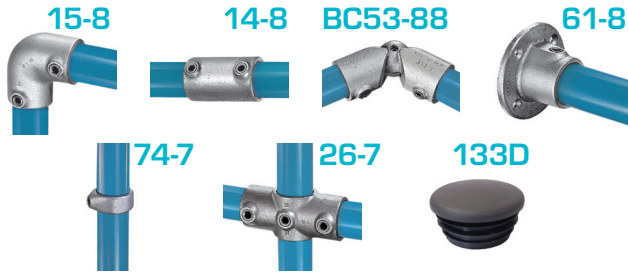
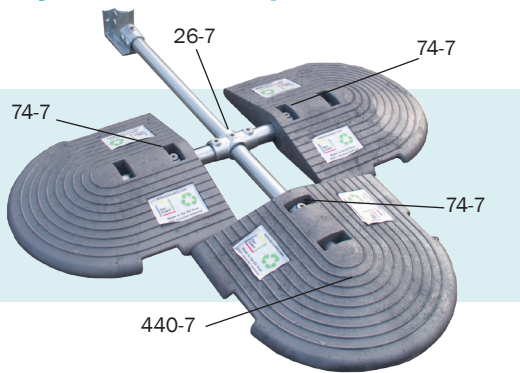


Keel Klamp® Components

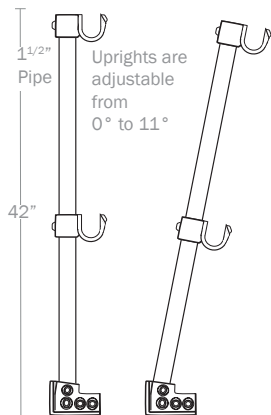
The Kee Klamp safety components below are the most commonly employed in KeeGuard fall protection systems.



Anatomy of the Setup



Keel Guard Components



OSHA Compliant

The Kee Klamp safety components, and specially designed KeeGuard safety components, when used to construct the KeeGuard railing system, using a 42" high guard railing, will meet or exceed the requirements of the OSHA Safety Standard of a single 200 lb. load applied at any location and in any direction along the top of the rail when the correct specification of pipe is used and the correct method of design is employed. The integrity of the structure to which the system may be fixed and the fixings used will need to be inspected to ensure that they are capable of meeting the imposed load requirements.

Fall Protection



Keel Anchor

Portable, Deadweight Anchor Systems that do not penetrate the roof membrane



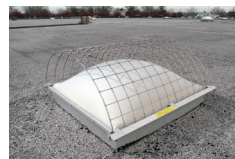
Keel Hatch

Safety Barrier System for safe passage through hatches in rooftops or floors



Keel Dome

Skylight Guardrail System, fits skylights, roof lights, and dome lights with curbs



Keel Guard

SKYLIGHT SCREENS

Skylight Screens for curb style, standing seam, and rib/corrugated metal roof skylights



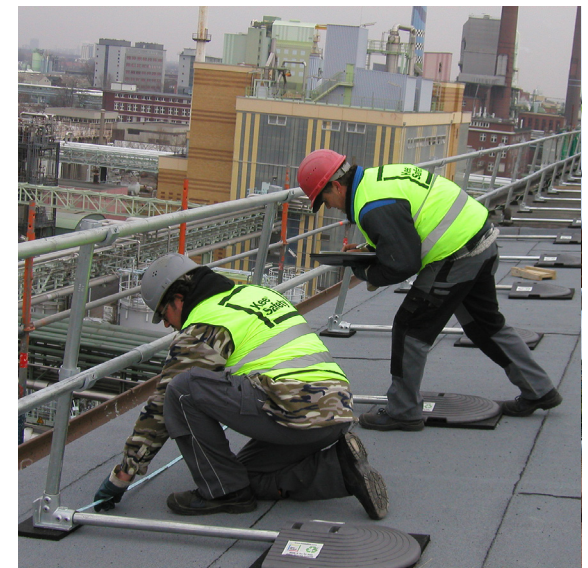
USA
Kee Safety, Inc.
100 Stradtman Street
Buffalo, NY 14206
Tel: (716) 896 4949
Fax: (716) 896 5696
Toll Free: (800) 851 5181
www.keesafety.com
Email: info@keesafety.com

Canada
Kee Safety, Ltd.
219 Connie Crescent, Unit 9
Concord, Ontario L4K 1L4
Tel: (905) 669 1494
Fax: (905) 669 4347
Toll Free: (877) 505 5003
www.keesafety.ca



SAFETY AT THE HIGHEST LEVEL

Installation Instructions



- NO PENETRATION OF THE ROOF MEMBRANE
- INDEPENDENTLY TESTED, MEETS OR EXCEEDS SAFETY STANDARDS
- NO WELDING, BENDING, OR THREADING OF PIPE

CSI 077200
January 2019



Independently tested to
OSHA Standard 29 CFR 1910.23
Ontario OHS Act
Meets ANSI Standards

Kee Klamp, Kee Lite, Kee Stainless, KeeGuard, Kee Dome, Kee Hatch, Kee Mark, Kee Access, KwikKit, Beam Clamp, and Box Bolt are all registered trademarks of Kee Safety, Inc. While every effort has been made to ensure the accuracy of the information contained in this brochure, Kee Safety, Inc cannot be held responsible for any errors or omissions. Kee Safety, Inc. reserves the right to alter or withdraw products without prior notice. Kee Safety, Inc accepts no responsibility for any loss or damage arising from improper use of their products. Copyright 2019 Kee Safety, Inc. All Rights Reserved.
KS/KGI_US_V1/0110

Installation Instructions

1. Be sure the locations for all uprights and counterbalances are free from stone and debris. Kee Safety advises that KeeGuard should not be installed during snowy or icy weather unless all snow and ice is cleared first.
2. Position a KGU (KeeGuard Upright). Angle of uprights are adjustable between 90° and 79° from the horizontal. Connect a CB4 PVC counterbalance assembly* (see *IMPORTANT NOTE below*), to the KGU with the 66" long 1-1/4" pipe and tighten the set screws to 29 lbs/ft (39 Nm). Install plug on end of tube.
3. Position a KGU at 4' from the first upright and connect a CB3 PVC assembly with the 42" long 1-1/4" pipe and tighten the set screws to 29 lbs/ft (39 Nm).
4. Position a KGU at 8' from the previous upright and connect a CB1 PVC assembly with the 42" long 1-1/4" pipe and tighten the set screws to 29 lbs/ft (39 Nm).
5. Set the 1-1/2" galvanized pipe into the Kee Klamp Type 135-8 at the top and at the mid section of the uprights to form two rails and tighten the set screws. Connect the lengths of handrail together using Kee Klamp Type 14-8 (Straight Coupling) and tighten the set screws to 29 lbs/ft (39 Nm). Be sure to stagger the joints of the horizontal rails. Ideally the Type 14-8 (Straight Coupling) connections on the mid rail and top rail should be offset by 8'.
6. Continue along the roof edge repeating steps 4 & 5.
7. At 90° corners, use Kee Klamp Type 15-8 (90° Elbow). Ensure that an upright is located less than 20" from the corner. The total length between uprights around the corner must be no greater than 8'.

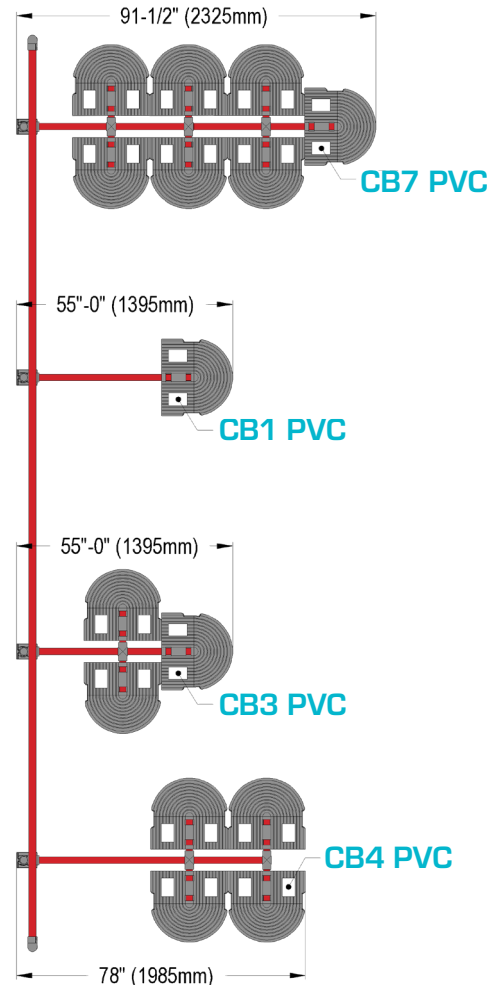
KeeGuard Drawing

Just contact us, at Kee Safety for custom configurations and technical assistance toll free at (800) 851 5181.

***IMPORTANT NOTE:** Only one (1) Kee Klamp TYPE 74-7 (Collar) should be used each one (1) KeeGuard Type 440-7 (PVC Counterbalance). The use of more than one Collar will result in not having enough Collars to complete the job. Only one collar is necessary per each PVC Counterbalance to create a safe and compliant system saving you time and money.

Counterbalance Assembly

CB1 PVC assemblies consist of one counterbalance and one 42" long 1-1/4" pipe. CB3 PVC assemblies consist of three counterbalances and one 42" long 1-1/4" pipe. CB4 PVC assemblies consist of four counterbalances and one 66" long 1-1/4" pipe. CB7 PVC assemblies consist of seven counterbalances and one 66" long pipe.



Corners

At corners greater than or less than 90° where a run is continuous, use Kee Klamp Type BC53-88 (Swivel Elbow). Be sure the spacing is no greater than 8' between the uprights, with one upright being no further than 20" from the corner. See Fig. 1.

Termination

The beginning and end of every continuous run must have one of three possible configurations:

Option 1: (shown in Fig. 1 - Option 1) A CB7 PVC assembly spaced 8' from the following CB1

Option 2: (Shown in Fig. 1 - Option 2) A KGU with a CB4 PVC assembly and a KGU with a CB3 PVC assembly 3' 3" from the CB4 PVC assembly or A KGU with a CB7 PVC assembly unless fastened to a structural member.

Option 3: (Shown in Fig. 2 - Option 3) Fasten the KeeGuard rail into brickwork or steel using two Kee Klamp Type 61-8 (Wall Flange) OR two Kee Klamp type v (flange). The closest upright should be placed no further than 8' from the wall or steel.

*Be sure to verify with your company representative which ending option your system was provided with. If you purchased shop drawings please follow the layout on the drawings exactly.

