



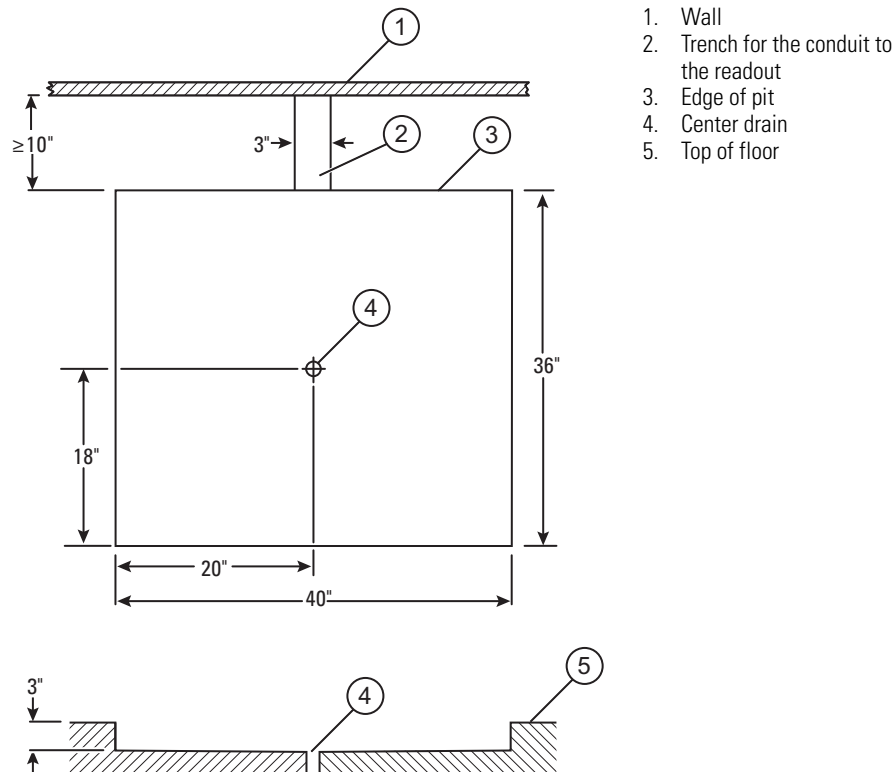
## Rough-in frame and flush-mount panel installation instructions

The Welch Allyn In-Floor Scale models 6102 and 6154 are installed into the floor with a special rough-in frame. This frame is then cemented into place. A pit must be provided for the frame and the scale. The pit can be constructed when the floor is poured, or it can be cut into an existing floor.

**Note** Make sure that you use non-shrinking concrete when installing the frame.

### Model 6102 pit preparation

Reference the following drawing for recommended measurements for scale model 6102.



#### Use the following recommendations to prepare the pit:

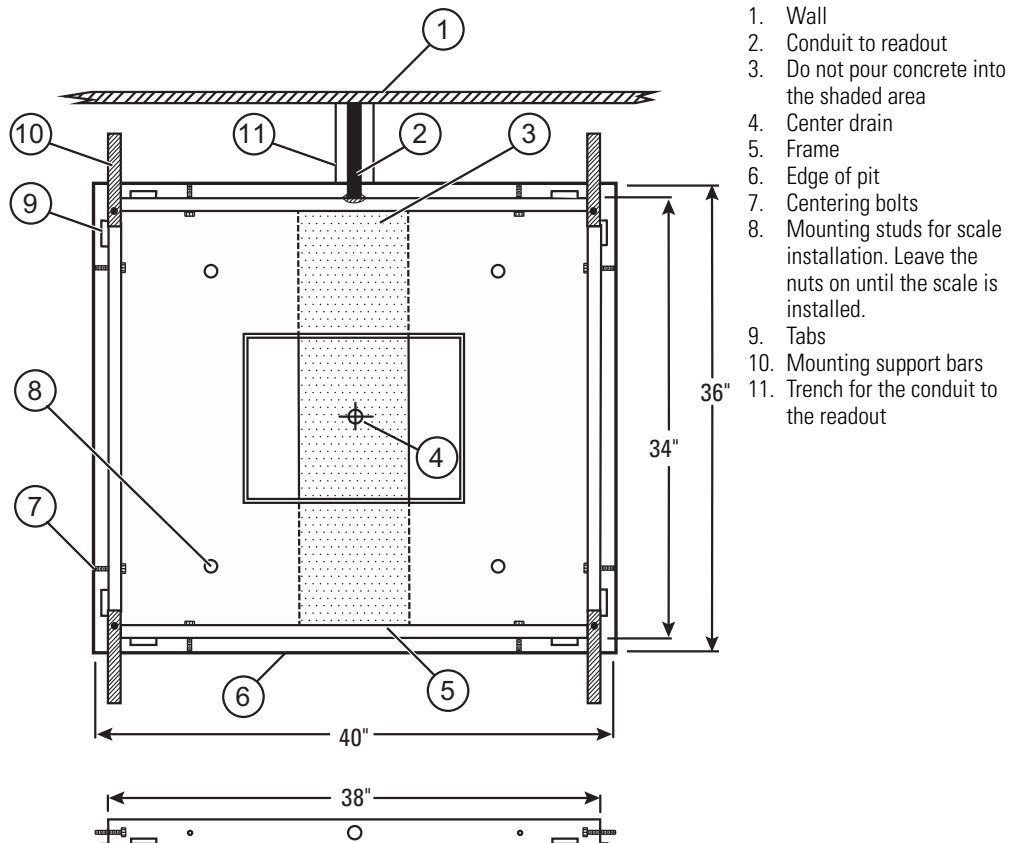
- Measure at least 10 inches from the wall to the top of the pit. A 10-inch distance is recommended for floors with 12-inch floor tiles.
- The pit must be 3 inches deep and 36 inches by 40 inches wide. This allows for a 1-inch clearance around each side of the frame.
- It is recommended that you install a drain to allow liquids to escape. A floor drain near the scale could serve the same purpose. Make sure the concrete around the drain is properly graded.



**Caution** Do not install a J trap in the drain line. Since the pit drain is not normally used, the water in the J trap would eventually evaporate and allow sewer gas to escape.

- A cable from the scale base runs in a conduit through the floor up inside the wall to the scale readout box. A trench 3 inches deep by 3 inches wide is required for the cable conduit. Install the trench from the center of the side closest to the wall to the inside of the wall.

## Model 6102 frame installation



1. Attach the plastic conduit and the connector to the cable entry hole on the long side of the frame. All unused holes should be left open to allow some concrete to seep into the holes to provide better anchoring.

**Note** The length of flexible conduit and connectors supplied with the frame kit is recommended for use. Some situations or codes may require metal conduit. If so, 1-inch conduit should be used.

2. Install the long eight centering bolts into the threaded holes in all four sides of the frame. These must be installed from the inside. Screw them into the frame so that approximately 1/4 to 1/2 inch protrudes out of the side of the frame.
3. Loosen the screws of the support bars, rotate the bars 180 degrees, and tighten them again. Make sure that the bars extend out as shown. Make sure that the mounting screws are tight to ensure a solid, level installation.

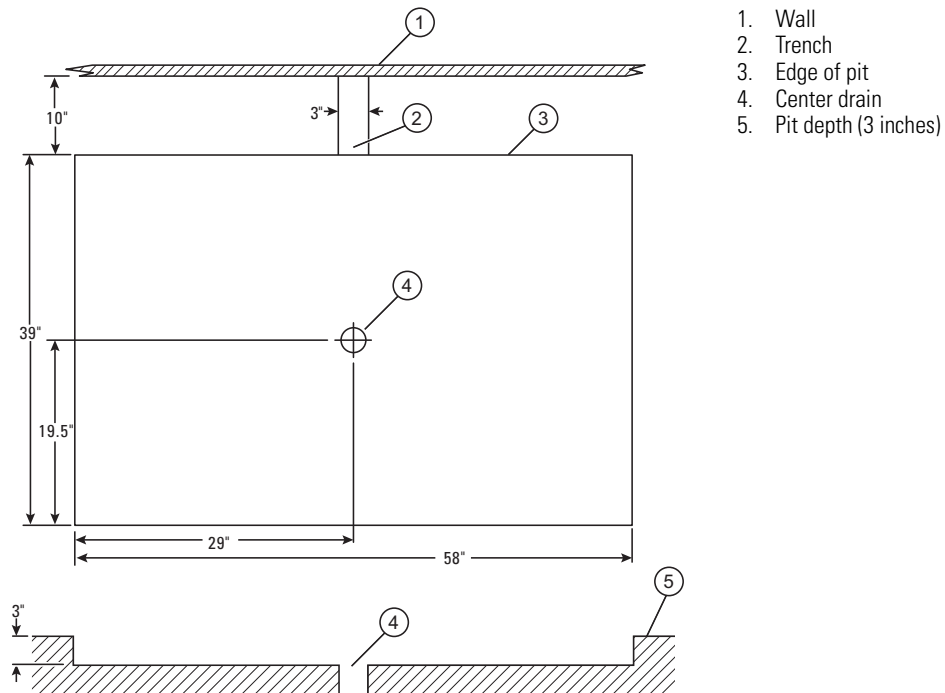
**Note** Do not place the frame in the pit yet.

4. Place non-shrinking concrete about 1 inch to 2 inches deep in the bottom of the pit in the areas shown in the drawing above. If a drain is provided in the pit, make sure not to block it.
5. With the four support bars in place and tightened securely, lower the frame into the pit and force it into the wet concrete. Use the following recommendations to ensure a proper installation:

- Push the frame firmly down so that the support bars rest on the unfinished floor or shims to the height of the finished floor.
  - Move the frame around to position it in the center of the opening. Excess concrete should flow out and around the frame for a secure fit.
6. Use the eight long centering bolts to align and center the frame in the pit. Use the following recommendations to ensure a proper installation:
    - Make sure the frame doesn't lift up when tightening the bolts.
    - Make sure the frame rests on all the support bars even after tightening.
    - Make sure the support bars are tightly bolted to the frame.
    - Make sure the frame is still level and flush with the desired height on the floor.
    - Press the frame down into the wet concrete and tighten the centering bolt against the walls of the pit. This prevents the frame from moving while additional concrete is added.
  7. Pour and trowel concrete around the sides of the frame to secure it. Use the following recommendations to ensure a proper installation:
    - Make sure concrete is visible in the center opening of the frame. If it isn't, push some under the frame from the center opening to the left and right.
    - Make sure to keep the central portion free of wet concrete.
    - Make sure to use an adequate amount of concrete under the right and left sides of the frame. The entire weight of the scale is supported on this concrete.
    - Make sure there is a sufficient amount of concrete under the frame, but make sure that the top of the frame is flush with the floor level.
  8. Continue to fill the areas between the frame and the pit walls. Use the following recommendations to ensure a proper installation:
    - Make sure to cover the conduit.
    - Make sure to fill in and trowel the concrete so it is smooth, flush, and level with the raw floor.
    - Make sure no concrete gets into the inside of the frame. This could interfere with the installation of the scale platform, when the scale platform is installed later.
    - A small amount of concrete that enters the holes in the corners is desirable in that it assists in anchoring the frame to the floor.
    - Make sure the mounting surface on the stainless steel studs are clean and free of debris or concrete. The scale platform will be mounted to these studs.
  9. Once the concrete has partially set, remove and discard the four support bars. Additional concrete can be added to the area that the support bars covered.
  10. Allow the concrete to cure for at least 24 hours.
  11. Protect the pit and the frame during building construction with a plywood cover or other suitable protection.
  12. After the concrete has cured, the floor covering can be installed. Make sure that the flooring is trimmed flush with the inside edge of the frame to prevent it from interfering with the scale platform.

## Model 6154 pit preparation

Reference the following drawing for recommended measurements.



### Use the following recommendations to prepare the pit:

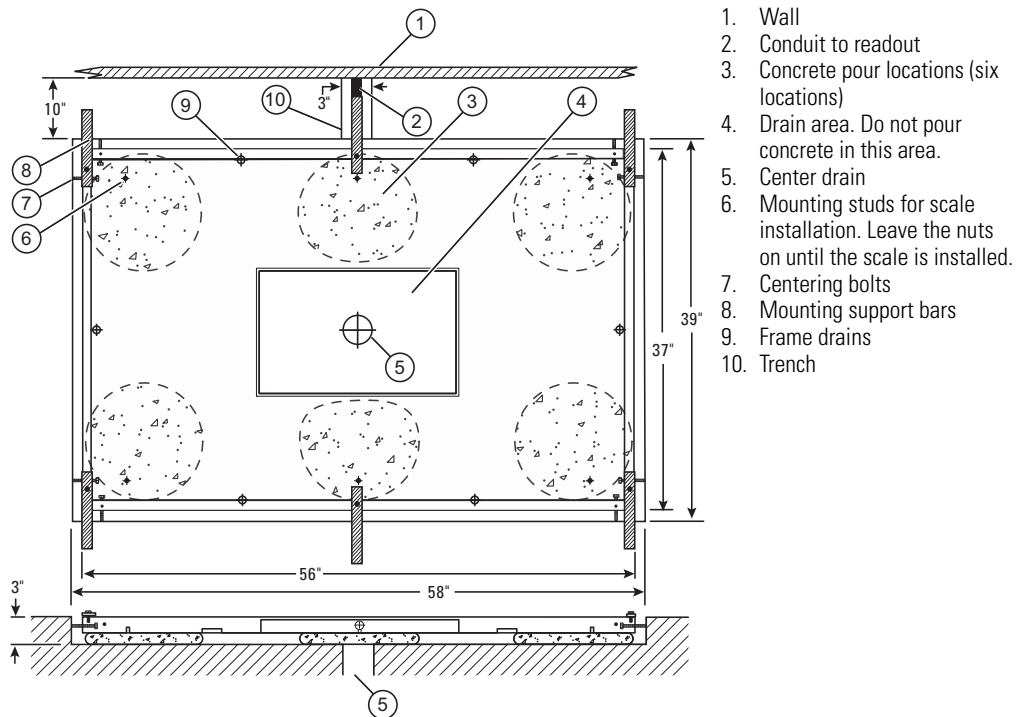
- Measure at least 10 inches from the wall to the top of the pit. A 10-inch distance is recommended for floors with 12-inch floor tiles.
- The pit must be 3 inches deep and 39 inches by 58 inches wide. This allows for a 1-inch clearance around each side of the frame.
- It is recommended that you install a drain to allow liquids to escape. A floor drain near the scale could serve the same purpose. Make sure the concrete around the drain is properly graded.



**Caution** Do not install a J trap in the drain line. Since the pit drain is not normally used, the water in the J trap would eventually evaporate and allow sewer gas to escape.

- A cable from the scale base runs in a conduit through the floor up inside the wall to the scale readout box. A trench 3 inches deep by 3 inches wide is required for the cable conduit. Install the trench from the center of the side closest to the wall to the inside of the wall.

## Model 6154 frame installation



1. Attach the plastic conduit and the connector to the cable entry hole on the long side of the frame. All unused holes should be left open to allow some concrete to seep into the holes to provide better anchoring.

**Note** The length of flexible conduit and connectors supplied with the frame kit is recommended for use. Some situations or codes may require metal conduit. If so, 1-inch conduit should be used.

2. Install the long eight centering bolts into the threaded holes in all four sides of the frame. These must be installed from the inside. Screw them into the frame so that approximately 1/4 to 1/2 inch protrudes out of the side of the frame.
3. Loosen the screws of the support bars, rotate the bars 180 degrees, and tighten them again. Make sure that the bars extend out as shown. Make sure that the mounting screws are tight to ensure a solid, level installation.

**Note** Do not place the frame in the pit yet.

4. Place a quantity of non-shrinking concrete about 1 inch to 2 inches deep in the bottom of the pit in the areas shown in the drawing above. If a drain is provided in the pit, make sure not to block it.
5. With the six support bars in place and tightened securely, lower the frame into the pit and force it into the wet concrete. Use the following recommendations to ensure a proper installation:
  - Push the frame firmly down so that the support bars rest on the unfinished floor or shims to the height of the finished floor.
  - Move the frame around to position it in the center of the opening. Excess concrete should flow out and around the frame for a secure fit.
6. Use the eight long centering bolts to align and center the frame in the pit. Use the following recommendations to ensure a proper installation:
  - Make sure the frame doesn't lift up when tightening the bolts.
  - Make sure the frame rests on all the support bars even after tightening.
  - Make sure the support bars are tightly bolted to the frame.
  - Make sure the frame is still level and flush with the desired height on the floor.

- Press the frame down into the wet concrete and tighten the centering bolt against the walls of the pit. This prevents the frame from moving while additional concrete is added.
7. Pour and trowel concrete around the sides of the frame to secure it. Use the following recommendations to ensure a proper installation:
    - Make sure concrete is visible in the center opening of the frame. If it isn't, push some under the frame from the center opening to the left and right.
    - Make sure to keep the central portion free of wet concrete.
    - Make sure to use an adequate amount of concrete under the right and left sides of the frame. The entire weight of the scale is supported on this concrete.
    - Make sure there is a sufficient amount of concrete under the frame, but make sure that the top of the frame is flush with the floor level.
  8. Continue to fill the areas between the frame and the pit walls. Use the following recommendations to ensure a proper installation:
    - Make sure to cover the conduit.
    - Make sure to fill in and trowel the concrete so it is smooth, flush, and level with the raw floor.
    - Make sure no concrete gets into the inside of the frame. This could interfere with the installation of the scale platform, when the scale platform is installed later.
    - A small amount of concrete that enters the holes in the corners is desirable in that it assists in anchoring the frame to the floor.
    - Make sure the mounting surface on the stainless steel studs are clean and free of debris or concrete. The scale platform will be mounted to these studs.
  9. Once the concrete has partially set, remove and discard the six support bars. Additional concrete can be added to the area that the support bars covered.
  10. Allow the concrete to cure for at least 24 hours.
  11. Protect the pit and the frame during building construction with a plywood cover or other suitable protection.
  12. After the concrete has cured, the floor covering can be installed. Make sure that the flooring is trimmed flush with the inside edge of the frame to prevent it from interfering with the scale platform.

## Flush readout panel enclosure installation

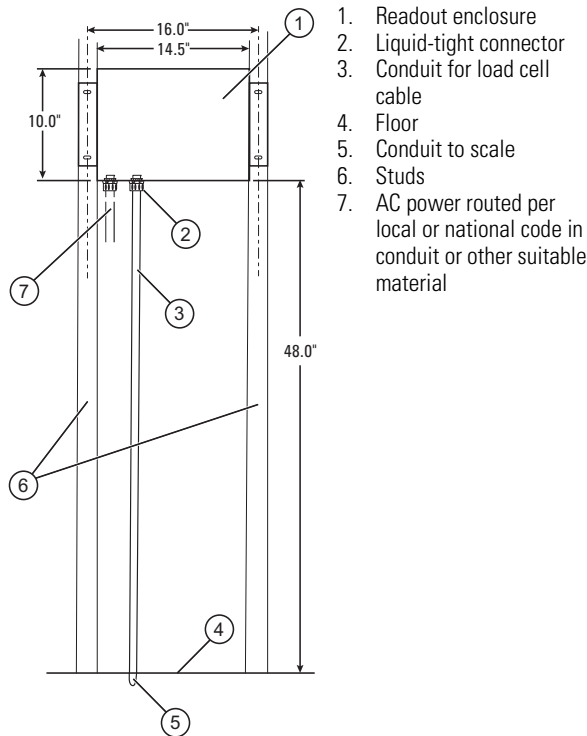
The flush readout enclosure is designed to mount in the wall between the studs. The enclosure may be installed in a new wall during construction, or in an existing wall by cutting a hole between the studs.



**WARNING** Make sure that you follow local and national electric codes when connecting to AC power.

**Note** Make sure that you locate the studs in the wall before installation.

**Note** Make sure that an AC power source is located near the proposed enclosure location.



1. Measure up 48 inches from the floor or to a desired height for the bottom of the readout cabinet.

**Note** The buttons and the LED display are approximately 7 inches above the bottom of the readout enclosure.

2. If you are installing the enclosure into an unfinished area, skip to Step 3. If you are installing the enclosure into an existing wall, perform the following steps:
  - a. Cut a hole 10 inches high from the height determined in Step 1.
  - b. Cut the hole 17.5 inches wide, making sure to expose both studs from the enclosure mounting angles.
  - c. Cut an additional access opening in the wall to install the conduits. Plan for the wires to extend 6 inches to 8 inches inside the enclosure.

**Note** Power can also be brought down through the top of the conduit hole if that is more convenient.

3. Place the enclosure into the hole with the four conduit holes on the bottom. Use a level to ensure that the readout is installed at the proper angle.

4. Use four screws (customer supplied) to fasten the cabinet to the studs.
5. Route the loadcell conduit up through the wall from the scale pit to the enclosure.
6. Fasten the conduit to the right-side hole in the enclosure using the liquid-tight connector.

**Note** The center conduit hole in the enclosure is reserved for options such as data output to a computer or a remote printer.

7. Finish off the wall area around the hole to cover the mounting angles.
8. The readout panel is installed when the scale and readout electronics are installed.

The panel measures 14 7/8 inches wide by 11 inches high. This panel overlaps the readout enclosure by 3/8 inch on each side. It is not wider than the mounting angles. The front panel will be positioned on top of the wall surface, which leaves a gap of the thickness of the wall between the panel and the enclosure.

