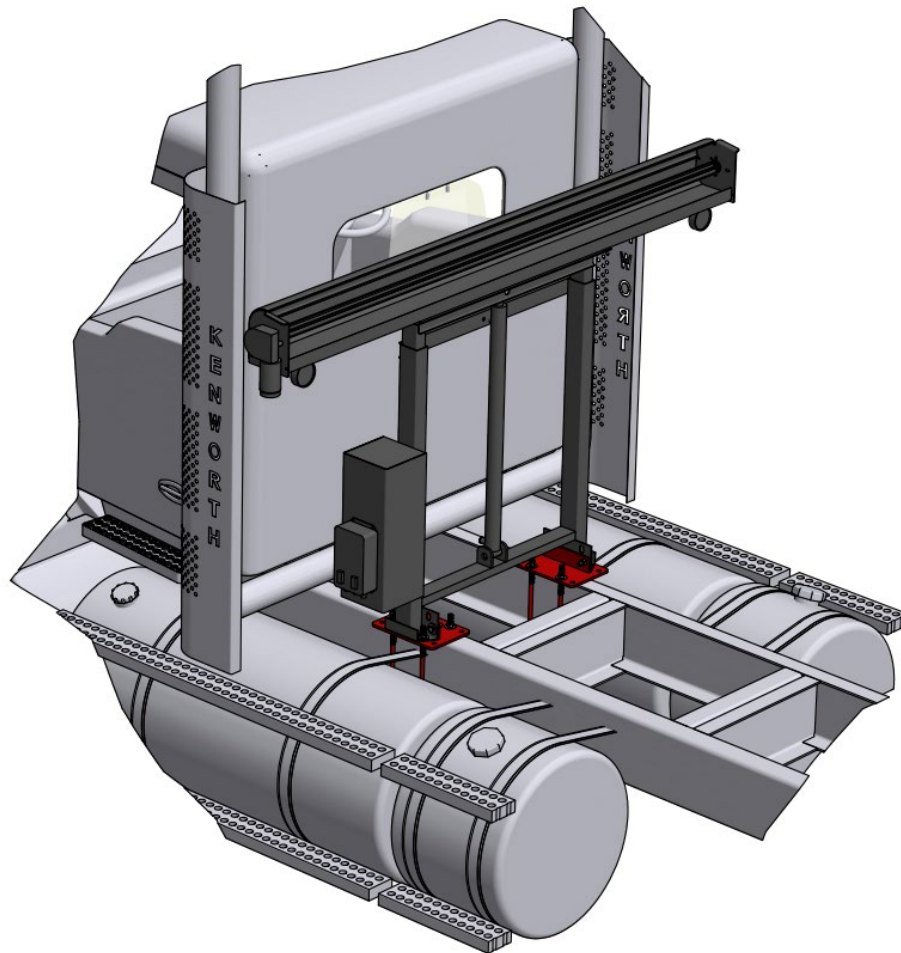


U-BOLT KIT FOR SINGLE & DUAL STAGE GANTRY


INSTALLATION INSTRUCTION MANUAL





SAFETY

Read this section carefully before proceeding. The following symbols may appear prior to certain safety related assembly and installation steps described in this manual.

FAILURE TO OPERATE AND INSTALL THIS UNIT AS INSTRUCTED MAY RESULT IN SERIOUS INJURY OR DEATH.

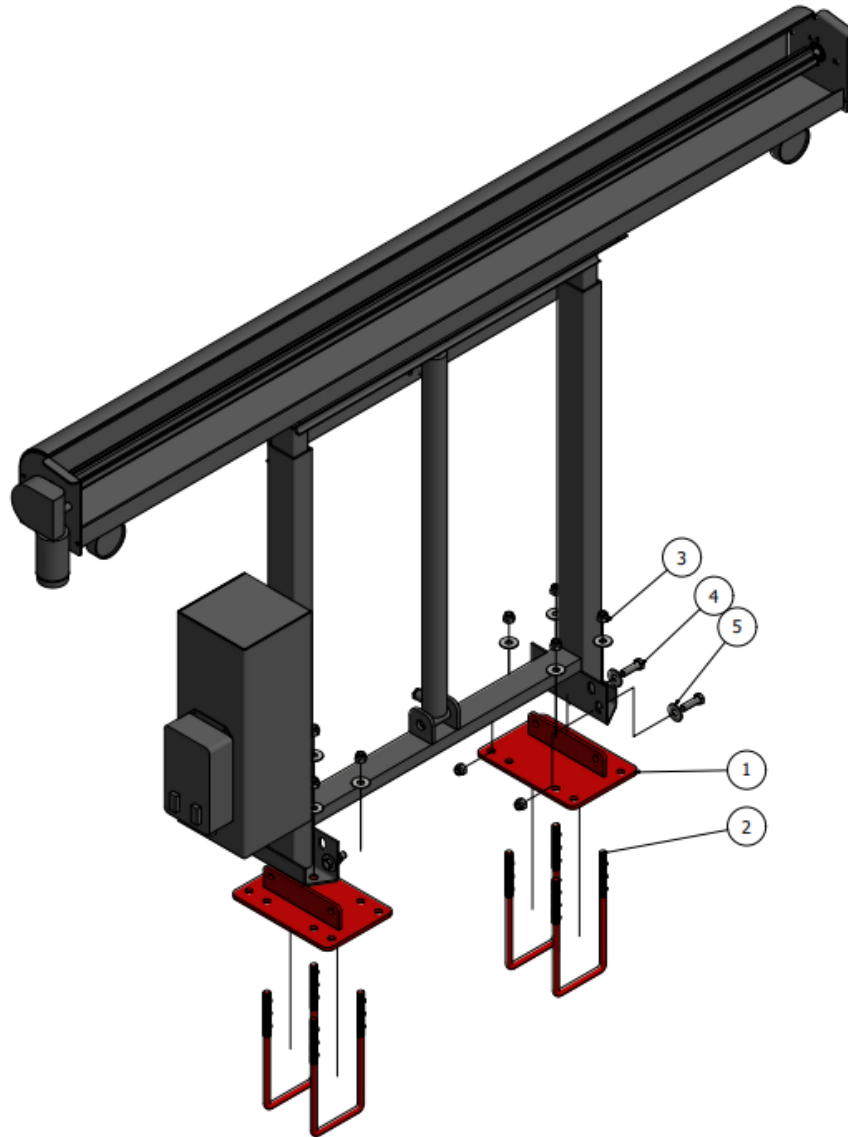
| |
|---|
|  DANGER |
| Indicates an immediately hazardous situation which, if not avoided, will result in serious injury or death. |

| |
|---|
|  WARNING |
| Indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death. |

| |
|---|
|  CAUTION |
| Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or property damage. |

| |
|---|
| NOTICE |
| Indicates information about a subject that is not safety related. |

U-Bolt Kit Parts List



| Ref. # | Part Number | QTY | Description |
|-----------|-------------|-----|---|
| 1 | 16442 | 2 | U-Bolt Mounting Plate for Single Stage Gantry |
| 1 | 16739 | 2 | U-Bolt Mounting Plate for Dual Stage Gantry |
| 2 | 16443 | 4 | 5/8"-11 x 13" U-Bolt for Single Stage Gantry |
| 2 | 16740 | 4 | 3/4"-10 x 13" U-Bolt for Dual Stage Gantry |
| 3 | 16071* | 12 | 5/8"-11 Hex Nut |
| 3 | 16742 | 16 | 3/4"-10 Hex Nut |
| 4 | 15853* | 4 | 5/8"-11 x 2" Grade 8 Hex Bolt |
| 5 | 15855* | 12 | 5/8" Flat Washer |
| 5 | 16743 | 8 | 3/4" Flat Washer |
| Not Shown | 16548 | 4 | 5/8"-11 Nylock Nut |

*Some or all will be included with the gantry system hardware kit

STEP 1: Mounting U-Bolt Plates to Gantry Frame

Prior to setting gantry on chassis, complete the following:

Holding U-Bolt plate up to gantry foot, insert 5/8"-11 x 2" bolts (1) with washers (2) through the bottom set of holes of the gantry feet. See *Figure 1* for orientation.

Turn on the 5/8" Grade 8 Nylock Nut (3). Turn nut on until almost tight leaving a little room for play with the plate.

NOTE: The hardware in this step is used from the gantry hardware kit

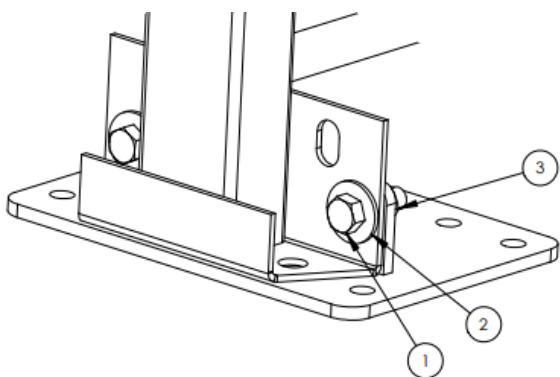


Figure 1 – Plate Mounting

STEP 2: Placing Gantry on to Chassis

Refer to "Single & Two Stage Gantry Installation Manual" for more in-depth instruction on frame placement on chassis

Place gantry frame on chassis behind cab using forklift or overhead hoist. There must be clearance between cab and gantry components;

4" is recommended, 1" is required. With the use of the u-bolt kit, there must be at least 5" of space between hook and gantry. It is recommended that there is at least 20" of space between cab and container lift. This is greater than what is stated in other documents due to the size of the u-bolt plates to accommodate varying mounting positions.

Place gantry leaving forklift or hoist attached through the next steps until the frame is secured.



WARNING

Failure to follow instructions to keep frame secured to forklift or hoist could result in serious injury or death.

STEP 3: Routing U-Bolts

The UStarp U-Bolt Kit is intended to be an alternate to drilling the frame rails and unnecessarily moving DEF tanks, air tanks and other equipment. The U-Bolts are sized for most but not all frame rail heights and widths. Some alterations may be required in certain cases.

Start by routing one of the u-bolts under the frame rail. Note: do not trap wires, plumbing or cables between the u-bolt and the frame rail.

NOTICE

Wires, air lines, hydraulic lines, and cables should be avoided. Do not pinch between u-bolt and frame rail.

There are 4 sets of holes on the mounting plate. The 2 primary sets run through the gantry feet. The primary holes should be the ones that the u-bolt is routed to, see *Figure 2*. Hand tighten 5/8" washer and hex nut on one or both u-bolt legs to keep in position. Do not tighten yet.

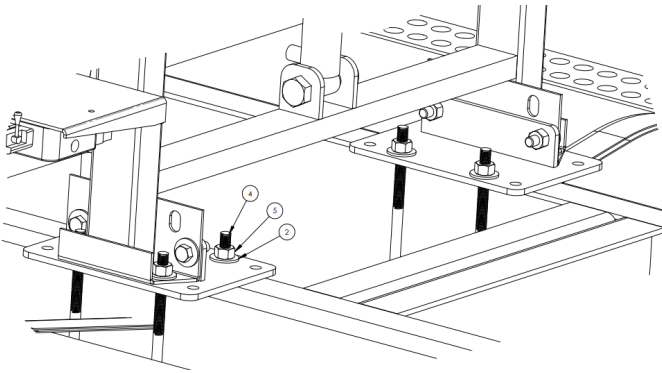


Figure 2 – Primary Mounting Holes

If there is equipment in the way and the gantry frame cannot be adjusted forward or backward use one or both of the alternate hole sets, see *Figure 3* with the red highlighted holes.

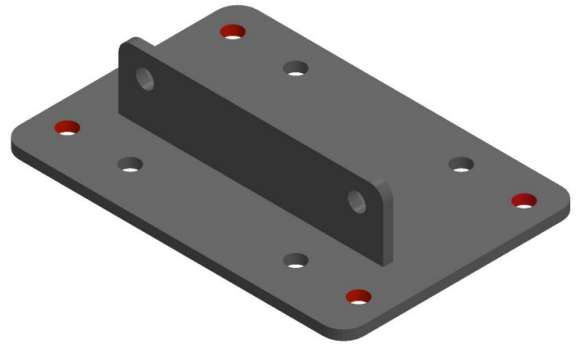


Figure 3 – Alternate Hole Sets

In the case that a u-bolt cannot be routed to any of the hole sets you can flip the u-bolt and route through alternate hole set. A custom bracket will need to be fabricated by the installer in order to use the u-bolt in this orientation, see *Figure 4*.

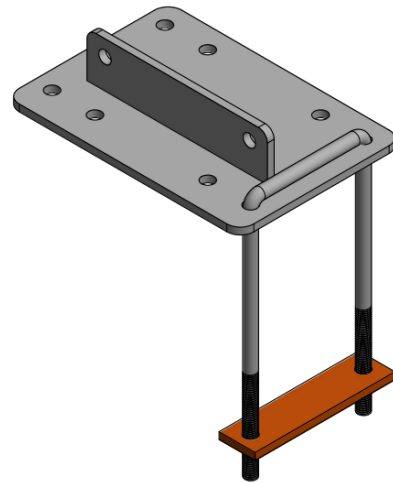


Figure 4 – Custom Bracket (not included)

STEP 4: Fastening U-Bolts and Gantry Frame

Once all u-bolts are in position, double check gantry frame location. Tighten down nuts (5) on u-bolt evenly to ensure the u-bolts are clamped evenly, see *Figure 5*. Use a ratchet and socket until tight, then torque each bolt to 150 ft-lbs. To prevent backoff, turn on one nylock nut (6) to each u-bolt leg and tighten against hex nut. Dual Stage Gantry U-Bolt kits will use 2 sets of hex nuts. It is recommended that after 3-months of use these bolts are re-torqued to account for any stretching.

NOTICE

It is recommended that the u-bolts are re-torqued after 3-months of use at 150 ft-lbs.

With the u-bolts fastened, finish tightening the bolts attaching the gantry frame feet to the u-bolt mounting plate. The gantry frame is now secured and the forklift or hoist can be unattached from the gantry frame. Continue the install using the “Single & Dual Stage Gantry Installation Manual”.

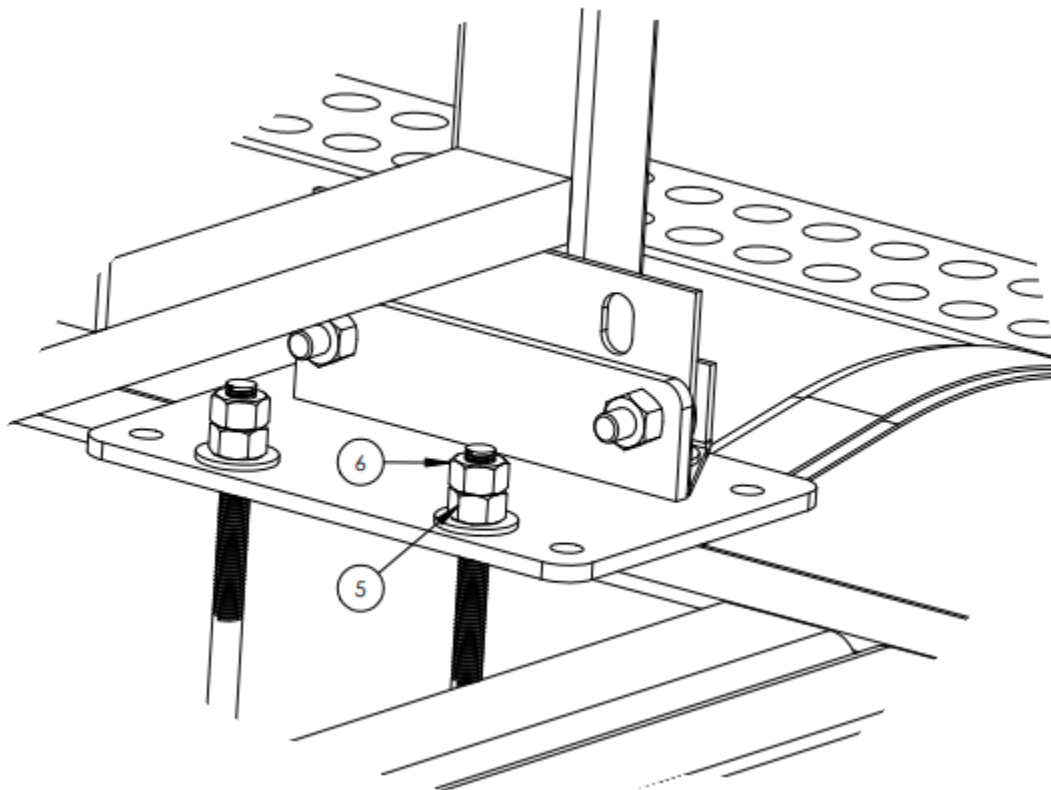


Figure 5 – U-Bolt Fastening

