Pit Frame Installation Guide

03/25

Description

Pit frames are used to support floor scales in flush-mount applications. The pit frame accessory is a one-piece welded unit with no additional welding required.

There are several different types of frames available:

- 2 types for the standard duty scale
- 1 type for the heavy capacity unit
- 3 types for the Lift Deck models
- Multiple sizes exist for each type frame.

Scan the above QR code to link to a Pit Frame Installation video.

This accessory is designed ONLY for in-floor or 'flush' applications. In general, a hole is cut in the concrete, the pit-frame accessory is installed in the hole, then, concrete is poured around and under the frame. Once cured, the scale platform is set into the frame and installation can be completed.

Standard Duty Pit Frames:

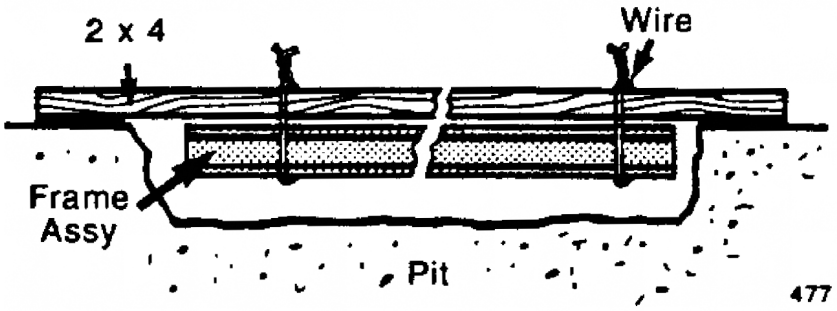
Standard duty frames are available in mild steel and stainless steel for seven (7) sizes. The concrete work and frame setting is usually done by a contractor, with a scale technician completing the project by setting and installing the scale.

1. Place the pit frame, standard or heavy duty, in the approximate position it will occupy on the floor.
2. Mark out the position of the hole to be made. The hole **MUST** be a minimum of **12" larger than the pit frame on all sides**. Should pit drainage be required, slope the pit floor to an installed drain while maintaining a level area at each corner. Use the attached drawings for measurements.
3. The hole will have to be deep enough to accommodate the pit coping, plus the thickness of the pit floor. Use the attached drawings for measurements.

Setting the Pit Frame:

Once the properly sized and prepped hole has been cut in the concrete floor, use these steps to help set the frame properly:

- Set the frame in the hole supported at about the correct height.
- Set two 2 x 4's on edge (longer than the width of the hole) across the opening.
- Use soft wire and make 2 loops by twisting wire around each 2 x 4 and the frame.



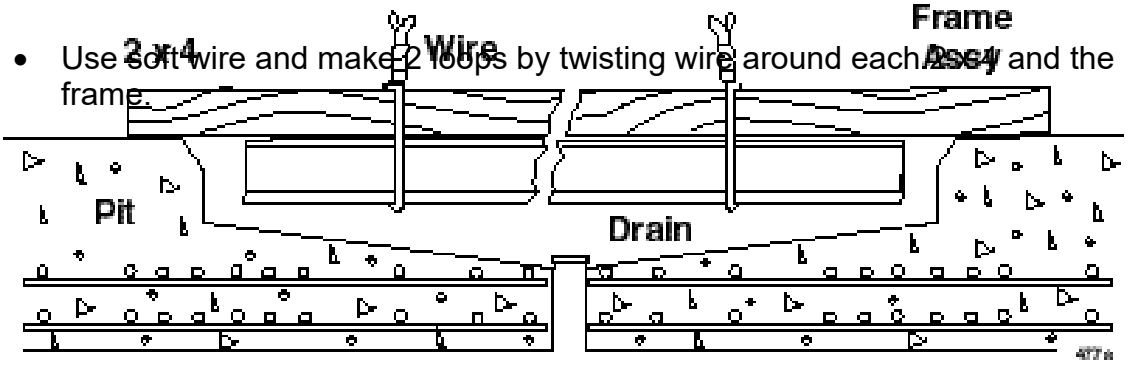
- With the frame supported by the wire and 2 x 4's, use a level to set the frame flush with the surrounding floor, level, and at the correct height by twisting or untwisting the wire.
- Use the included drawings for concrete specifications and amounts. Make sure the conduit for the scale cable is in place and secured into the frame opening.
- Pour the concrete around and under the frame ensuring a smooth and level finish.
- If a drain is included, use the drawings in this bulletin to put a slope in the pit floor to it.
- Cure to a minimum of 2000 psi before cutting wire (flush).
- Pull the cable through the conduit before placing the scale platform in the frame.
- Level the platform before installing the instrumentation.

Heavy Duty Frames:

Heavy duty pit frames are available in 4 sizes, mild steel only as a standard product. The concrete work and frame setting are usually done by a contractor, with a scale technician completing the project by setting and installing the scale.

CAUTION: ***Heavy duty frames require substantially more concrete work and preparation than standard duty frames. Rebar and extra thick concrete are required to accept the pier loading that a 20K scale will have. Use only the proper drawing, 21897, included in this bulletin.***

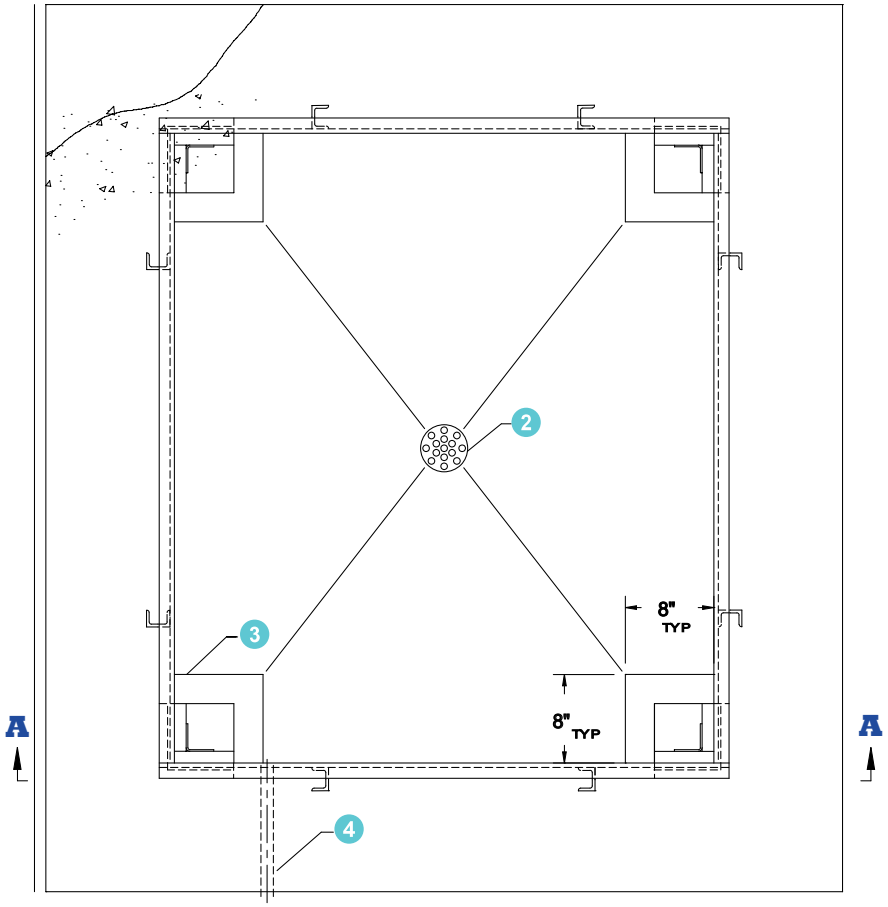
1. Setting the pit frame: Once the properly sized and prepped hole has been cut in the concrete floor, use these steps to help set the frame properly.
   - Set the frame in the hole supported at about the correct height.
   - Set two 2 x 4's on edge (longer than the width of the hole) across the opening.

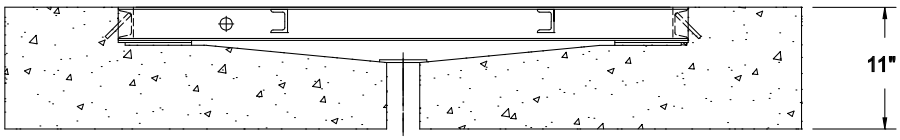


- Use soft wire and make 2 loops by twisting wire around each 2 x 4 and the frame.
- With the frame supported by the wire and 2 x 4's, use a level to set the frame flush with the surrounding floor, level, and at the correct height by twisting or untwisting the wire.
- Use the included drawings for concrete specifications and amount. Make sure the conduit for the scale cable is in place and secured into the frame opening.
- Pour the concrete around and under the frame ensuring a smooth and level finish.
- If a drain is included, use the drawings in this bulletin to put a slope in the pit floor to it.
- Cure to a minimum of 2000 psi before cutting wire (flush).
- Pull the cable through the conduit before placing the scale platform in the frame.
- Level the platform before installing the instrumentation.

NOTE: The conduit must be installed through the hole provided. Align the pit frame and conduit with desired scale location.

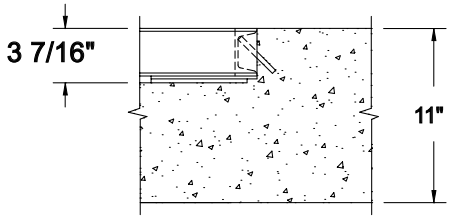
1K to 10K -10 Mild & Stainless Steel FS Installation Drawing





A-A View

INSTALLATION OF PIT FRAME
POURED CONCRETE BASED ON THE SIZE
1K-10K

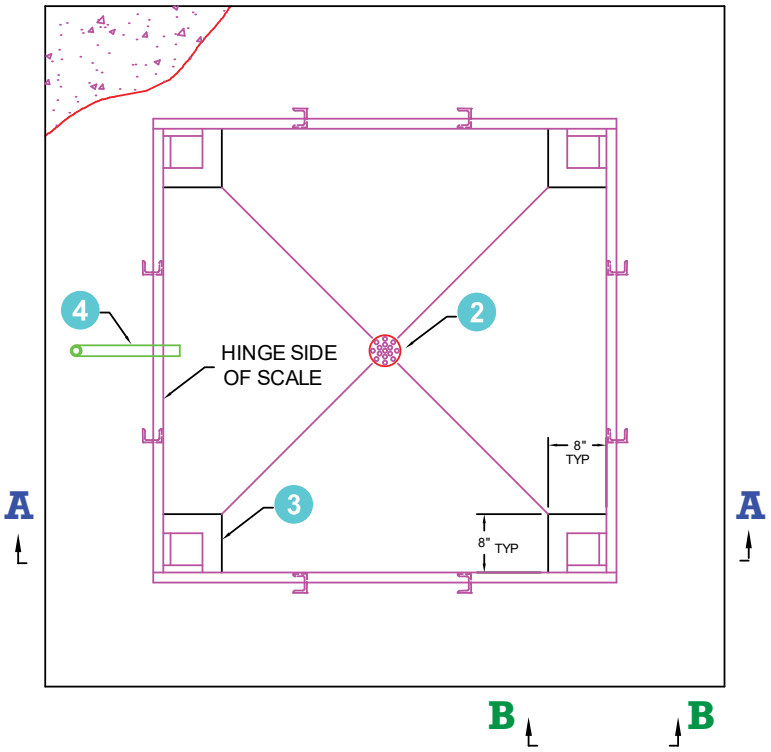


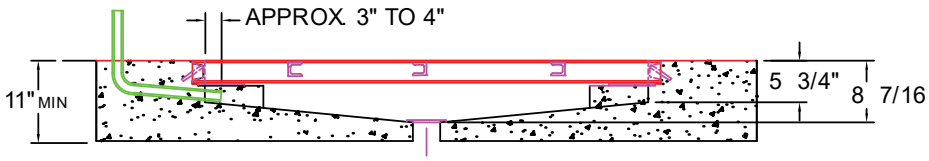
B-B View

Mild & Stainless Steel FS Installation Notes

1. A Pit Frame is a one-piece welded unit (no field welding required).
2. The Pit Dimensions are determined by the Pit Frame accessories.
   - At least 6” thickness of concrete is required for Pit Floor in non-hostile applications.
   - At least 11” concrete floor with minimum 3” bottom slope (as shown) is required if drainage is required for hostile application. A 4” diameter drain is recommended.
3. A soil bearing pressure of at least 1,000 lbs. per square foot is required. The corner pier should be designed to support at least two thirds of the total capacity of the scale.
4. A ¾” diameter conduit for scale interface cable is recommended. The Pit Frame is arranged with a 1 1/8” diameter hole for cable exit. Locate conduit to match hole location.
5. With the frame level ± 1/8” in both directions and secured, concrete is filled in around the outside of the Pit Frame and Pit Floor to form the scale pit. It is recommended that f_c=3500 PSI and 3” to 4” slump concrete be used.
6. When the concrete has reached a minimum of 2000 PSI, pull the interface cable through the conduit to the instrument location, and lower the platform assembly into position.
7. With the scale in the place, the clearance around the edge of the platform and pit coping should be ¼” to 3/8”.

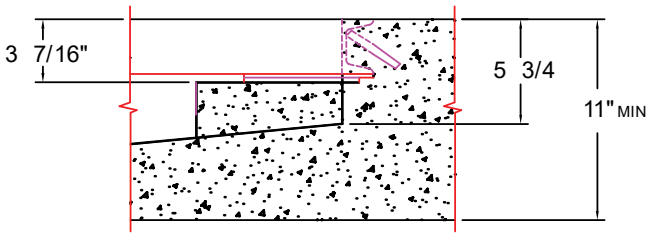
1K to 10K -10 Stainless Steel Lift Deck Installation Drawing





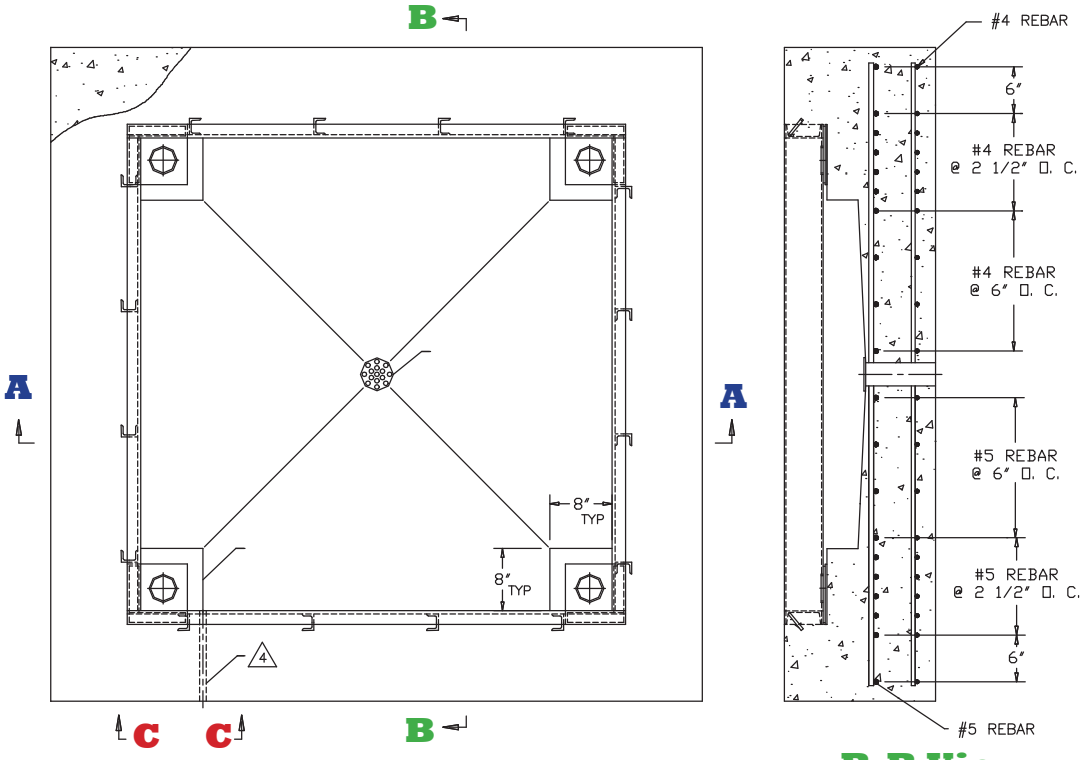
A-A VIEW

INSTALLATION OF PIT FRAME
POURED CONCRETE BASED ON THE SIZE
1K-10K

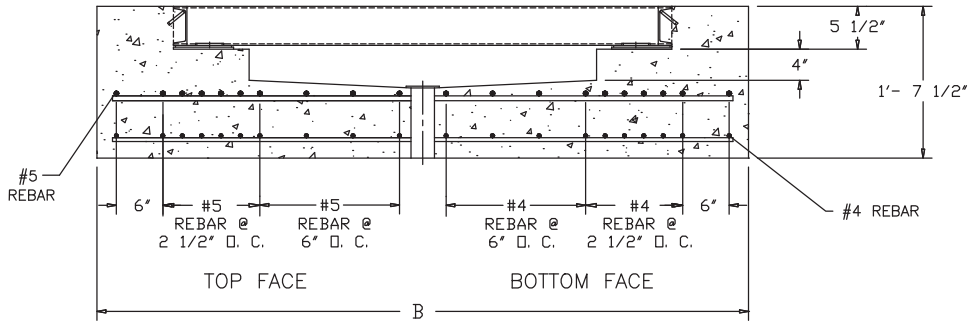


B-B VIEW

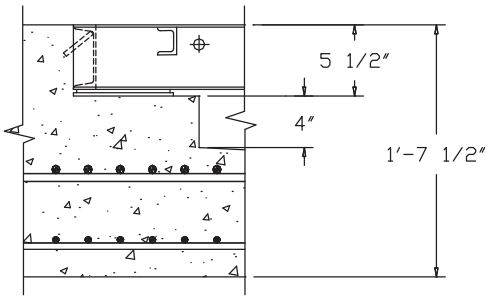
20K Heavy Capacity FS Installation Drawing



B-B View



A-A View



C-C View

20K Heavy Capacity FS Installation Notes

1. A Pit Frame is a one-piece welded unit (no field welding required).
2. The Pit Dimensions are determined by the Pit Frame accessories.
   - At least 9” thickness of concrete is required for Pit Floor in non-hostile applications.
   - At least 10” concrete floor with minimum 1” bottom slope (as shown) is required if drainage is required for hostile application. A 4” diameter drain is recommended.
3. A soil bearing pressure of at least 1,500 lbs. per square foot is required. The corner pier should be designed to support at least two thirds of the total capacity of the scale.
4. A ¾” diameter conduit for scale interface cable is recommended. The Pit Frame is arranged with a 1 1/8” diameter hole for cable exit. Locate conduit to match hole location.
5. With the frame level ± 1/8” in both directions and secured, concrete is filled in around the outside of the Pit Frame and Pit Floor to form the scale pit. It is recommended that f_c=4000 PSI and 3” to 4” slump concrete be used.
6. When the concrete has reached a minimum of 2000 psi, pull the interface cable through the conduit to the instrument location, and lower the platform assembly into position.
7. With the scale in the place, the clearance around the edge of the platform and pit coping should be ¼” to 3/8”.

Disclaimer

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