



The Cargo Control *People!*<sup>™</sup>

# ***K2 KAPTIVE BEAM SYSTEM***

## **INSTALLATION INSTRUCTIONS**

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### **TRAILER LAYOUT:**

- Determine the track layout in the trailer. Typical layouts are shown in **Fig. 1 – Fig. 4**
- Track must be secured to a solid trailer structure, such as vertical posts or through the walls of composite/plate trailers. The structure must be able to support the weight of the loaded beams applied through the attachment fasteners.
- New Construction Refrigerated trailers require special care because the posts are small and located underneath the interior lining. As in sheet/post construction, the track must be installed into a solid trailer structure and able to support the weight of the loaded beams applied through the attachment fasteners and not just through the interior lining. This may require special structural accommodations provided for by the trailer manufacturer.
- Standard track length of 84” will work with scuff plates up to 24” tall in 108” high trailers.
- Single track configuration: This layout provides two beams for each pallet position. The cutouts in the stringers on the bottom of the pallets typically nest down on the beams. The results are a lighter, more economical configuration, with sufficient capacity for most decking applications.
- Double/Single/Double track configuration: This layout provides three beams for each pallet position. The front, middle and rear of the pallets are supported. The pallets rest on top of the beams. This prevents the tips of the fork truck from coming in contact with the beams during the unloading process and increases the overall WLL for each a pallet position.

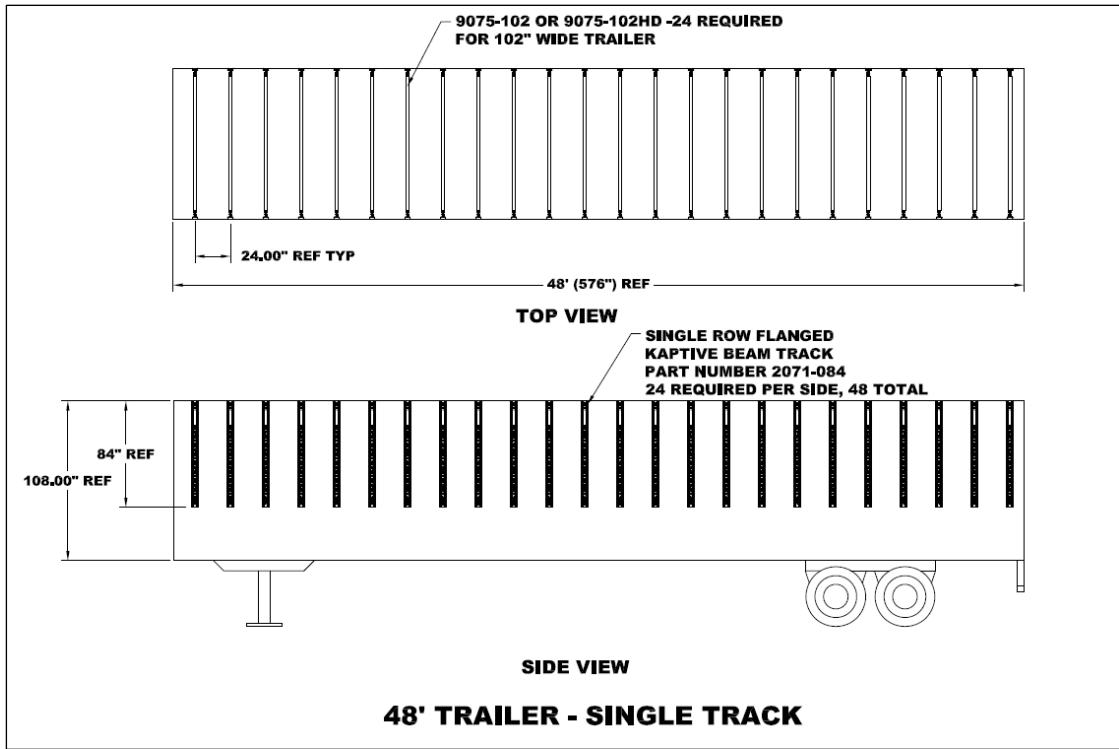


Figure 1

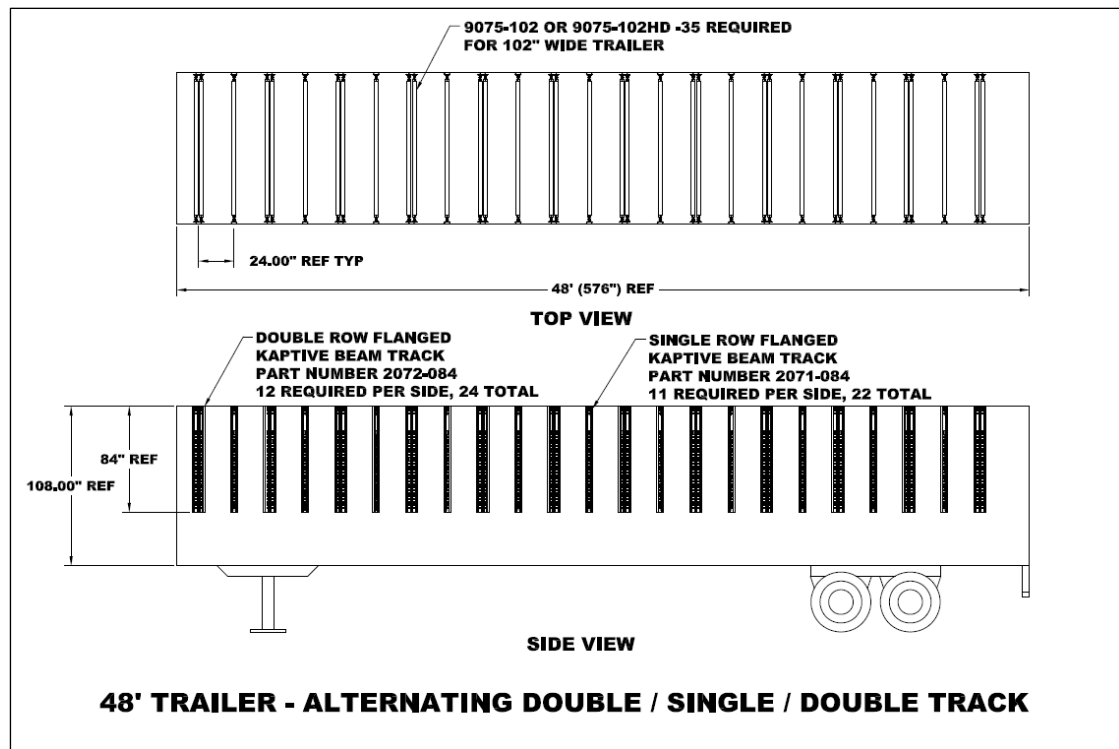


Figure 2

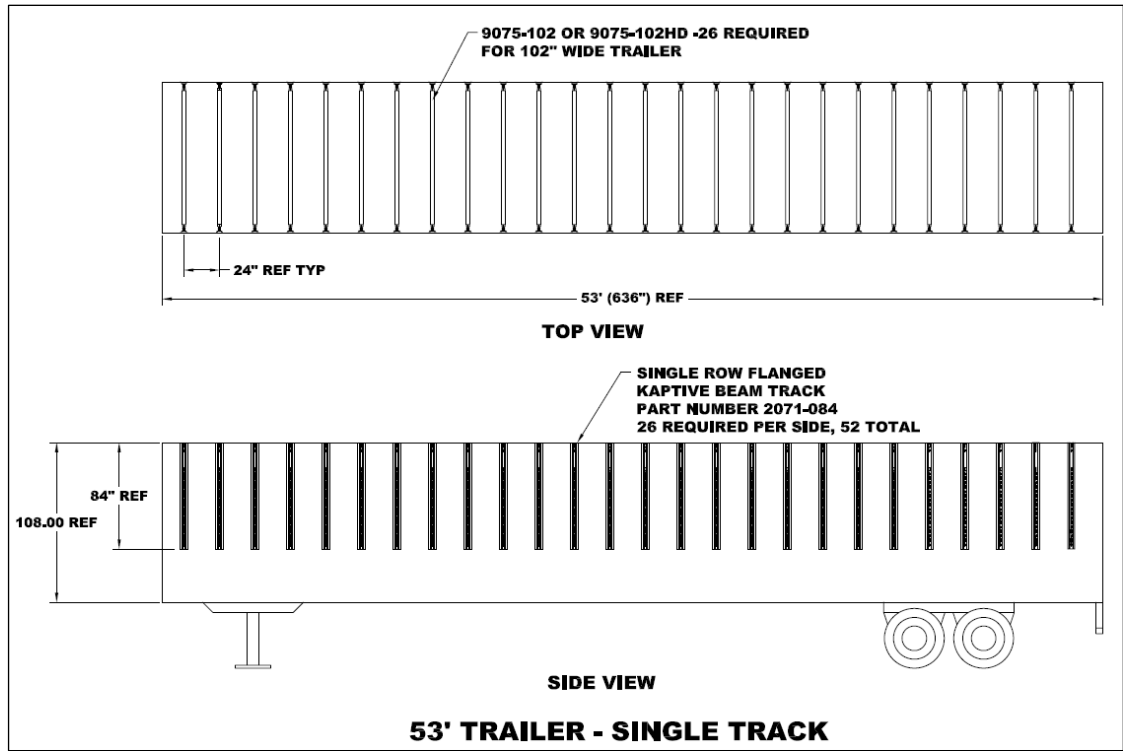


Figure 3

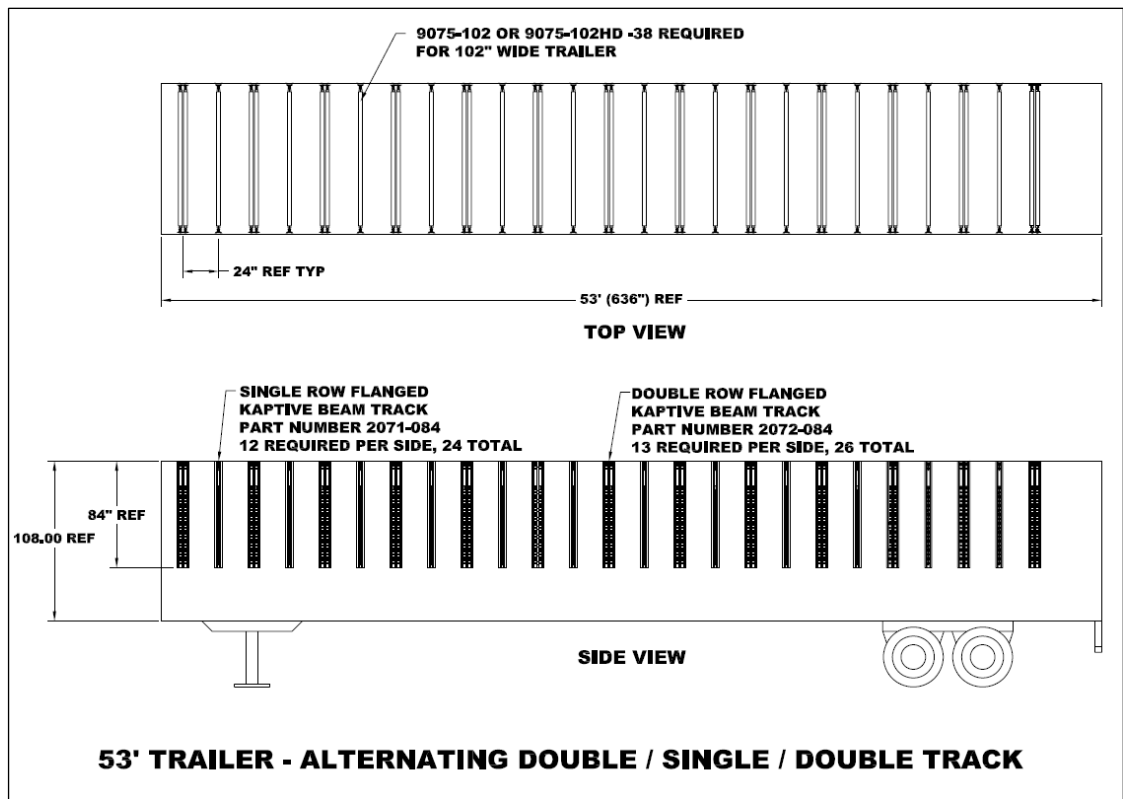


Figure 4

## FASTENER SELECTION AND TRACK INSTALLATION:

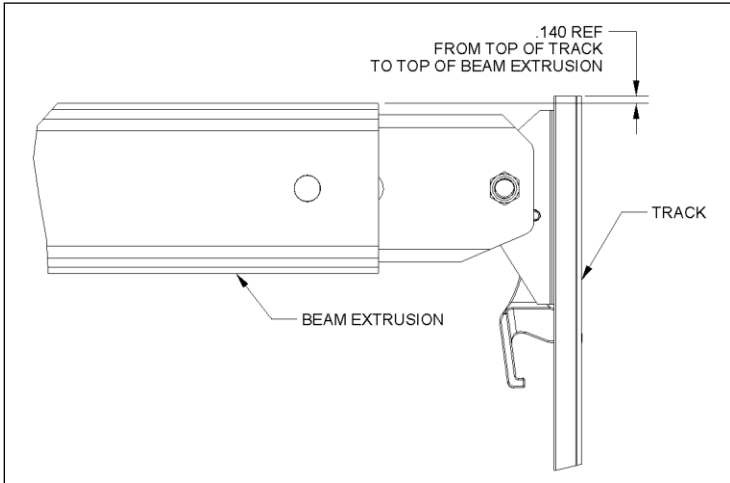
- **Track Height:** Once engaged in beam storage notch, beam will sit 0.140” below top of track (See Fig. 5). Track should be installed at maximum height to optimize beam clearance in stored position. Center over vertical post. Check clearance for top of beam to allow it to lock into top storage location (when engaged in beam storage notch) without ceiling interference. **See Figure 8. Secure top of track with at least one rivet.**
- For sheet and post trailers, the track (2071, 2072, 2073) is installed on the centerline of the post with 1/4” countersink rivets with a maximum of 8” spacing. See **Table One** for recommended rivets. Using the holes on the track centerline as a guide, drill through the trailer post and install rivets. When using 2071 or 2072 track liner panels may be installed by attaching to the track flanges.
- For plate trailers, the track (2071, 2072) is installed using rivets through the flanges or the centerline of the track as shown in **Figure 8**. Refer to trailer manufacturer for proper spacing and orientation of fasteners.
- **Track Orientation:** The track (2071, 2072, 2073) is installed with the unpunched area towards the top. **See Figure 8**
- **Countersink Rivets:** Rivets installed along the centerline of 2071, 2073 and 2075 countersink holes must be installed flush or below the track surface to ensure proper system operation. **See Figure 6.**
- **Countersink Rivets:** When installing the recommended Huck Rivets ensure the rivet tail is fully removed during the installation process. **See Figure 7**

**TABLE ONE – ATTACHMENT RIVET RECOMMENDATIONS**

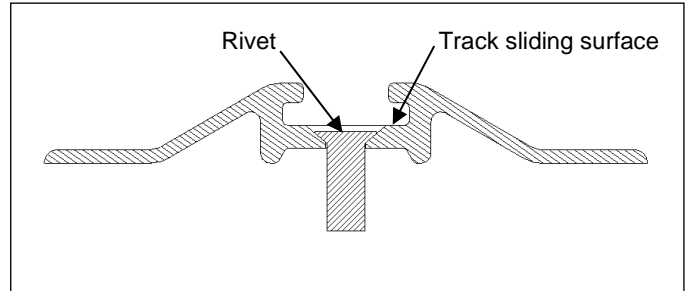
Track Configuration	Installed Directly To Vertical Post	Installed Over ¼” Liner Into Vertical Post	Composite/Plate Trailers
Single Row Flanged Track (2071)	MGL100-R8-8 (Flush Head)	MGL100-R8-12 (Flush Head)	MGLP-R8-10 (Flush Head) OR MGLP-R8-6 (Protruding Head)
Double Row Flanged Track (2072)	MGLP-R8-6 (Protruding Head)	MGLP-R8-10 (Protruding Head)	MGLP-R8-6 (Protruding Head)
Single Row No Flanged Track (2073)	MGL100-R8-8 (Flush Head)	MGL100-R8-12 (Flush Head)	N/A

**Note:** Rivets are Huck Magna-Lock structural blind rivets. Other fasteners of equal or higher strength may be used. Rivet grip length must be determined using track thickness, post thickness, liner sheet or composite/plate thickness.

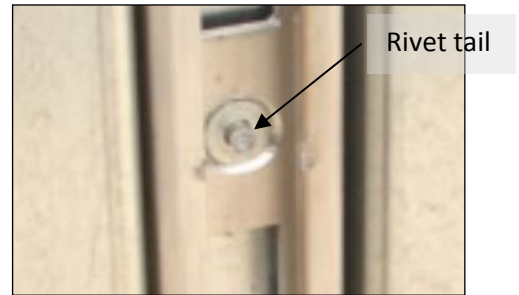
**Figure 5**



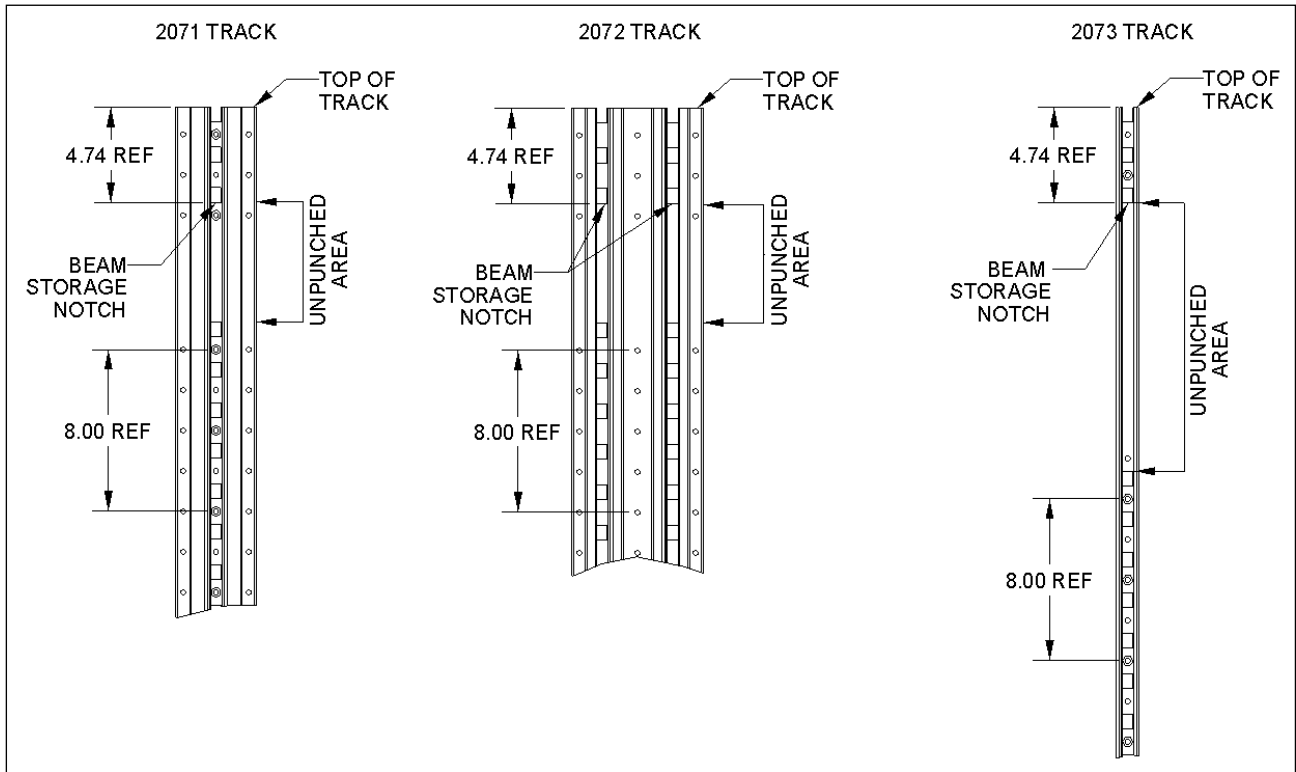
**Figure 6**



**Figure 7**



**Figure 8**

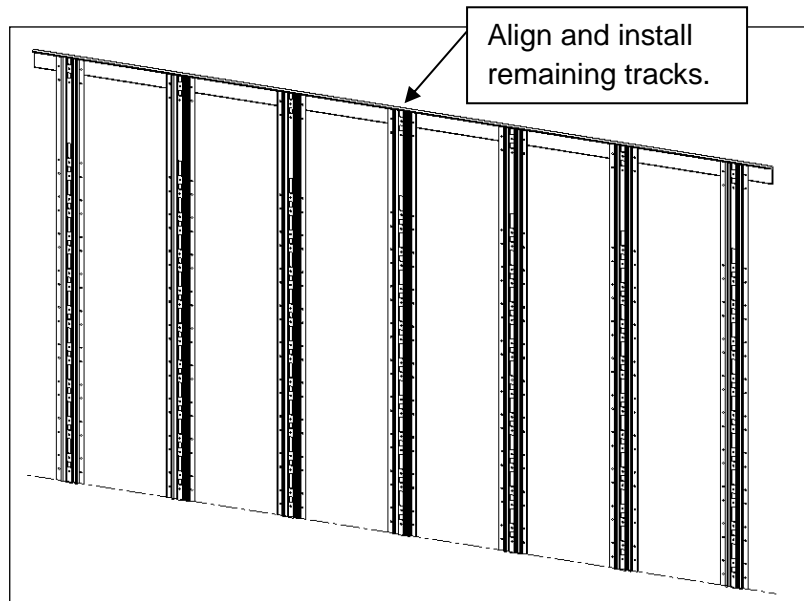
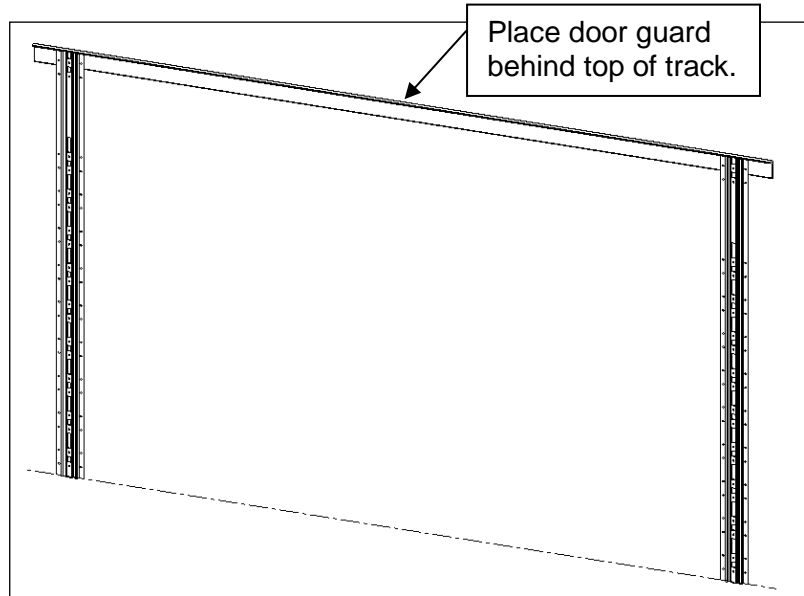


**DOOR GUARD INSTALLATION**

1. To install the Door Guard align the bottom of the first and last row of track along the door track area. Install the bottom rivets into both pieces of track.

**Note:** For typical installations this track is a shorter length than standard.

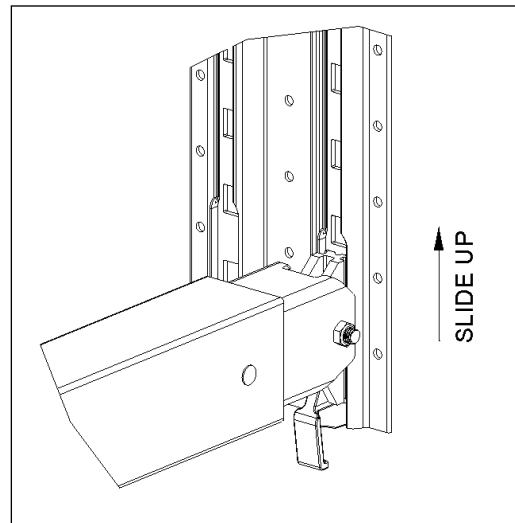
2. Place the door guard behind the top section of each piece of track. Locate and level the door guard as required by your installation. Drill through the door guard and trailer post at required mounting hole locations in the track for rivet installation. Rivet the track and door guard to the trailer post.
3. Install the remaining track rivets as required.
4. Install remaining track as required for your installation configuration. Drilling and installing rivets as required in the door guard at the top section of the track per steps 2 and 3.



**INSTALLATION OF  
BEAM HEADS:**

- Place beam head into the track with the locking pawl facing toward the floor. **(Figure 9)**.
- Slide fitting up into end of track until locking pawl clicks into a slot.

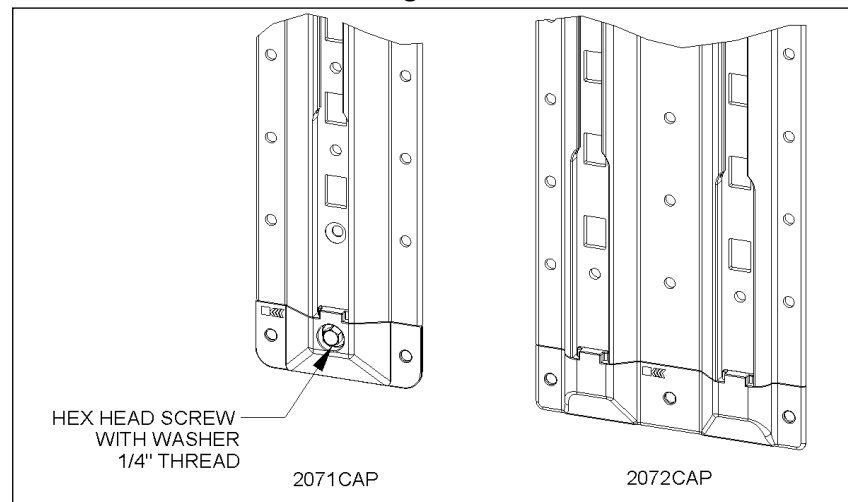
Figure 9



**END CAPS:**

- After installing beams into track, place beveled end cap at the base of the track as shown in **Figure 10**. Use the holes in the bracket as a pilot hole and drill through the trailer structure. Install hex head screws in the center hole or structural blind rivets into the two side holes to retain in place.

Figure 10



## **K2 BEAM STOP**

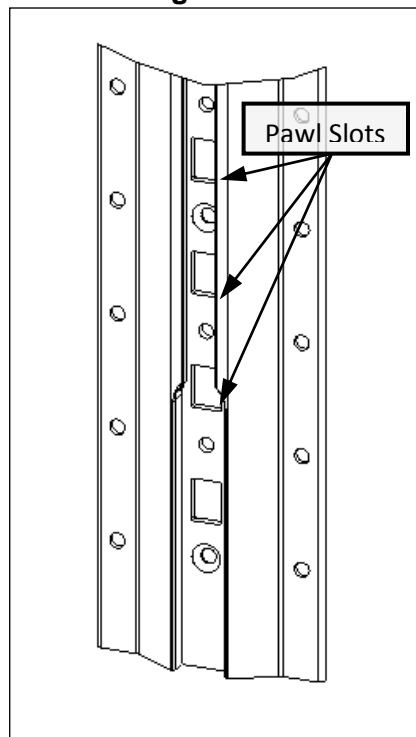
### **Installation / Recommended Use**

#### **WARNING:**

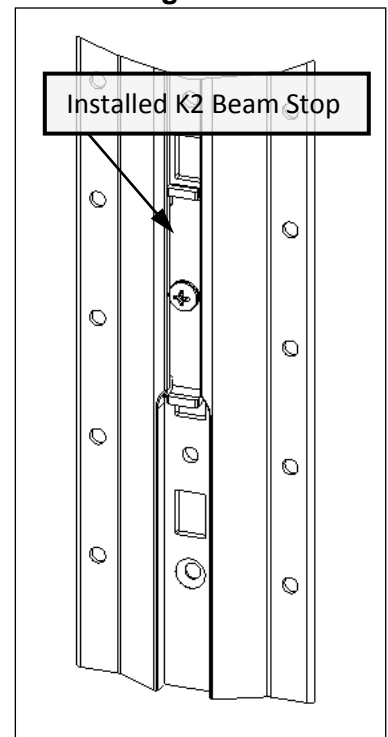
- K2 Beam Stops are intended as a safety stop only.
- K2 Beams with load must not be placed on top of beam stops.
- Always ensure proper pawl/track engagement of your beam assemblies.

1. The Kinedyne K2 Beam Stop (P/N: 80097) is intended to be installed in an open pawl slot on the K2 track.
2. When installed correctly on most K2 tracks this installation allows the beam stop to sit directly below the next available pawl slot.
3. Installation:
  - a. Loosen screw to allow beam stop to slide into track.
  - b. Once screw is over the desired pawl slot, tighten screw.

**Figure 11**



**Figure 12**



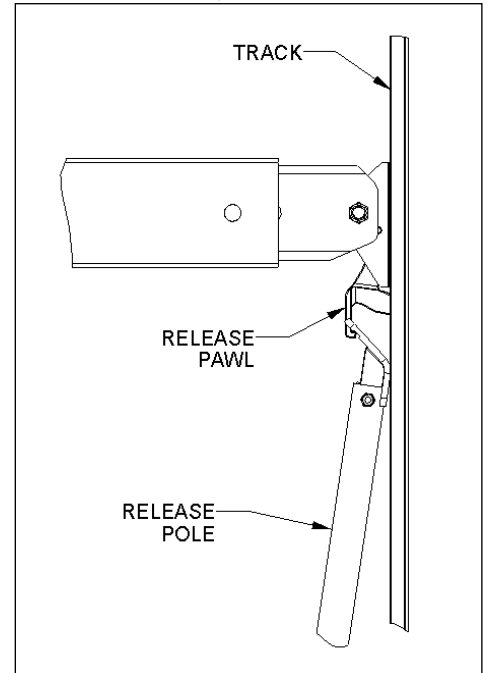


## OPERATING INSTRUCTIONS

### TO LOWER BEAMS:

1. Stand clear of beam travel.
2. Use release pole to disengage locking pawl. To disengage locking pawl, position the end of the release pole between the locking pawl and the track and pivot the handle towards the track. **(See Figure. 13)**
3. Once the locking pawl is disengaged, lower the beam to desired position.
4. Make sure locking pawl is fully engaged in desired track slot before removing the release pole.
5. Repeat steps 1 through 4 for lowering opposite end of beam.
6. Make sure beams are level, and both locking pawls fully engaged, prior to loading.
7. Store release pole when not in use.
8. Periodically inspect beams and components for damage. Repair or replace as needed to ensure correct function.

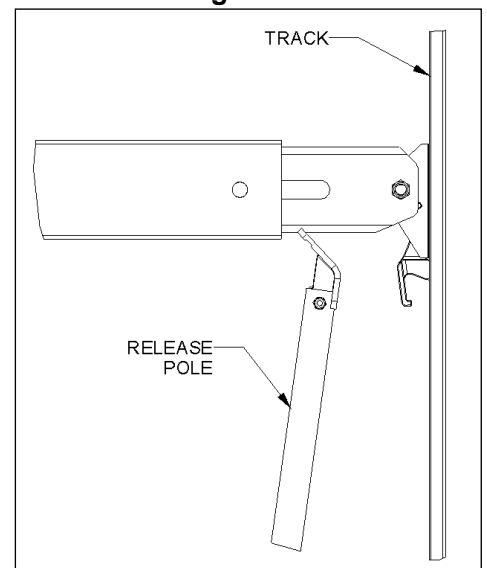
Figure 13



### TO RAISE / STORE BEAMS:

1. Stand clear of beam travel.
2. To raise the beam to the desired position, place the release pole under the beam as shown in **Figure 14**.
3. When storing a beam, raise it to the highest position.
4. Make sure locking pawl is fully engaged in track slot before removing the release pole.
5. Repeat Steps 1 through 4 for raising / storing opposite end of beam.
6. Store release pole when not in use.

Figure 14

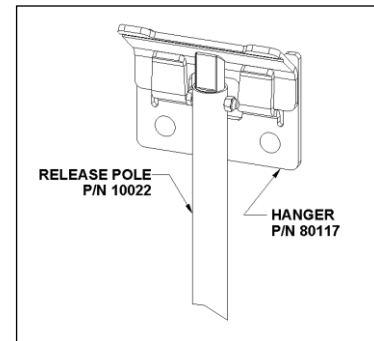


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## **STORAGE OF RELEASE POLE:**

- Install the 80117 Release Pole Hanger approximately 1" inside the rear door and 84" above the floor.
- Release pole can be stored for easy access.

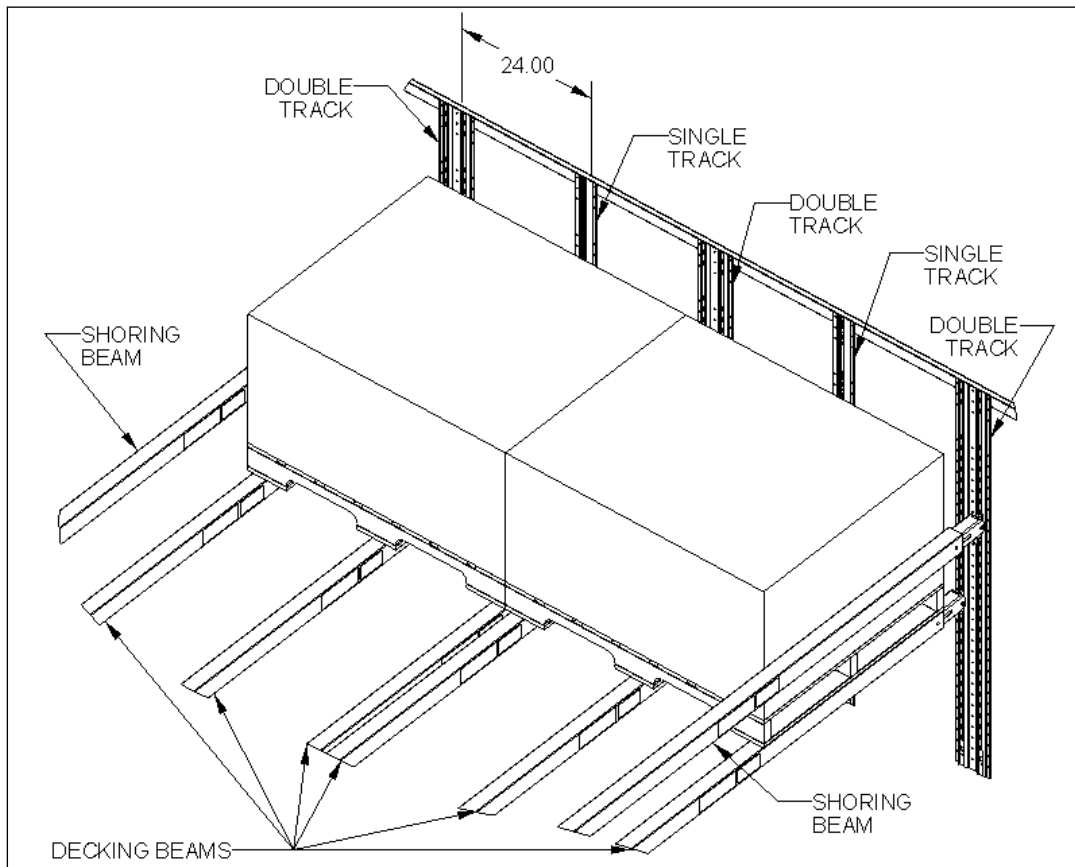
**FIGURE 15**



## **LOADING OF TRAILER:**

- With alternating double & single row track on 24" centers, each pallet will be supported by 3 beams.
- See **Figure 16** for a typical load with 48" pallets.
- Ensure that pallet loads are properly stabilized on the pallet by shrink wrap or equivalent.
- If needed, additional restraints may be supplied by installing K2 Logistic straps into the track.

**FIGURE 16**



## **LOADING CAPACITY:**

Based on an evenly distributed static load.

1. Decking:
  - a. Standard Beam: 2200 LBS (1000KGS) WLL
  - b. Heavy Duty Beam: 3000 LBS (1360 KGS) WLL
  - c. Wide Flange Beam: 3335 LBS (1550 KGS) WLL
2. Shoring:
  - a. Standard Beam: 1500 LB (680KG) WLL
  - b. Heavy Duty Beam: 2500 LB (1135KG) WLL
  - c. Wide Flange Beam: This beam is not recommended for shoring applications.

## **CAUTION:**

- Do not exceed WLL (working load limit).
  - Dynamic loads must be considered to avoid possible overload of system.
  - It is recommended that the actual pallet loads supported by the beams not exceed 50% of the working load limit to allow for dynamic loads during transit.
  - Additional load derating must be considered depending on expected transit dynamics.
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## **WARNING:**

- Improper use may result in personal injury or cargo damage.
  - Do not overload deck, as it may create a top heavy, unstable trailer.
  - To protect against over load conditions it is recommended that no more than 1500 Lbs. per pallet is loaded in any given 3 or 4 beam deck position.
  - Do not attempt to position beams while loaded.
  - Ensure both keepers are fully latched into track slots.
  - Raise and Lower Beams manually, do not use a fork lift.
  - Do not rest beams on end caps or beam stops.
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## **MAINTENANCE INSTRUCTIONS**

### **Inspection:**

Periodically inspect beams and components for damage.

Repair or replace as needed to ensure correct function.

Periodically, inspect function by running beams up and down track.