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LADDER SAFETY GATE – Installation Instructions and Technical Data

Installation:

Tools Required:

- 1/2" deep socket or wrench (u-bolt installation)

The steps below are a general guideline for a single gate installation on a railing post up to 2" square/round. Individual installation may vary, therefore, load capabilities of a gate are dependent on proper installation and existing structure. Always field verify completed installation for adequate performance.

Step 1:

Loosely attach ladder safety gate hinge assemblies to vertical column of railing with provided u-bolts (or select appropriate field fasteners for other types of installation). Do not tighten, as additional adjustment may be required.

Step 2:

Adjust top of safety gate to match top of railing.

Step 3:

Align hinge bracket to be perpendicular (90°) to ladder safety gate and opening.

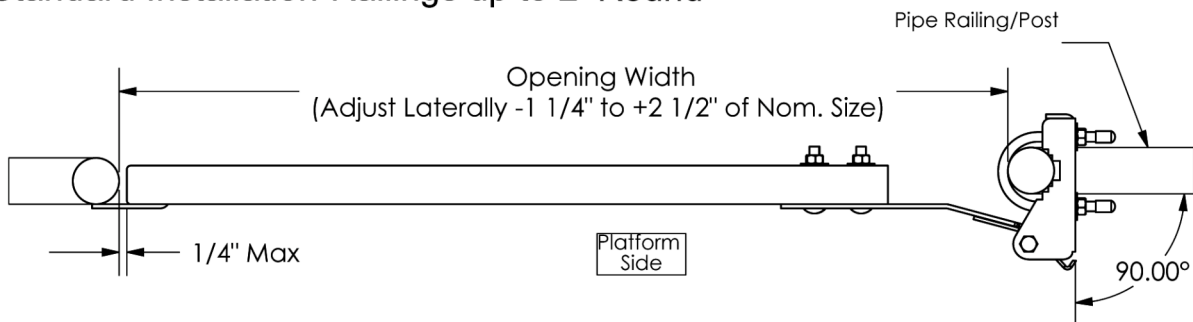
Step 4:

Adjust gate hoop to proper opening width. This can be achieved by selecting any combination of two of the three bolt holes at connection point for hinge plate and gate. Insure stop plate over laps and contacts adjacent vertical column of railing system (opposite of hinge side) allowing for 1/4" max. of clearance. Tighten carriage bolts once at desired width.

Step 5:

Operate gate through full swing range (180 degree max.) to insure proper alignment before permanent attachment. If mounting to pipe/railing, tighten each u-bolt to 20 ft/lbs. of torque and field verify for adequate attachment (all types of installations).

Standard Installation-Railings up to 2" Round



The following information is for the **LADDER SAFETY GATE**, Standard Design only. Custom modifications or features may not be covered in this Technical Data description. Consult Kee Industrial Products for any additional required information.

STANDARD TECHNICAL DATA

- A. **Gate Arm:** To be a minimum of 1-1/4" x 1-1/4" [31.75mm x 31.75mm] 11-gauge [3.03mm] formed mild steel (ASTM A569) or stainless steel, type 316 (ASTM A554) members. Finished product to be capable of meeting U.S. Federal OSHA Loading Requirements at time of manufacturing. Minimum dimension from top of gate arm to bottom of gate arm to be 22" [558.8mm]. Gate arm to be furnished in dimension and type capable of engaging adjacent railing column.
- B. **Standard Pivot Clamp Bracket:** Universal clamp bracket to be formed 10-gauge [3.41mm] mild steel (ASTM A569) or stainless steel, type 316 (ASTM A240) shape capable of fitting railing columns up to 2" [50.8mm] O.D, adaptable to flat surfaces, and welded installation. Provide four (4) zinc plated or stainless steel U-Bolts, four (4) zinc plated or stainless steel nylon inset lock nuts, and four (4) zinc plated or stainless steel flat washers per gate. Hinge pivot hardware to include two (2) nylon bearing washers, one (1) 5/16"-18 x 3" [7.94mm-18 x 76.2mm] hex bolt, and one (1) 5/16"-18 [7.95mm-18] nylon inset lock nut per hinge bracket.
- C. **Adapter Bracket(s):** For railings larger than 2" [50.8mm] O.D., Angle Iron, or Flatbar where drilling mounting holes is not acceptable or preferred choose from the following Adapter Brackets:
- 1. Adapter Bracket – Railing Columns Larger than 2" [50.8mm] O.D.** Bracket to be formed 10-gauge [3.41mm] mild steel (ASTM A569) or stainless steel, type 316 (ASTM A240) shape capable of fitting railings columns from 2-1/4" [57.13mm] to 4" [101.6mm] O.D. Mounting hardware to include, two (2) 5/16" x 1" [7.94mm x 25.6mm] and two (2) 5/16" [7.94mm] nylon inset lock nuts per adapter bracket for mounting Standard Pivot Clamp Bracket to Adapter Bracket. Provide two (2) 3/8" x 6" [9.53mm x 152.4mm] hex bolt, two (2) 3/8" [9.53mm] nylon inset lock nuts, and two (2) flat washers for mounting adapter bracket to railing column, per adapter bracket. Hardware to be zinc plated on all mild steel gates. Stainless steel gate to have stainless steel hardware.
 - 2. Adapter Bracket – Flat Bar Railing Columns.** Bracket to be 1/4" [6.35mm] mild steel (ASTM A569) or stainless steel, type 316 (ASTM A240) plate punched to accept mounting of Standard Pivot Clamp Bracket. Standard Flat Bar Railing Column Bracket comes with standard mounting hardware to mount to flat bar railing columns from 2-1/4" [57.13mm] to 4" [101.6mm] x 3/8" [9.53mm]. Mounting hardware to include, two (2) 3/8"-18 x 1-1/2" [9.53mm-18 x 38.1mm] hex bolts, two (2) 3/8" [9.53mm] nylon inset lock nuts, two (2) 3/8" x 1" [9.53mm x 25.4mm] flat countersunk head cap screws, and two (2) 3/8" [9.53mm] nylon inset lock nuts. Hardware to be zinc plated on all mild steel gates regardless of finish. Stainless steel gate to have stainless steel hardware.
 - 3. Adapter Bracket – Angle Iron Columns.** Bracket to be 7-gauge [4.55mm] formed mild steel (ASTM A569) or stainless steel, type 316 (ASTM A240) punched to accept mounting of Standard Pivot Clamp Bracket. Standard Angle Iron Railing Column Bracket comes with standard mounting hardware to mount to angle iron railing columns up to 3-1/2" x 3-1/2" x 3/8" [88.9mm x 88.9mm x 9.53mm]. Mount hardware to include, two (2) 3/8"-18 x 1-1/2" [9.53mm-18 x 38.1mm]

hex bolts, two (2) 3/8" [9.53mm] nylon inset lock nuts, two (2) 3/8" x 1" [9.53mm x 25.4mm] flat countersunk head cap screws, and two (2) 3/8" [9.53mm] nylon inset lock nuts. Hardware to be zinc plated on all mild steel gates regardless of finish. Stainless steel gate to have stainless steel hardware.

- D. **Hinge Plate:** To be full height 10-gauge [3.41mm] formed mild steel (ASTM A569) or stainless steel, type 316 (ASTM A240) plate and provide for gate arm adjustment of 3-3/4" [95.25mm] (-1-1/4" [31.75mm] to +2-1/2" [63.5mm] from nominal gate size) minimum total horizontal adjustment. Adjustment hardware, factory assembled, to include four (4) 5/16"-18x 1-3/4" [7.94mm-18x44.45mm] carriage bolt, four (4) flat washers, and four (4) nylon inset lock nuts. Hardware to be zinc plated on all mild steel gates regardless of finish. Stainless steel gate to have stainless steel hardware.
- E. **Hinge Springs:** To be torsion type, stainless steel (type 316) on all gates. Provide two (2) springs per gate, housed within hinge pivot.
- F. **Finish:** All exposed surfaces to be one of the following types:
1. Mild Steel with Powder Coat Safety Yellow; TGIC Polyester. Fasteners to be zinc plated.
 2. Hot Dip Galvanized. Fasteners to be zinc plated.
 3. Stainless steel, grade 316, acid washed and rinsed after fabrication. Fasteners to be stainless steel.
 4. Stainless steel, grade 316, Powder Coat Safety Yellow; TGIC Polyester. Fasteners to be stainless steel.
- G. **Gate Operation:** To allow a minimum of 180° travel and is reversible by inverting or rotating gate.
- H. **Packaging:** Each gate to be fully assembled, individually boxed, and labeled with appropriate size and finish identifier clearly identified on exterior of carton. All mounting hardware, to include Standard U-bolts for 2" O.D. railing mount and installation instructions are packaged in a cloth bag and attached to gate assembly.
- I. **Warranty:** *Kee Industrial Products* warrants this product and components to be free from defects in material and workmanship for a period of one (1) year from date of purchase. WARRANTY DOES NOT APPLY TO ANY DAMAGE OR DETERIORATION CAUSED BY ABUSE, APPLIED PAINT FAILURE OR FAILURE TO PROVIDE REASONABLE AND NECESSARY MAINTENANCE. Consult *Kee Industrial Products* for full warranty detail.