" and Post "B". **See Figure 4.** Do not tighten the set-screws in the fittings at this point.
- 5.6 The mid rails of both sides should also then be inserted between Post "A" and Post "B" on both sides, taking care that the top rail does not fall out. Once inserted, the set-screws holding the side rails (both sides) can be tightened to 16 ft-lbs.
- 5.7 Next install the rear rails between Post "B" and Post "B". Once inserted, the set-screws securing the rear rails, and Stiffener "Z" can be tightened to 16 ft-lbs, ensuring the side rails are parallel.
- 5.8 Finally, install the gate, mounting the hinges to one of the Post "A" posts. The gate can be mounted on either side to accommodate opening in either direction. The hinges on the gate can be rotated around the vertical Post "A" to adjust the spring tension on the gate. When closed, the tab on the end of the gate should strike the Post "A" opposite to the hinges.



Figure 3: Base Plate



Figure 4: 4-foot rail

- 5.9 Once the system is complete, a second check of each set screw should be performed, and once torqued, each set screw should be marked with the blue crayon (or other marking system) to help facilitate inspection and provide indications in the event of any tampering.

6.0 Installation RGC-KIT-09, see Appendix Diagram 2

- 6.1 When assembling the RoofGuard Kits, workers should be back from the roof edge (per local regulations), or be attached to a fall protection system until the setup is complete.
- 6.2 Clear the area for the RoofGuard Base Plates of any snow, ice or loose dirt/debris. Depending on the roof surface, a rubber pad (for membranes) or paver (for gravel) may be placed on the rooftop as an interface between the steel plates and the roofing material.
- 6.3 Base plates should be set out with approximate spacing per the sketch (RGC-KIT-09) with pavers or rubber pads underneath them, as required by the roof surface; one baseplate at the leading edge locations (2 for KIT-09) and three baseplates at the tie-back locations. Tie-back locations are 6-feet behind the two corner posts, at the ends of the hazard edge.
- 6.4 At the ends of the tie-back portions, a Post "A" should be placed into the stack of 3 baseplates, so that the pilot hole in the bottom of the Post "A" lines up with one of the set screws. Depending on the orientation of the baseplate and the hole chosen, there may be one or two set-screws. One must line up with the pilot hole. Torque all contacting base-plate set screws to 25 ft-lbs.
- 6.5 At the corner, a Post "B" should be placed into the single baseplate. The pilot hole in the bottom of Post "B" should line up with one of the set screws. Torque all contacting base-plate set screws to 25 ft-lbs.
- 6.6 Between Post "A" and Post "B", two of the 6-foot aluminum rails should be secured using the fittings. The top fitting should be flush with the plastic cap, ensuring the top rail is at 42" above the bottom of the Post. The mid-rail should be adjusted by the installer so that the center of the fitting is at the mid-point (21" from top or bottom) of the Post. Torque the set-screws in all aluminum fittings to 16 ft-lbs.
- 6.7 Along the "hazard" edge, two 9-foot pieces of rail will be secured. Prior to attachment, the stiffener Post "X" should be secured to the center of two 9-foot lengths of pipe where they are marked with and "X". The 9-foot rail section can then be inserted into the Corner Post "B" and secured to the other Corner Post "B" for RGC-KIT-09. All set-screws in the fittings should be torqued to 16 ft-lbs.



Figure 5: Rails

- 6.8 At the second corner post "B", another two 6-foot rails will be connected between the corner post "B" and the second end post "A". The end post "A" will have 3 baseplates, with the hole of the Post "A" lining up with one of the set-screws in the bottom base plate. All baseplate set-screws that contact the post should be torqued to 25 ft-lbs.

- 6.9** Once the system is complete, a second check of each set screw should be performed, and once torqued, each set screw should be marked with the blue crayon (or other marking system) to help facilitate inspection and provide indications in the event of any tampering.

7.0 Installation RGC-KIT-18V, see Appendix Diagram 3

- 7.1** When assembling the RoofGuard Kits, workers should be back from the roof edge (per local regulations) or be attached to a fall protection system until the setup is complete.
- 7.2** Clear the area for the RoofGuard Base Plates of any snow, ice or loose dirt/debris. Depending on the roof surface, a rubber pad (for membranes) or paver (for gravel) may be placed on the rooftop as an interface between the steel plates and the roofing material.
- 7.3** Base plates should be set out with approximate spacing per the sketch (RGC-KIT-18V) with pavers or rubber pads underneath them, as required by the roof surface; one baseplate at the leading-edge locations (3 for KIT-18V), and three baseplates at the tie-back locations. Tie-back locations are 6-feet behind the two corner posts, at the ends of the hazard edge.
- 7.4** At the ends of the tie-back portions, a Post "A" should be placed into the stack of 3 baseplates, so that the pilot hole in the bottom of the Post "A" lines up with one of the set screws. Depending on the orientation of the baseplate and the hole chosen, there may be one or two set-screws. One must line up with the pilot hole. Torque all contacting base-plate set screws to 25 ft-lbs.
- 7.5** At the corner, a Post "B" should be placed into the single baseplate. The pilot hole in the bottom of Post "B" should line up with one of the set screws. Torque all contacting base-plate set screws to 25 ft-lbs.
- 7.6** Between Post "A" and Post "B", two of the 6-foot aluminum rails should be secured using the fittings. The top fitting should be flush with the plastic cap, ensuring the top rail is at 42" above the bottom of the Post. The mid-rail should be adjusted by the installer so that the center of the fitting is at the mid-point (21" from top or bottom) of the Post. Torque the set-screws in all aluminum fittings to 16 ft-lbs.
- 7.7** Along the "hazard" edge, two 9-foot pieces of rail will be secured. Prior to attachment, the stiffener Post "X" should be secured to the center of two 9-foot lengths of pipe where they are marked with an "X". The 9-foot rail section can then be inserted into the Corner Post "B" and secured to the Center Post "E" (for RGC-KIT-18V). All set-screws in the fittings should be torqued to 16 ft-lbs. **Refer to Figure 5 for more details.**
- 7.8** A second pair of 9-foot rails with the stiffener "X" will be placed from the center post "E". The angle between the 9-foot rails can be adjusted from 90-180 degrees or anywhere in-between using the fittings. The pilot hole in the base of Post "E" should line up with one of the set-screws in the base plate. The angles of the fittings can be adjusted as necessary. The other end of the 9-foot rails will be secured to the other corner post "B".

- 7.9** At the second corner post “B”, another two 6-foot rails will be connected between the corner post “B” and the second end post “A”. The end post “A” will have 3 baseplates, with the hole of the Post “A” lining up with one of the set-screws in the bottom base plate. All baseplate set-screws that contact the post should be torqued to 25 ft-lbs.
- 7.10** Once the system is complete, a second check of each set screw should be performed, and once torqued, each set screw should be marked with the blue crayon (or other marking system) to help facilitate inspection and provide indications in the event of any tampering.

WARNING – DO NOT LEAN ON, SIT ON OR CLIMB ON GUARDRAILS.

GUARDRAILS MUST NOT BE USED AS AN ANCHOR FOR FALL RESTRAINT OR FALL ARREST AND SHALL NOT BE USED FOR HOISTING OR TIE-OFF.

ATTACHMENT OF BANNERS / SIGNS / EQUIPMENT IS NOT PERMITTED.

OSHA Reference 29 CFR 1910.23 Guarding of floor and wall openings and holes.

(a)(2) Every ladderway floor opening or platform shall be guarded by a standard railing with standard toeboard on all exposed sides (except at entrance to opening), with passage through the railing either provided with a swing gate or so offset that a person cannot walk directly into the opening.

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9.0 RoofGuard Warranty

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Equipment offered by Liftsafe Fall Protection (LFP) is warranted against factory defects in workmanship and materials for a period of one year from date of installation or use by the owner, provided that this period shall not exceed 18 months from date of shipment. Upon notice in writing, LFP will promptly repair or replace all defective items. LFP reserves the right to elect to have any defective item returned to its plant for inspection before making a repair or replacement. This warranty does not cover equipment damages resulting from abuse, damage in transit, or other damage beyond the control of LFP. This warranty applies only to the original purchaser and is the only one applicable to our products, and is in lieu of all other warranties, expressed or implied.

