



RELIABLE SAFE ACCESS

Kee Pallet Gate Operation and Maintenance Manual



Kee Pallet Gate System Overview



PALLET SAFETY GATES

KEE PALLET GATES are a range of pallet/mezzanine gates designed specifically to provide permanent hazard protection when moving goods between different working levels.

KEE PALLET GATES can provide permanent protection for any openings where material/pallet access is required. The gates have been specifically designed to provide a “retro-fit” solution to existing guardrails where opening protection is required.



APPLICATION

The KEE PALLET GATE range has been designed to be fully adjustable in width and can accommodate openings up to 1.8m (6').

Connecting the KEE PALLET GATE to the supporting structure is simple using KEE KLAMP fittings which are directly fixed to the existing guardrail or mechanically/chemical fixed to the masonry or concrete structure

DURABILITY

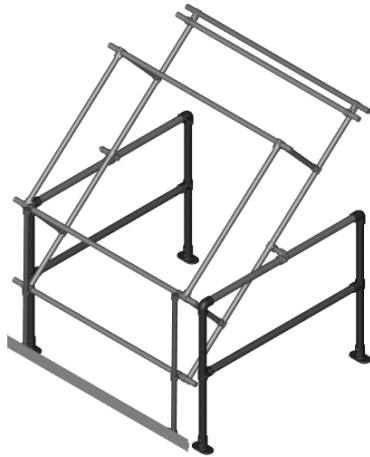
KEE PALLET GATES are available in a range of high quality finishes.

Galvanised: components are supplied with a galvanised finish to BS EN ISO 1461 and ASTM A53: Hot Dip Galvanised Coatings Specification and Testing Methods, giving an average coating of between 55-100 microns.



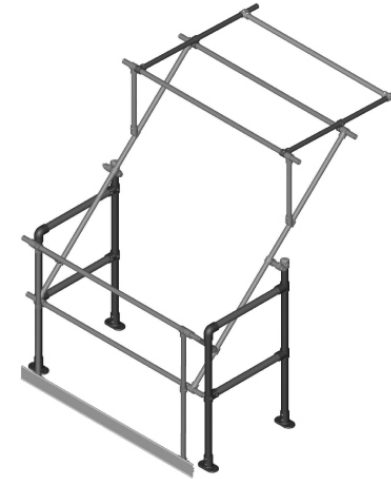
COMPONENT BASED SYSTEMS

All products consist of high quality tubing and cast clamps that seamlessly compliment the Company's safety portfolio. KEE PALLET GATE is easily installed to existing and new structures using all variants of the KEE KLAMP range to provide a safe compliant solution.



TYPE A STANDARD PALLET GATE - SGPPTYAGV

Type A gate is balanced for a positive open and close action. This gate accepts pallets up to 4'7" x 4'10" with a maximum height capacity of 5'3". Toe-board mounted on mezzanine edge side to protect workers below. Manufactured from Gatorshied ASTM A-500 steel tube 1.90 dia. x 1.09" wall thickness tube and 1.32" dia. x 1.25" wall thickness tube to meet test requirements. Net Weight 201lbs.



TYPE B NARROW PALLET GATE - SGPPTYBGV

The Type B narrow frame pallet gate is perfect for use on mezzanines where space is limited. The design of this gate means less floorspace is required to load and unload. Balanced for a positive open and close action. This gate accepts pallets up to 4'7" x 4'10" with a maximum height capacity of 5'10". Manufactured from Gatorshied ASTM A-500 steel tube 1.90 dia. x 1.25" wall thickness tube and 1.32" dia. x 1.09" wall thickness to meet test requirements. Toe-board mounted on mezzanine edge side. Net Weight 188lbs.



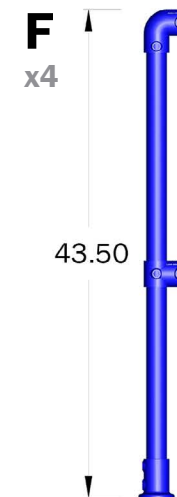
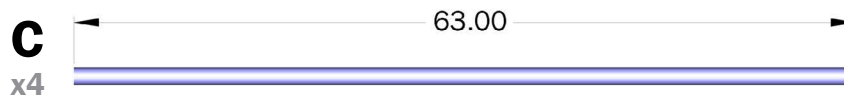
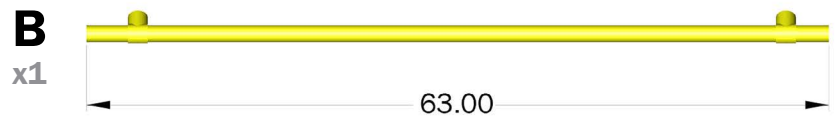
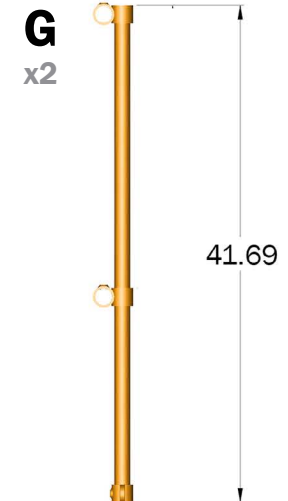
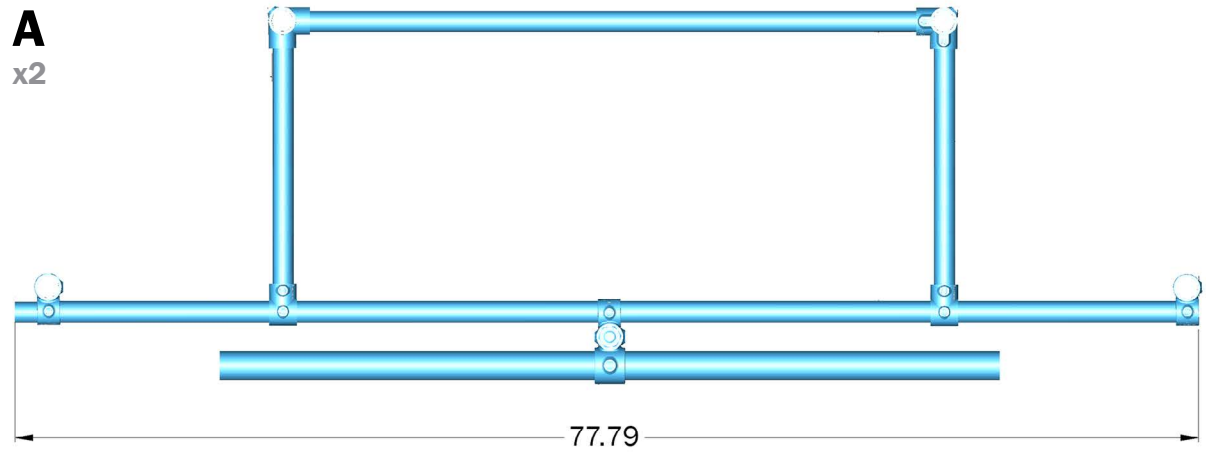
TYPE C TALL PALLET GATE - SGPPTYCGV

The Type C gate offers the tallest capacity of the Kee Pallet Gates. The cantilever design of this gate provides maximum height with minimal ceiling height requirement. Balanced for a positive open and close action. This gate accepts pallets up to 4'7" x 4'10" with a maximum height capacity of 7'2". Manufactured from Gatorshied ASTM A-500 steel tube 1.90 dia. x 1.09" wall thickness tube and 1.32" dia. x .125" wall thickness tube to meet test requirements. Toe-board mounted on mezzanine edge side. Net Weight 275lbs.



TYPE D PREMIUM WIDE PALLET GATE - SGPPTYDAL

The Type D gate offers the widest load capacity of the Kee Pallet Gates. The design of this gate provides maximum load width, whilst also offering 6'6" head clearance for workers. Made from Aluminium and balanced for a positive open and close action. This gate accepts pallets up to 4'7" x 6'4" with a maximum height capacity of 5'3". Manufactured from Grade 6005 T61 Aluminum 1.90" dia. x .157" wall thickness tube to meet test requirements. Toe-board mounted on all sides to protect gates from pallet contact. Net Weight 170lbs.



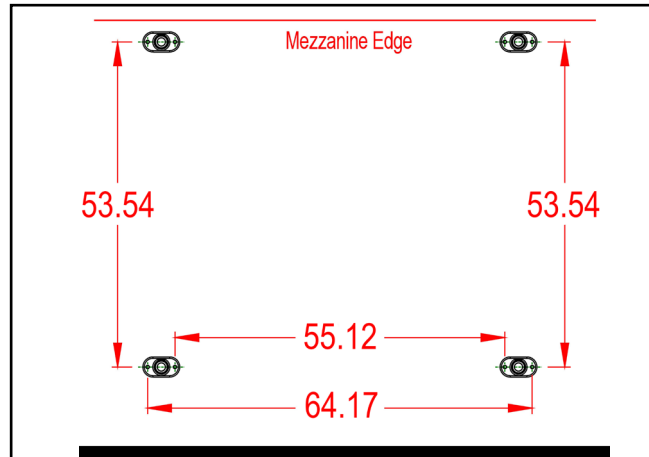
- Fixing items**
- 4no. M10 x 50mm Bolts
 - 4no. M10 Plain nuts
 - 4no. M10 Plain washers
 - 12no. Plastic end caps



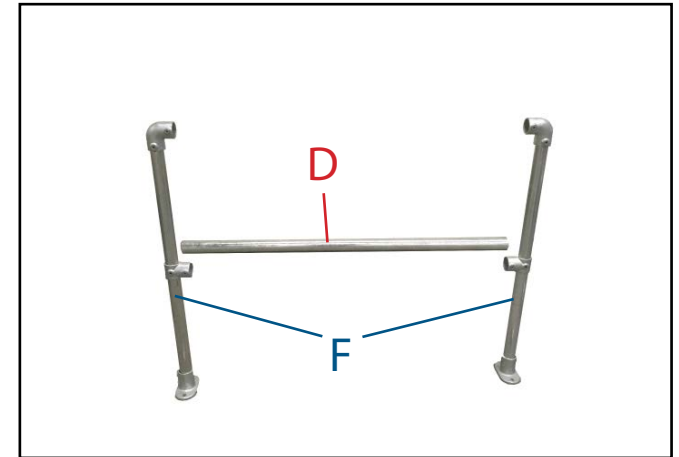
TOOLS REQUIRED

You will need the following in order to install the Kee Pallet Gate:

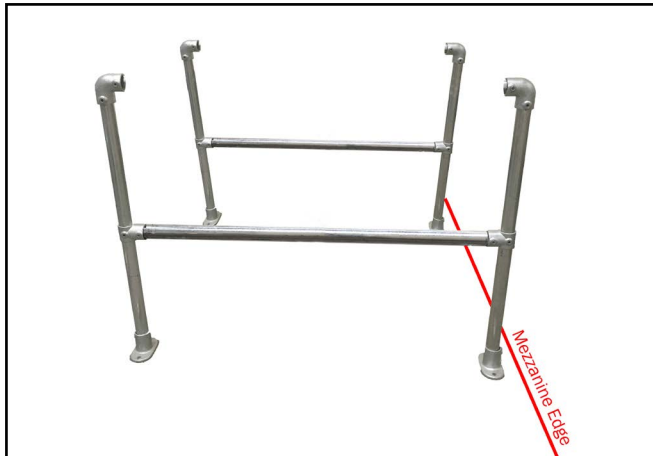
- Marker Pen
- Tape Measure
- 2No. Adjustable Spanners
- 1/4" Hex Key/Socket
- 5/16" Hex Key/Socket
- Torque Wrench 10- 60 Nm approx
- Small Magnetic Level
- Floor fixings to suit surface



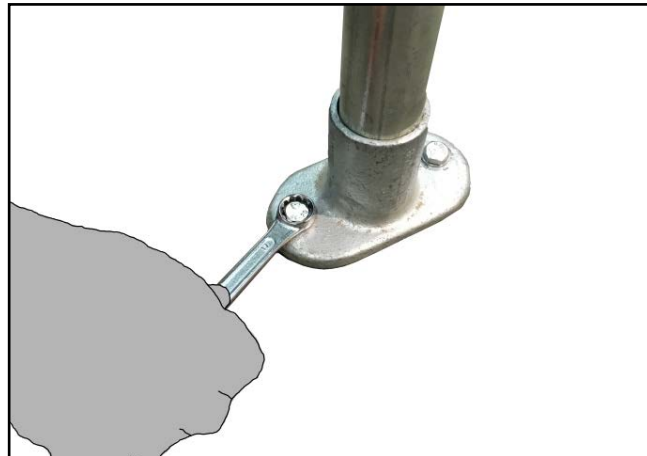
1. Using the above guide mark the position of the holes. Carefully drill a 0.5" hole on each mark. Remove any debris using suitable extraction equipment.



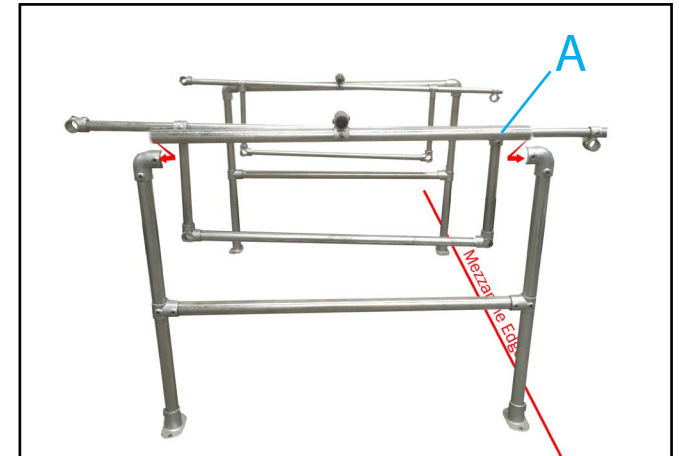
2. Build 2No frames using 2No. (F) uprights, 1No. (D) horizontal per frame. Once tubes are fully inserted tighten grub screws using 5/16" hex key.



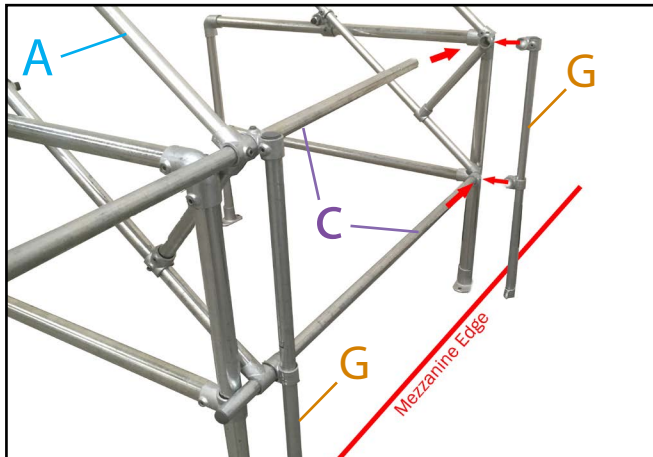
3. Align each frame to the pre-drilled holes. Slight adjustment of the fittings may be necessary to centre correctly with the holes.



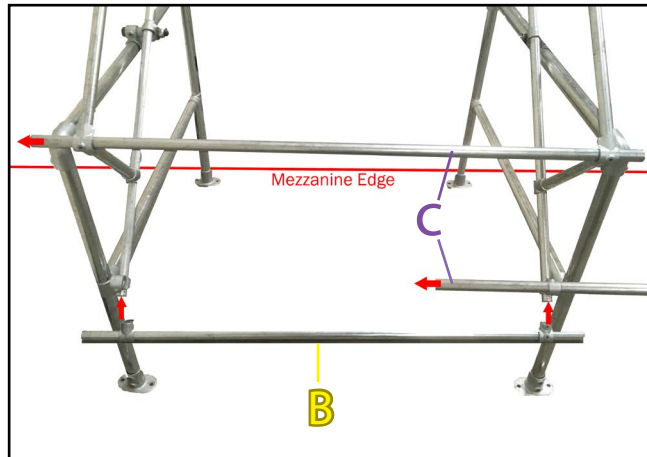
4. Using the 4No (62-8) castings at the base of the frame legs mount all 4No. feet to the floor. Ensure fixings are torqued as per suppliers' guidelines.



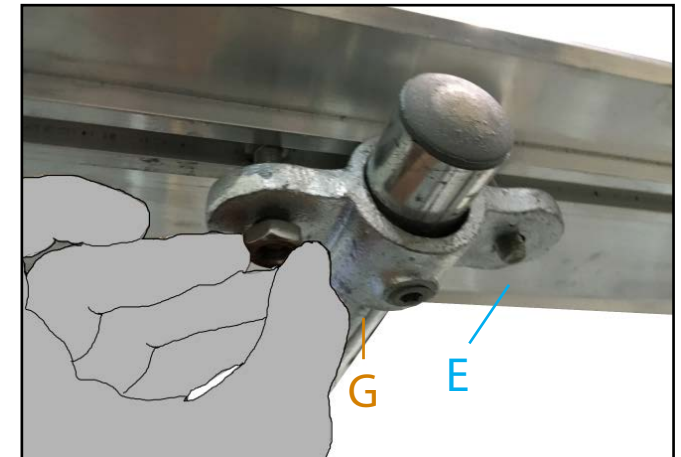
5. Take part (A) with hinge arm and mount wide size 8 (1.90" dia) tube to frame with gate rail on inner side. Repeat this step for other frame. NB. Slight loosening of the frame may be required to allow the horizontal to be inserted into the frame.



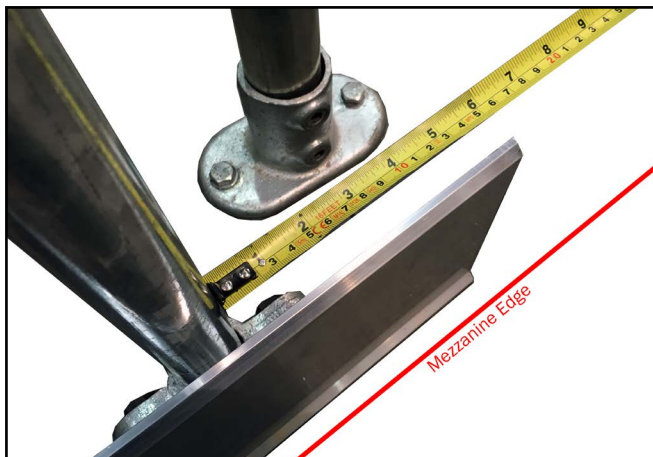
6. Rotate cantilever part (A) so this is as above. Add 2no. part (C) horizontal tubes on mezzanine edge end and add part (G) upright tubes as above onto parts (C) during the process. Tighten using 1/4" hex key.



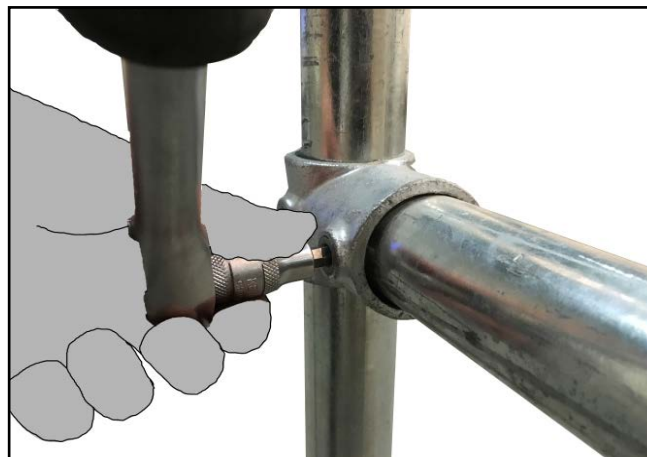
7. On opposite end to mezzanine edge add 2no. part (C) horizontal tubes to upper and lower cantilever tubes. Then add part (B) onto ends of lower cantilever tubes. Tighten using 1/4" hex key.



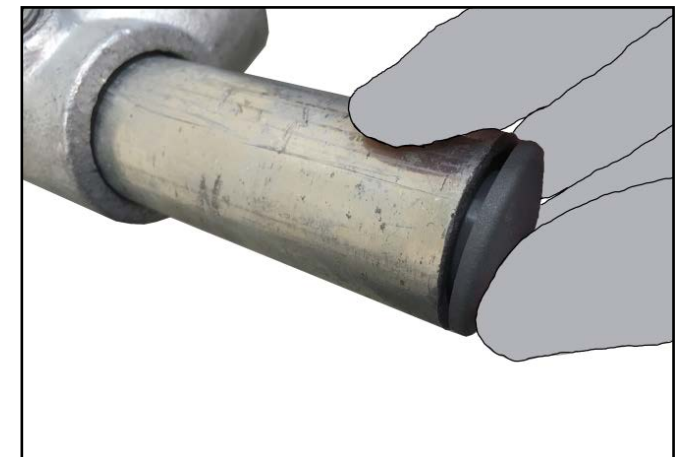
8. Mount toe-board (E) part to the (G) uprights by sliding 4No. bolt heads into the track along the back of the toe-board. Carefully align 2No. bolts so they fit through each of the M51-6 fitting. Add the washer and nut and loosely tighten to permit movement within the toe-board for adjustment in next step.



9. Check toe-board is central within the frame and tighten nuts to 15Nm to ensure it is held securely in place.



10. Ensure all fittings are correctly torqued to 39Nm and all tubes are level. Ensure gate operates smoothly and opens and closes positively.



11. Place plastic end caps on all exposed tube ends. These may need to be tapped into place using a rubber mallet.

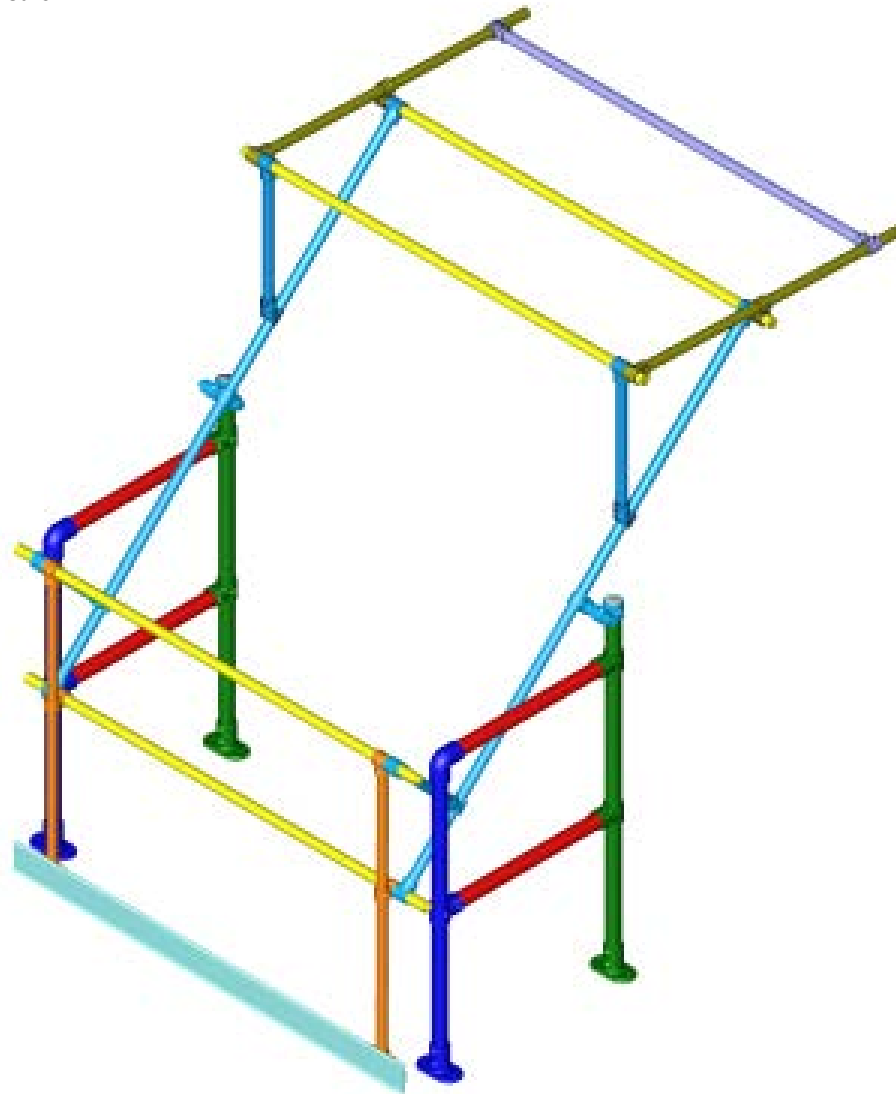
Note:- Installing Kee Pallet Gate

Ensure gate fittings are correctly torqued. Establish that the gate will close correctly. Failure to do so could result in death or serious injury.

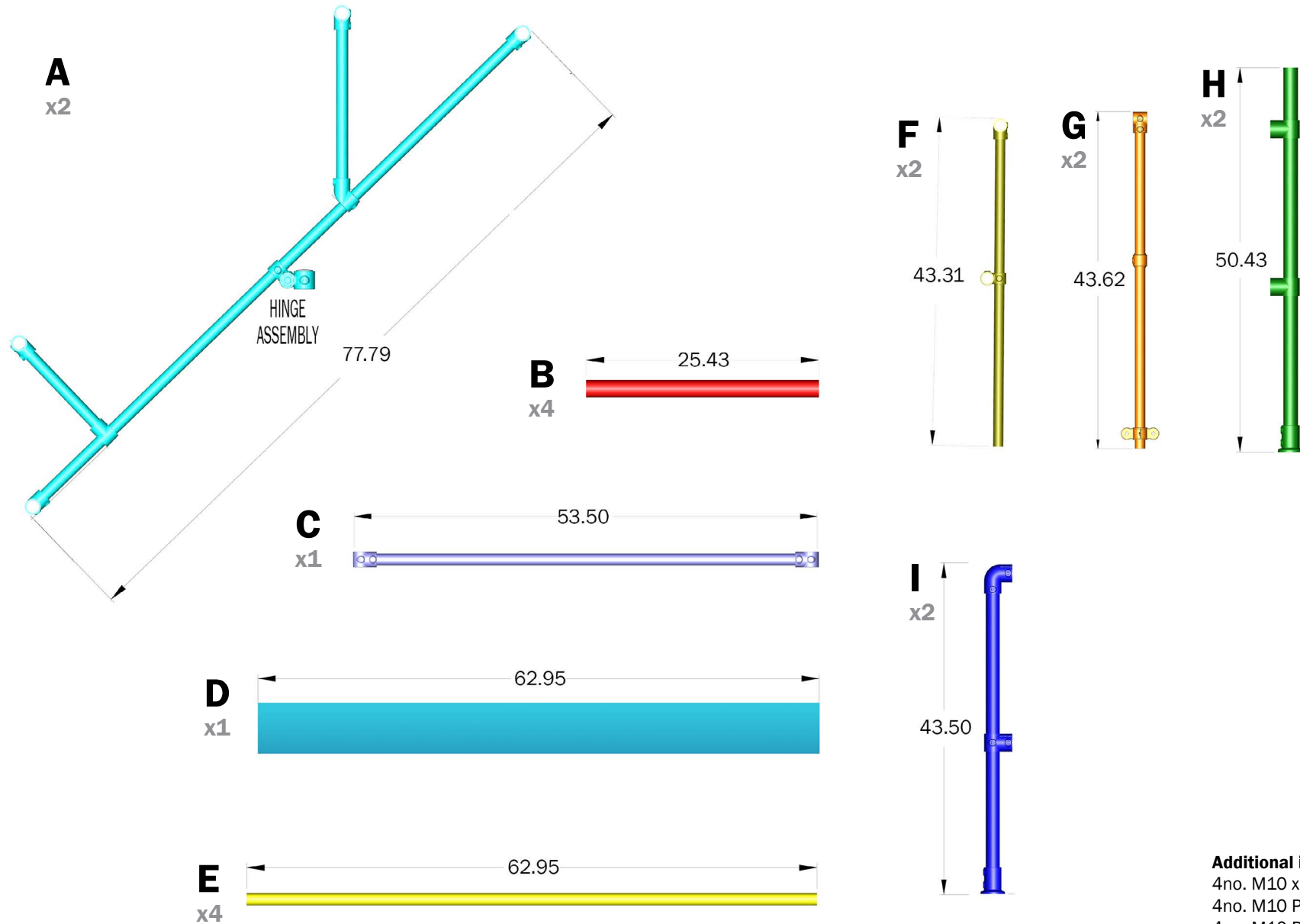
Components for a Type B Gate

Colour coded diagram of components

Carefully take all the components out of the packaging and ensure all components listed on the next page have arrived.



Components for a Type B Gate



- Additional items**
- 4no. M10 x 50mm Bolts
 - 4no. M10 Plain nuts
 - 4no. M10 Plain washers
 - 12no. Plastic end caps

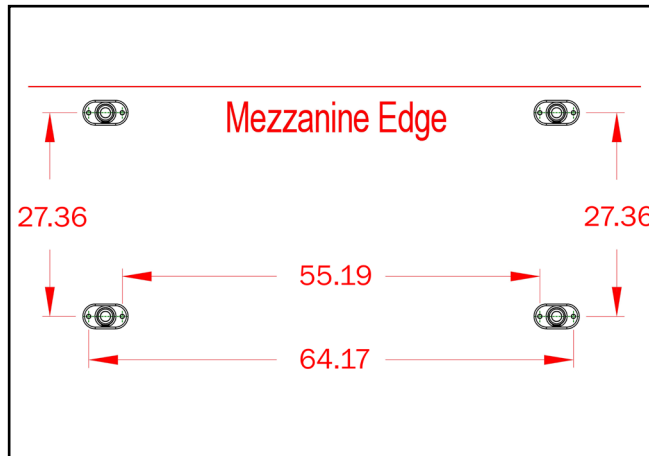


TOOLS REQUIRED

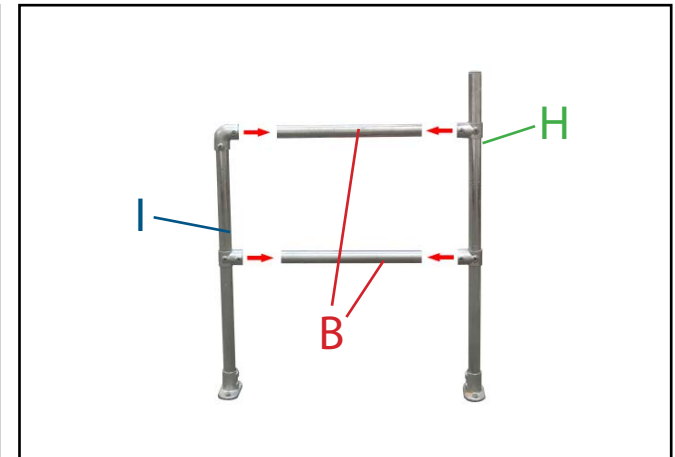
You will need the following in order to install the Kee Pallet Gate:

- Marker Pen
- Tape Measure
- 2No. Adjustable Spanners
- 1/4" Hex Key/Socket
- 5/16" Hex Key/Socket
- Torque Wrench 10- 60 Nm approx
- Small Magnetic Level
- Floor fixings to suit surface

Establish that the gate will close correctly!! Failure to do so could result in Death or serious injury.



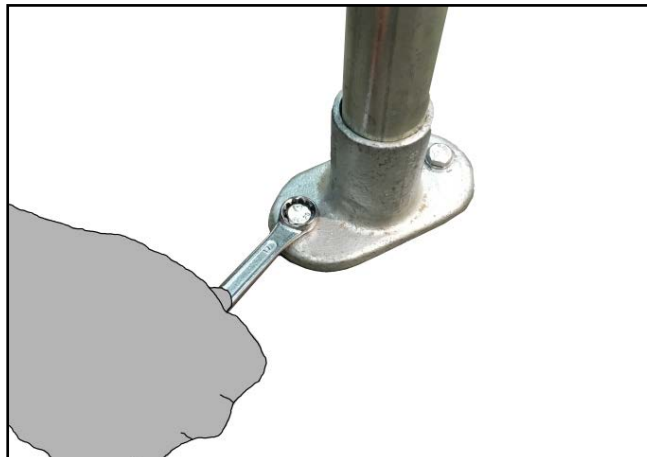
1. Using the above guide mark the position of the holes. Carefully drill a 0.5" hole on each mark. Remove any debris using suitable extraction equipment.



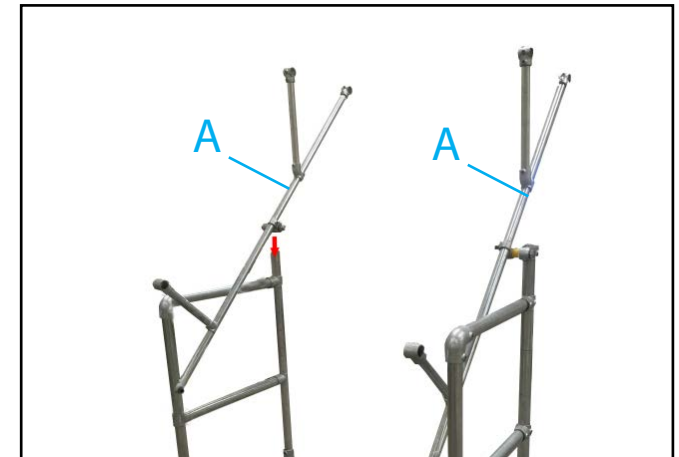
2. Build 2No frames using 1No. (H) upright, 1No. (I) upright and 2No. (B) horizontal parts per frame. Once tubes are fully inserted tighten grub screws using 5/16" hex key.



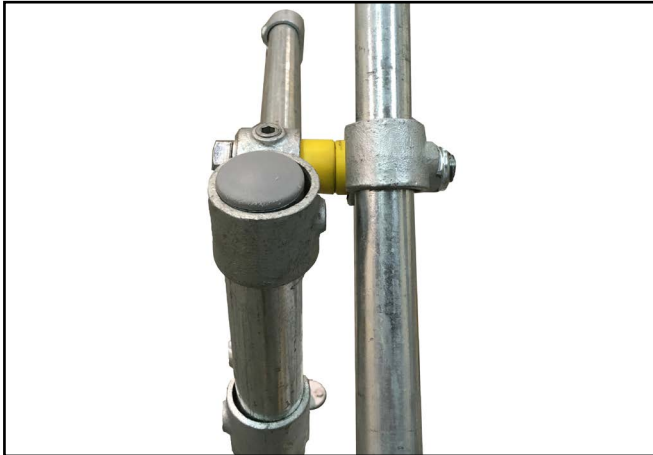
3. Align each frame to the pre-drilled holes. Slight adjustment of the fittings may be necessary to centre correctly with the holes.



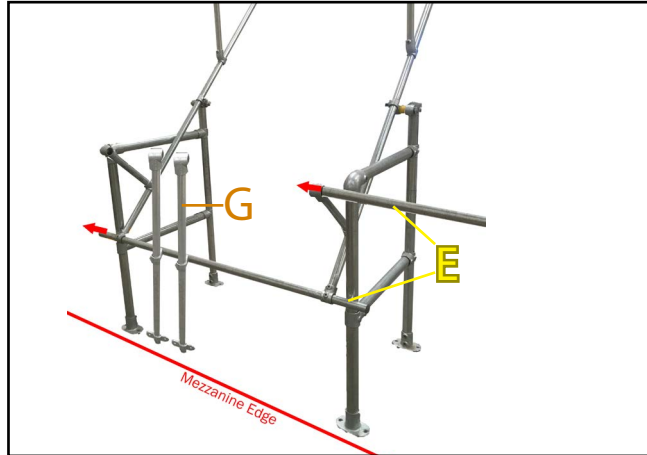
4. Using the 4No (62-8) castings at the base of the frame legs mount all 4No. feet to the floor. Ensure fixings are torqued as per suppliers' guidelines.



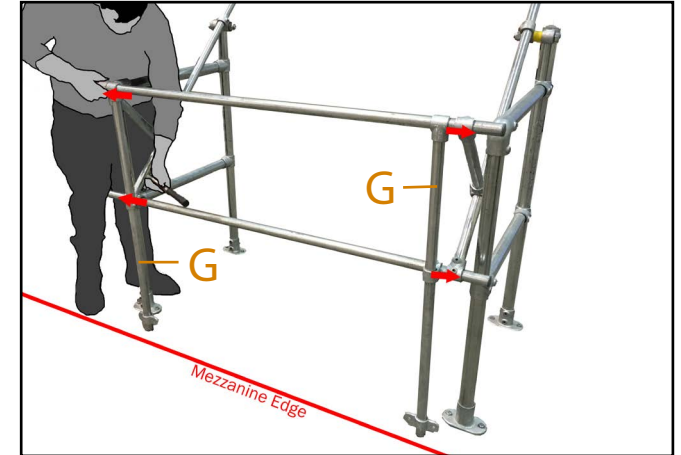
5. Take part (A) with bearing attached and with gate rail on inner side mount to the vertical tube of the frame. Ensure bearing is facing mezzanine edge side as per diagram above. Repeat this step for other frame.



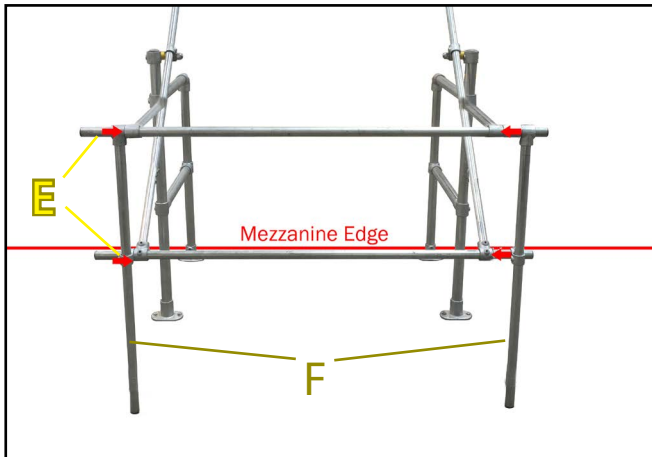
6. Ensure frame is parallel. If not, the gate will not operate smoothly. Adjust this if necessary by rotating the fittings. Note location of hinge mechanism as mentioned in previous step.



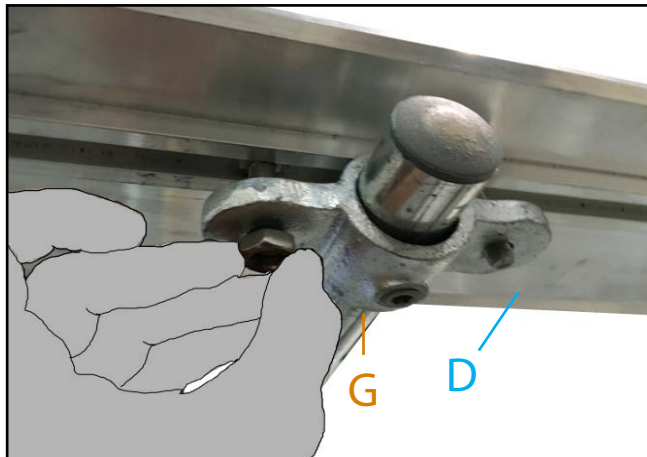
7. On Mezzanine leading edge slide 2no. part (E) horizontal tubes through the cantilever tube ends. During this process add 2no. part (G) vertical uprights with toe-board brackets onto horizontal tubes part (E).



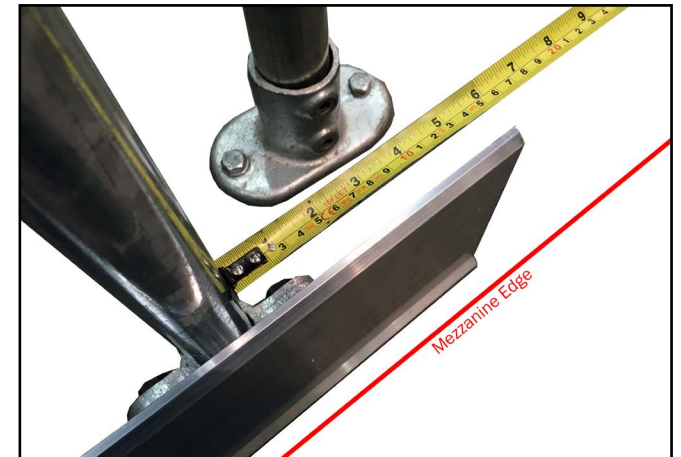
8. Slide part (G) vertical uprights to the left and right hand side of horizontals as shown above. Tighten using 1/4" hex key.



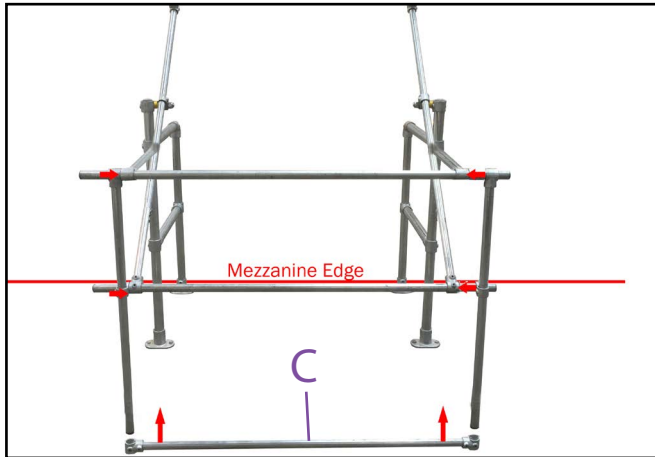
9. On opposite end to mezzanine edge slide 2no. part (E) horizontal through cantilever tube ends. Add 2no. (F) uprights onto ends of horizontal tubes. Tighten using 1/4" hex key.



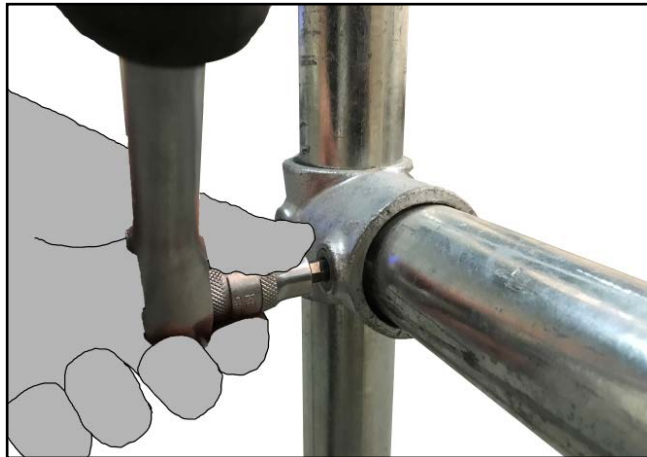
10. Mount toe-board (D) part to the I uprights by sliding 4No. bolt heads into the track along the back of the toe-board. Carefully align 2No bolts so they fit through each of the M51-6 fitting. Add the washer and nut and loosely tighten to permit movement within the toe-board for adjustment in next step.



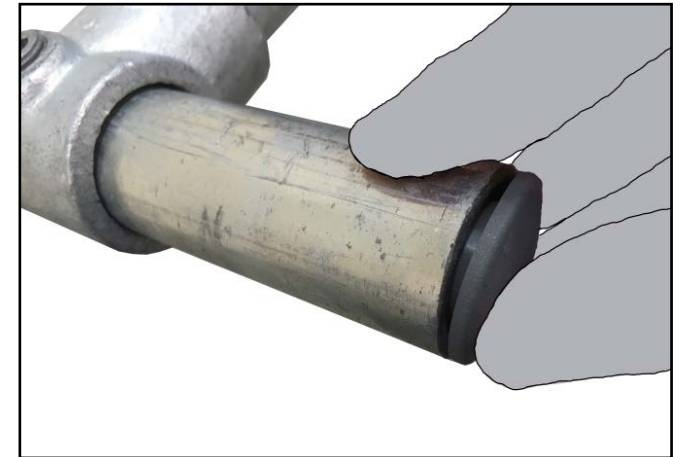
11. Check toe-board is central within the frame and tighten nuts to 15Nm to ensure it is held securely in place.



12. On opposite end to mezzanine edge insert part (C) horizontal tube by sliding tube 4" up the vertical posts. Tighten using 1/4" hex key.



13. Ensure all fittings are correctly torqued to 39Nm and all tubes are level. Ensure gate operates smoothly and opens and closes positively.



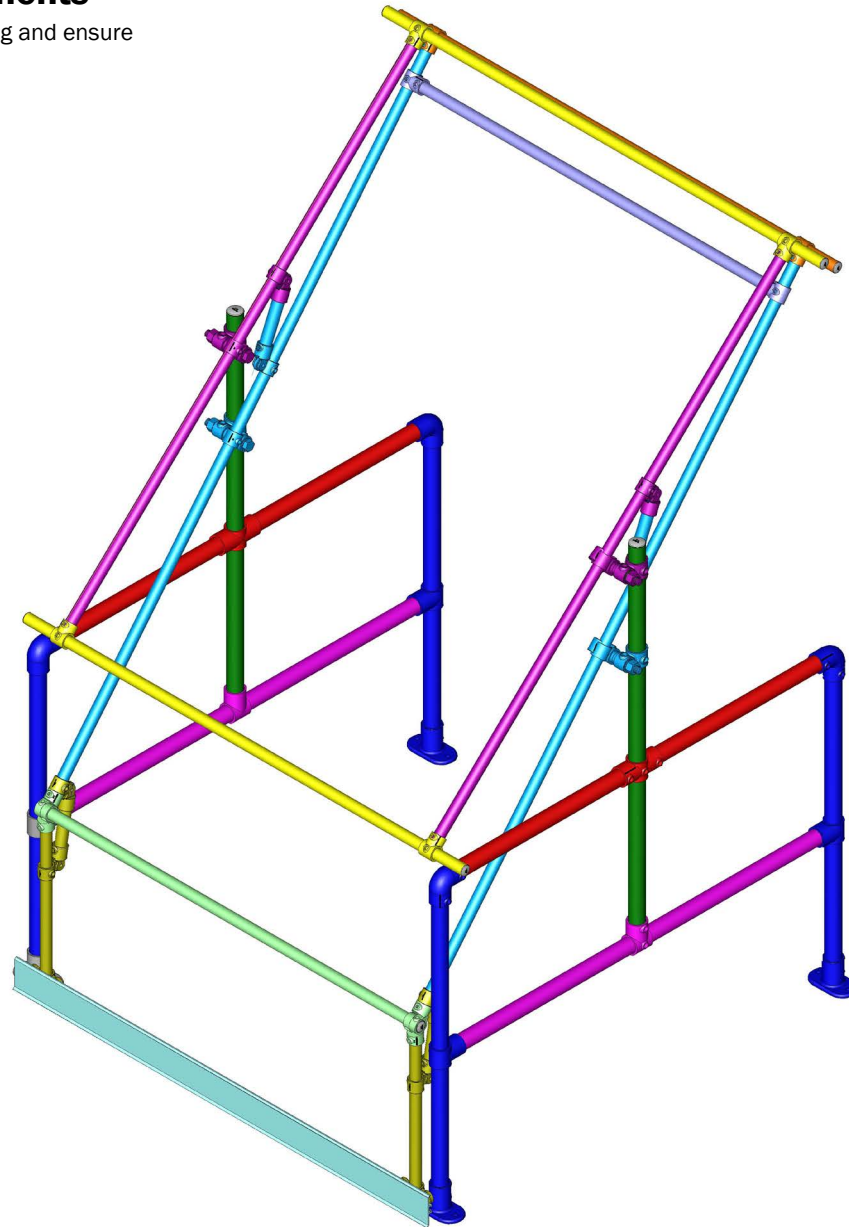
14. Place plastic end caps on all exposed tube ends. These may need to be tapped into place using a rubber mallet.

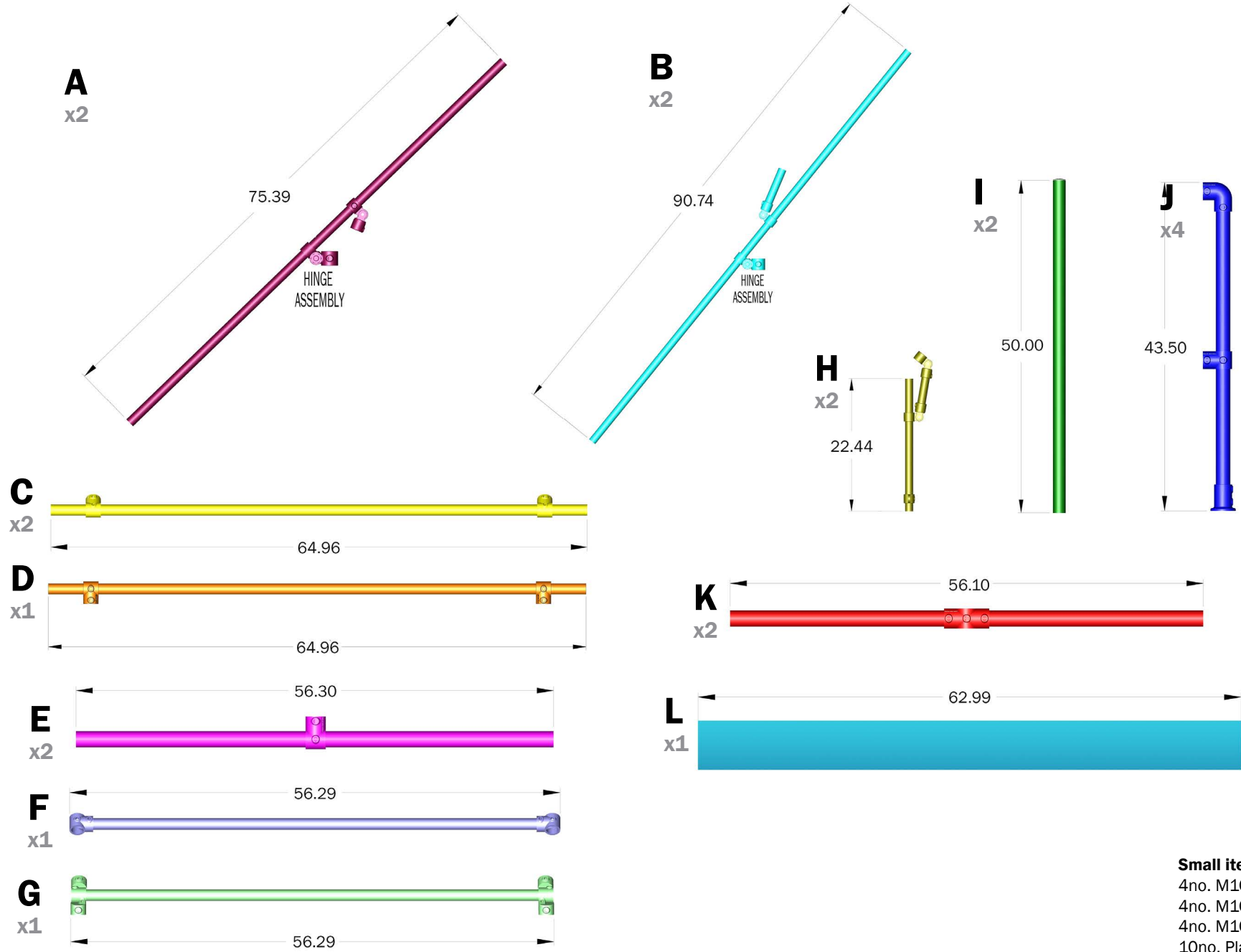
Note:- Installing Kee Pallet Gate

Ensure gate fittings are correctly torqued. Establish that the gate will close correctly. Failure to do so could result in death or serious injury.

Colour coded diagram of components

Carefully take all the components out of the packaging and ensure all components listed on the next page have arrived.





All measurements are shown in inches

- Small items**
 4no. M10 x 50mm bolts
 4no. M10 Plain nuts
 4no. M10 Plain washers
 10no. Plastic end caps

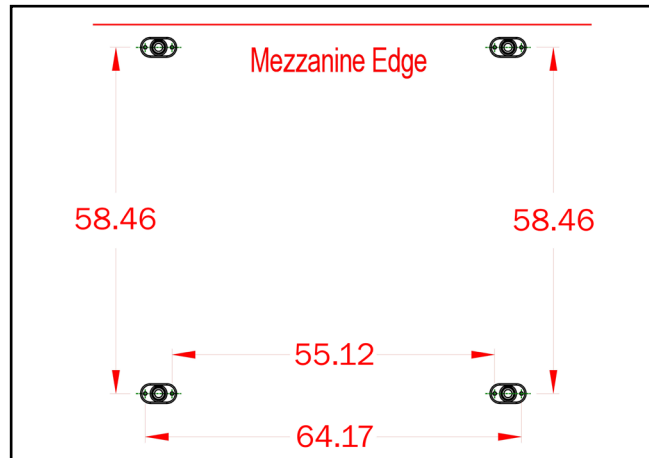


TOOLS REQUIRED

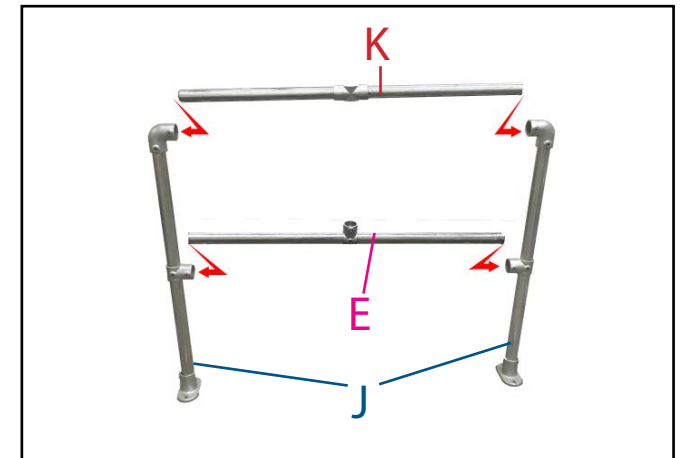
You will need the following in order to install the Kee Pallet Gate:

- Marker Pen
- Tape Measure
- 2No. Adjustable Spanners
- 1/4" Hex Key/Socket
- 5/16" Hex Key/Socket
- Torque Wrench 10- 60 Nm approx
- Small Magnetic Level
- Floor fixings to suit surface

Establish that the gate will close correctly!! Failure to do so could result in Death or serious injury.



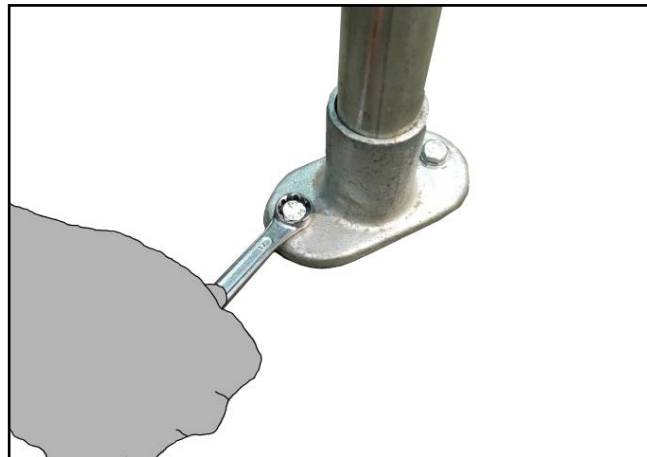
1. Using the above guide mark the position of the holes. Carefully drill a 12mm hole on each mark. Remove any debris using suitable extraction equipment.



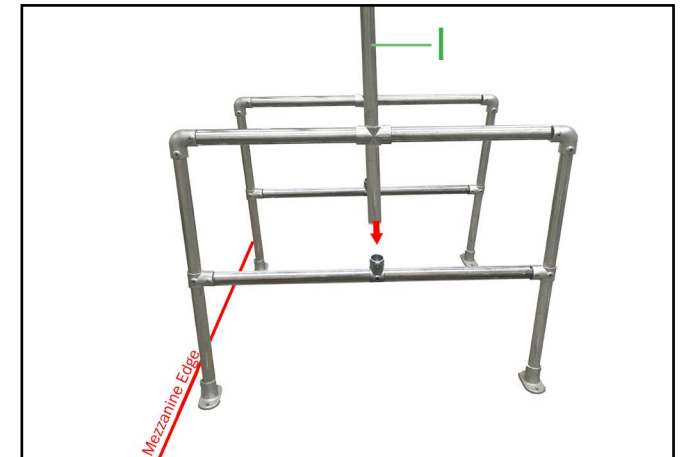
2. Build 2 frames using 2no. (J) uprights, 1no. (E) horizontal for the lower horizontal and 1no. (K) for the upper horizontal per frame. Once tube is fully inserted tighten grub screws using 5/16" hex key.



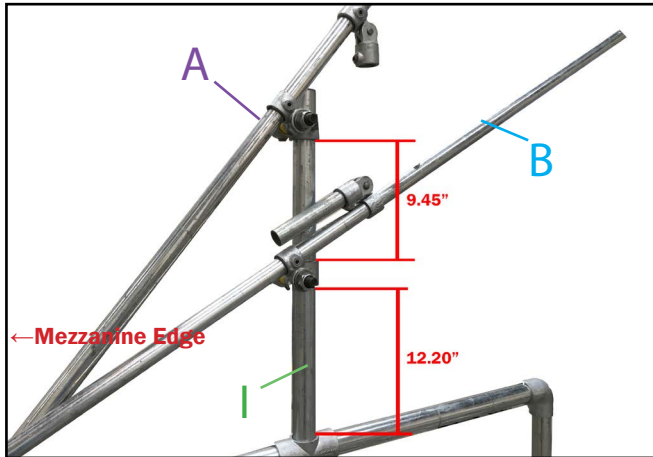
3. Align each frame to the pre-drilled holes. Slight adjustment of the fittings may be necessary to centre correctly with the holes.



4. Using the 4No (62-8) castings at the base of the frame legs mount all 4No. feet to the floor. Ensure fixings are torqued as per suppliers' guidelines.



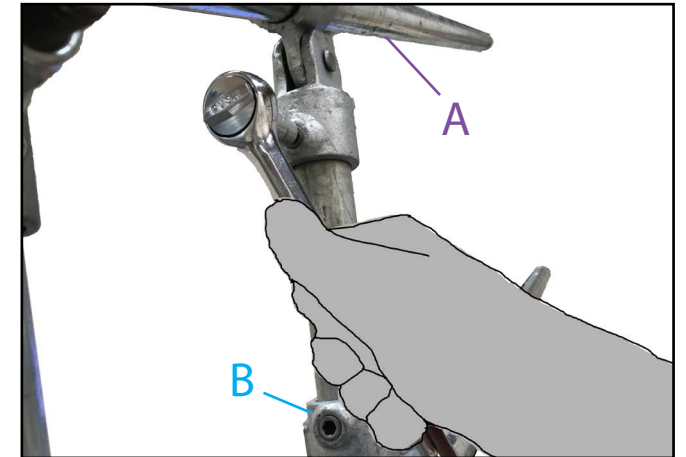
5. Slide part (I) upright rail through fittings on each frame. Tighten grub screws. Repeat for other frame.



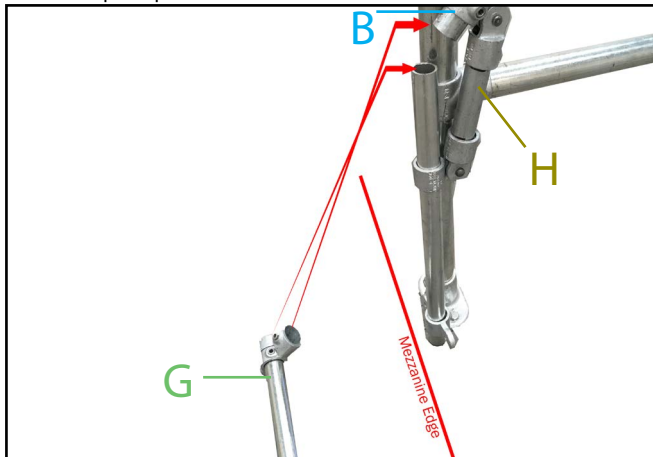
6. Carefully measure and mark 12.20" from top of frame as shown above. Slide part (B) onto part (I) and mount fitting at this mark, ensuring bearing is on the inside of the frame then tighten grub screw. Measure and mark 9.45" from top of fitting on part (B). Add part (A) to part (I) mounting the fitting to this mark ensuring bearing is facing same direction and tighten grub screw. Repeat process for other frame.



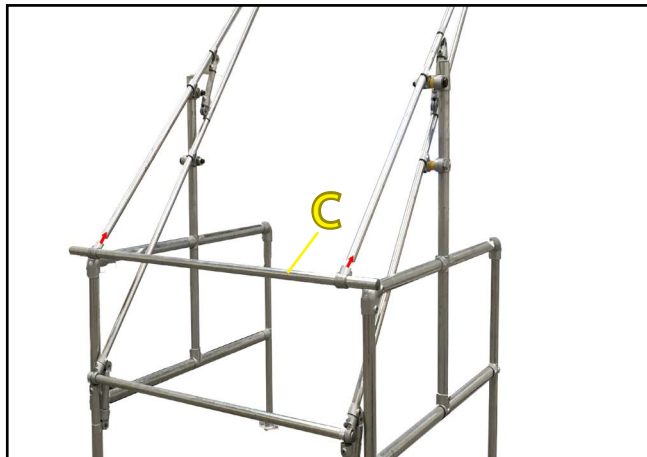
7. Ensure frame is parallel. If not, the gate will not operate smoothly. Adjust as necessary by rotating the fittings.



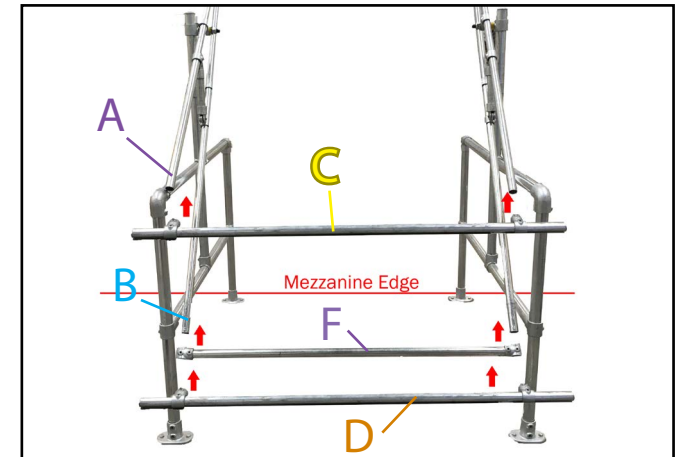
8. Connect cantilever tube link post form part (B) and connect into fitting on part (A). This will link the two tubes and allow the concertina action.



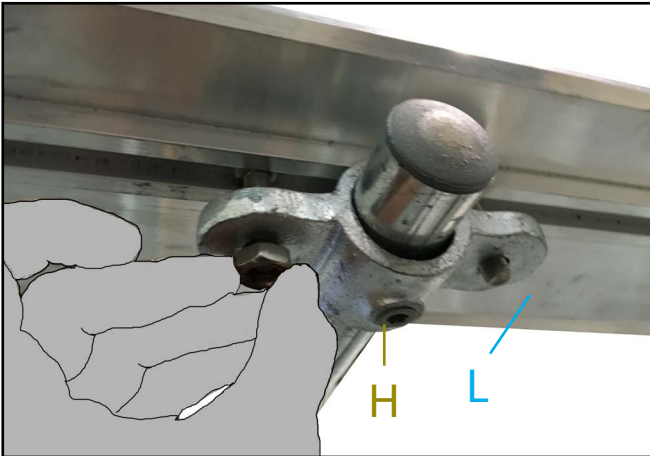
9. Add part (H) upright by sliding fitting onto end of part (B) on mezzanine leading edge end of the gate and tighten grub screw. Then linking part (G) horizontal tube to exposed tube ends on part (H) and part (B). Tighten fittings using 1/4" hex key.



10. Add 1no. part (C) horizontal tube to mezzanine floor edge end as in diagram above. Tighten using 1/4" hex key.



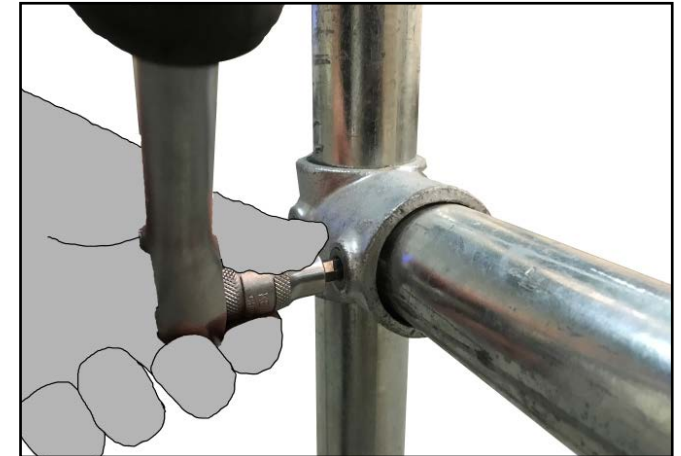
11. On opposite end to mezzanine edge mount horizontal tube part (C) to upper cantilever rails (A). Slide part (F) 5.9" up part (B) cantilever tubes and tighten using 1/4" hex key. Mount horizontal tube part (D) to lower cantilever rails (B). Tighten fittings using 1/4" hex key.



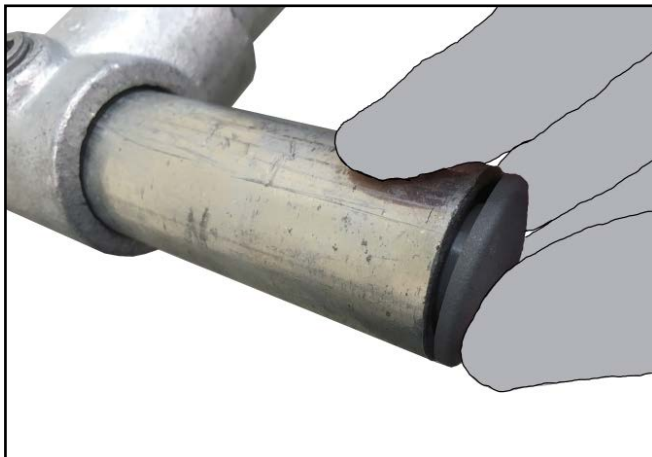
12. Mount toe-board (L) to part (H) uprights by sliding 4no. bolt heads along back of toe-board and then inserting 2no. bolts into each fitting. Loosely add washer and nut allowing movement within the toe-board for adjustment in next step.



13. Check part (H) toe-board is central within the frame and tighten nuts to 15Nm to ensure it is held securely in place.



14. Ensure all fittings are correctly torqued to 39Nm and all tubes are level. Ensure gate operates smoothly and is balanced.



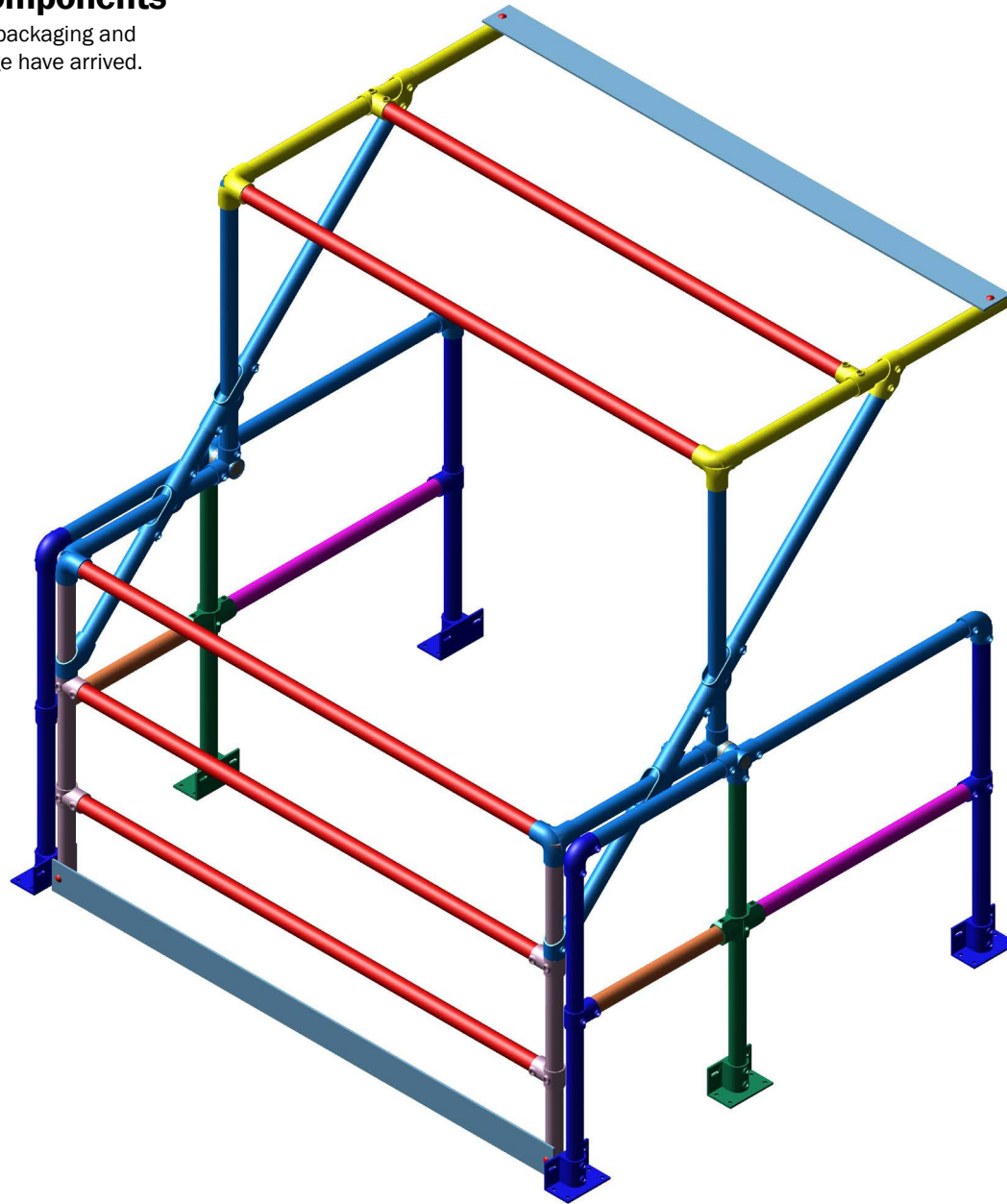
15. Place plastic end caps on all exposed tube ends. These may need to be tapped into place using a rubber mallet.

Note:- Installing Kee Pallet Gate

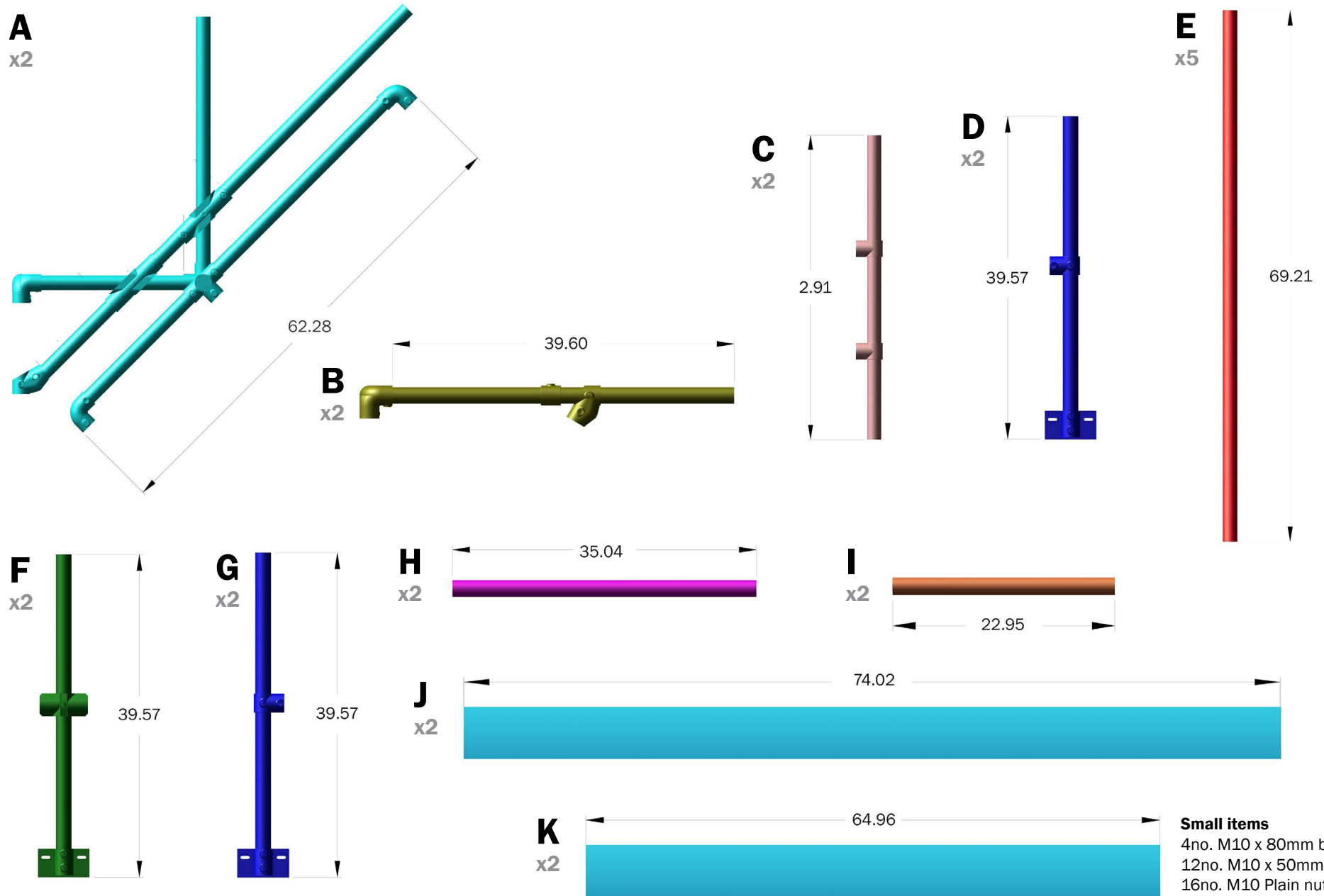
Ensure gate fittings are correctly torqued. Establish that the gate will close correctly. Failure to do so could result in death or serious injury.

Colour coded diagram of components

Carefully take all the components out of the packaging and ensure all components listed on the next page have arrived.



Components for a Type D gate



- Small items**
- 4no. M10 x 80mm bolts
 - 12no. M10 x 50mm bolts
 - 16no. M10 Plain nuts
 - 16no. M10 Plain washers
 - 4no. Plastic end caps

All measurements are shown in inches

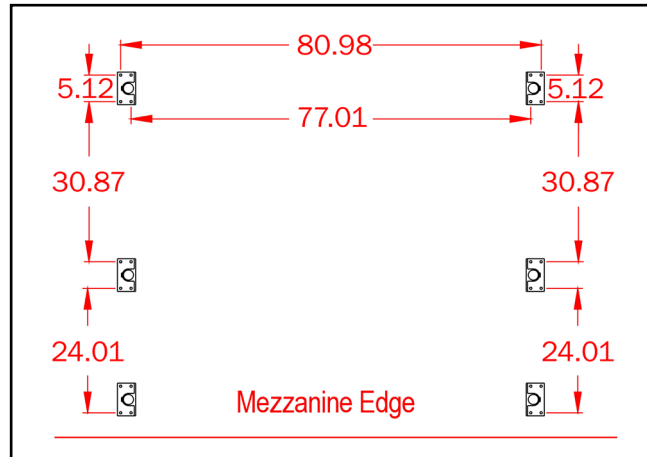


TOOLS REQUIRED

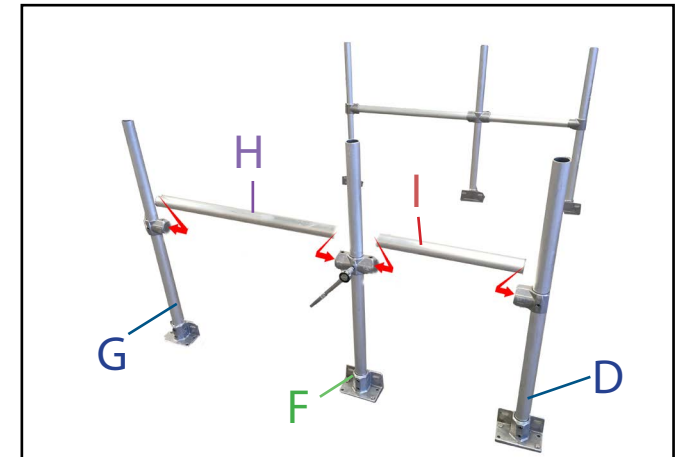
You will need the following in order to install the Kee Gate Pallet Gate:

- Marker Pen
- Tape Measure
- 2No. Adjustable Spanners
- 1/4" Hex Key/Socket
- 5/16" Hex Key/Socket
- Torque Wrench 10- 60 Nm approx
- Small Magnetic Level
- Floor fixings to suit surface

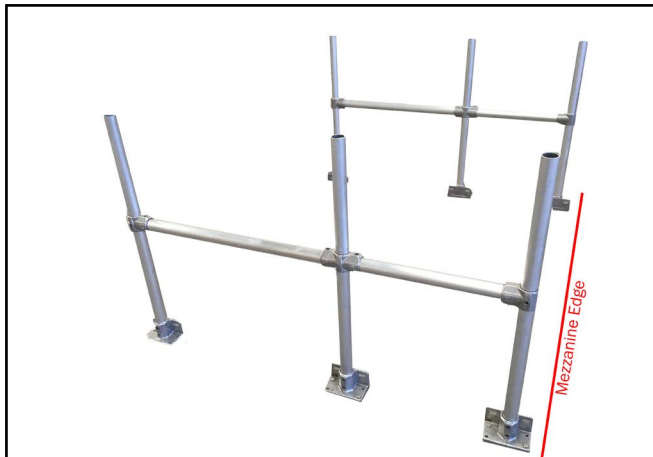
Establish that the gate will close correctly!! Failure to do so could result in Death or serious injury.



1. Lay components on safe flat working area. Using adequate fall protection device drill 12mm holes to allow feet to be attached using the above guide.



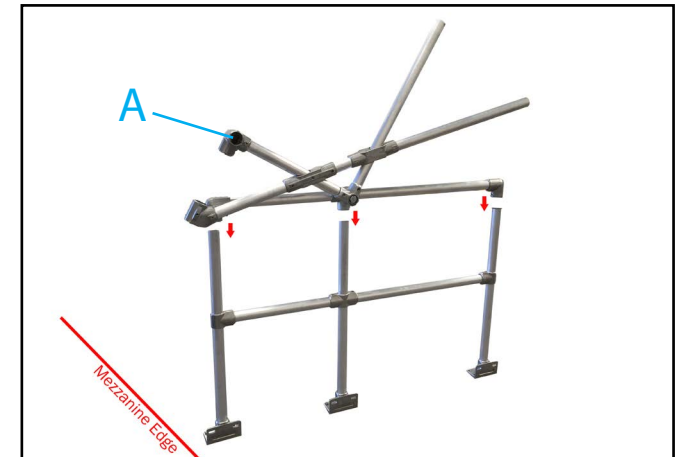
2. Build 2 frames using 1no. (D) part, 1no. (F), 1no. (G) per frame as above. Link upright posts using 1no. part (H) and 1 no. part (I) per frame and tighten grub screws using 5/16" hex key. Repeat process to make second frame.



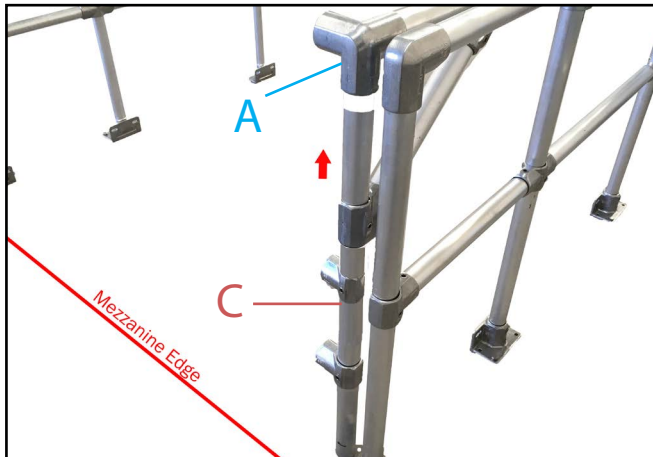
3. Align each frame to the pre-drilled holes. Slight adjustment of the fittings may be necessary to centre correctly with the holes. As per drawing, the frame uprights are off centre, so the centre post should be closer to the leading edge of the mezzanine.



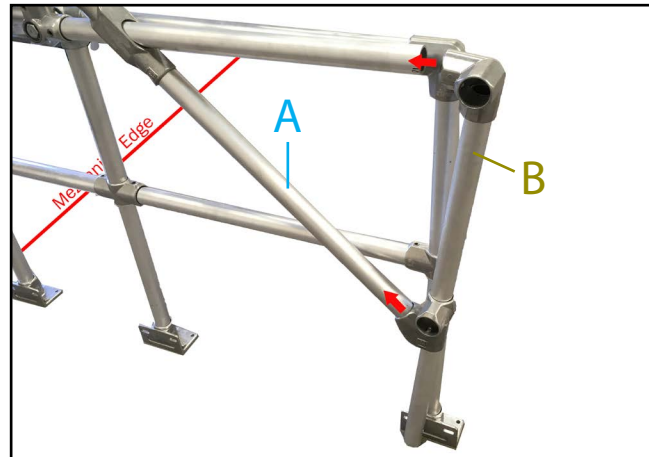
4. Mount each of the six (L69-8) feet on frame using suitable floor fixings. Ensure fixings are torqued as per suppliers' guidelines.



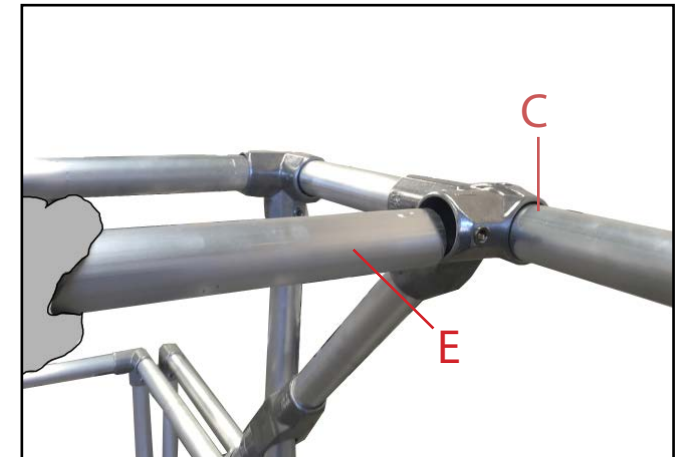
5. Add part (A) cantilever arms onto the frame, ensuring that the arm is positioned on the inside of pallet gate. Repeat for opposite frame.



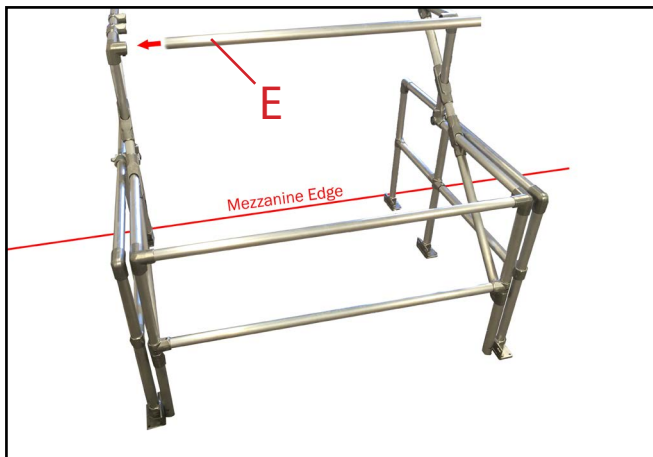
6. Add part (C) uprights into end of part (A) with fittings pointing inwards towards each other and tighten grub screws.



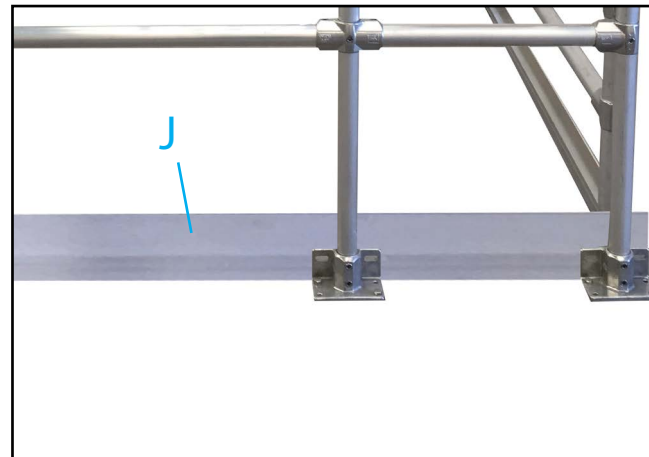
7. Add part (B) upright tubes onto opposite end of part (A), insert tubes into fittings as per above and tighten grub screws using hex key.



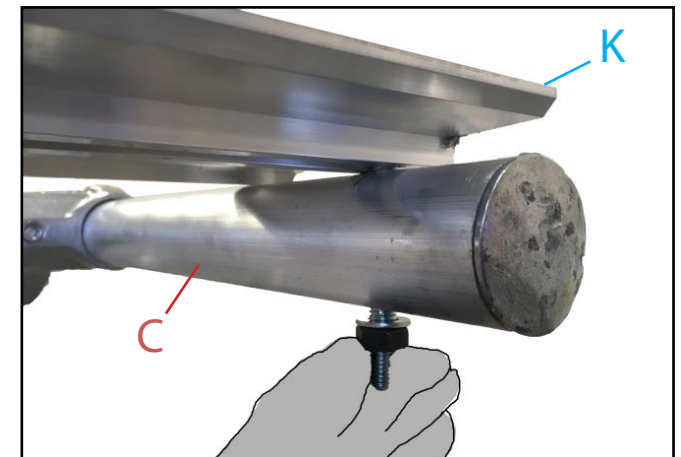
8. Insert 2no. part (E) horizontal tube to link up left and right hand cantilever sections. Tighten grub screws using hex key.



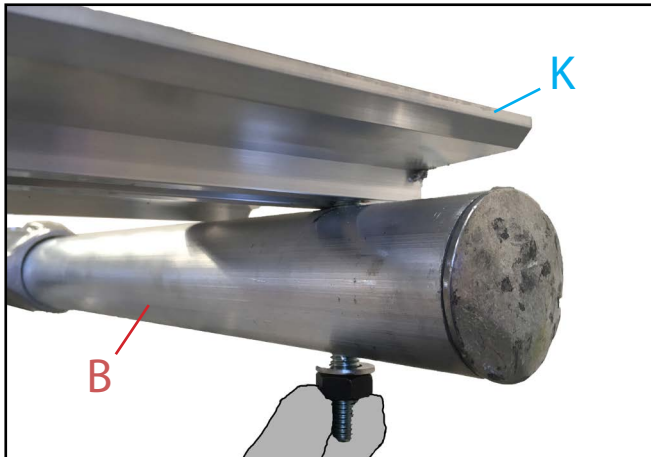
9. Repeat process for other side of gate using 3no. part (E) horizontal tubes. Once tubes have been inserted tighten grub screws and torque to 39Nm.



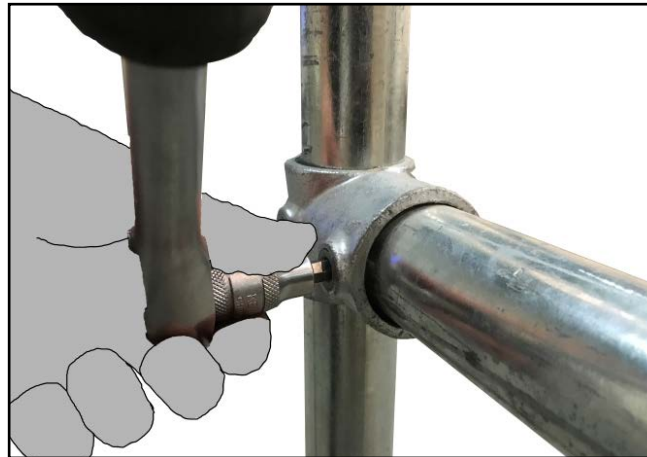
10. Add part (J) toe-board onto both left and right hand side frames using M10 x 50mm bolts and nuts provided.



11. Add 1no. part (K) toe-board to part (C) uprights. Thread M10 x 80mm bolt through hole in upright and add nut and washer. Tighten to 15Nm.



12. Add 1no. part (K) toe-board to part (B) uprights. Thread M10 x 80mm bolt through hole in upright and add nut and washer. Tighten to 15Nm.



13. Ensure to fittings are torqued to 39Nm, that the pallet gate operates smoothly and is balanced.

Note:- Installing Kee Pallet Gate

Ensure gate fittings are correctly torqued. Establish that the gate will close correctly. Failure to do so could result in death or serious injury.

