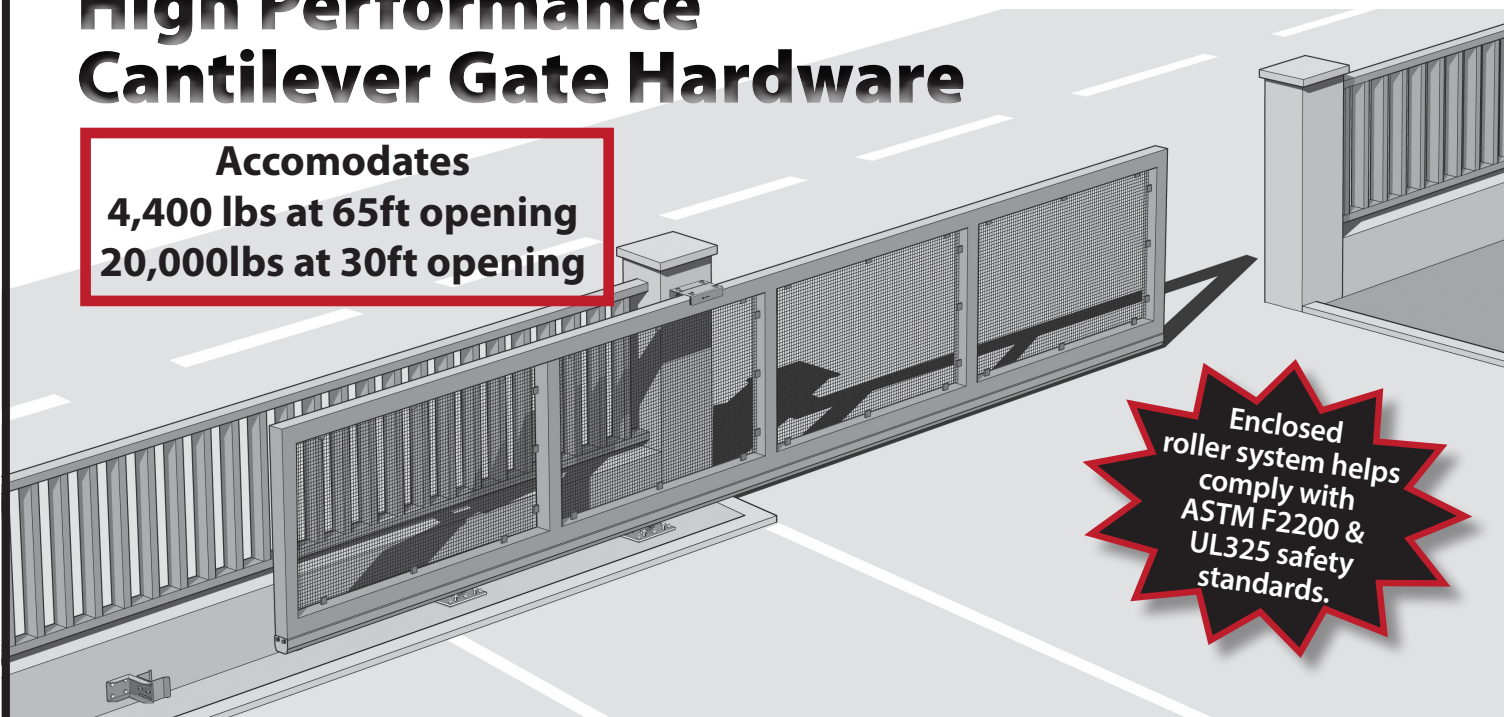


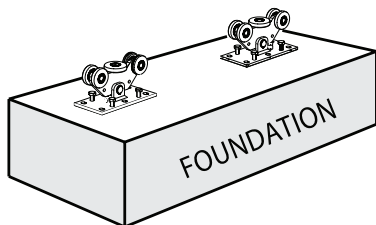
High Performance Cantilever Gate Hardware

**Accommodates
4,400 lbs at 65ft opening
20,000lbs at 30ft opening**



Foundation Options: Pad, Post, or Pier

PAD MOUNT



In general, Comunello recommends installing cantilever hardware on a concrete pad. This gives your gate a solid foundation that will help it to last for years. Using a single concrete pad helps in two ways:

1. Puts both carriages on a single foundation where they will not misalign over time
2. Allows for shorter tail sections by providing the counter balance weight needed for a stable gate

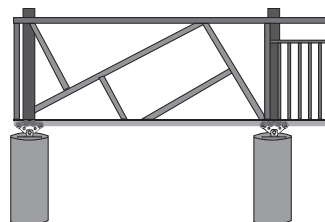
The reason most gates get harder to open year after year is wheel misalignment. When the support wheels are mounted on posts, they begin to mis-align as the posts move. Whether it's because of sandy soil, freeze/thaw cycles, or just the weight of a cantilever gate hanging off them, gate posts move over time. And that movement creates friction that makes the gate harder to open.

Not all installations allow for the use of a concrete pad, and not all installers want to pour a concrete pad. You have two other options to install Duragates:

POST



PIER



Concrete Pad Considerations

The concrete pad dimensions given in the configurator are based on the total gate length (LT) and weight (P) determined by the configuration. The concrete pad acts as the counterbalance weight for the gate, allowing for shorter tail sections than traditional hardware. Two important factors to consider about the Pad are:

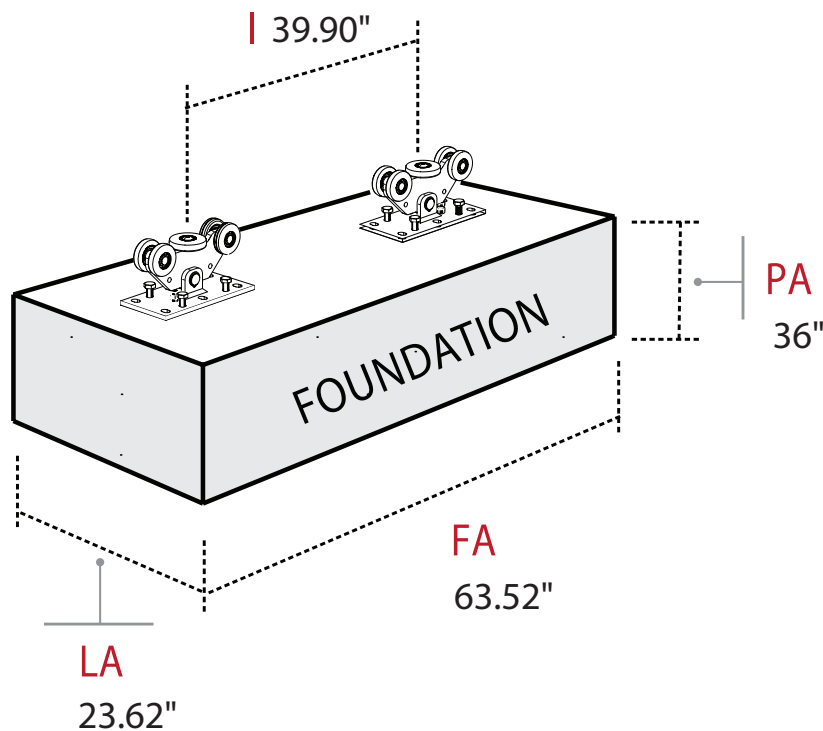
1. The pad dims given are long enough to support the carriages and heavy enough to act as the counterbalance, but do not take the frost line into consideration.
2. The pad **MUST** be dug below the frost line to prevent heaving caused by the freeze thaw cycle.

The pad dimensions determine the volume of concrete necessary to provide a counterweight. If you alter the length, width, or depth of the pad, make sure you do not reduce the total volume:

The amount of concrete needed, in YARDS = $(LA * P * FA) / 46,656$

For example, for a foundation, 63" long x 24" wide x 36" deep, it would need 1.2 yards of concrete.

Yards = $(63 * 24 * 36) / 46656 = 1.2$ yards



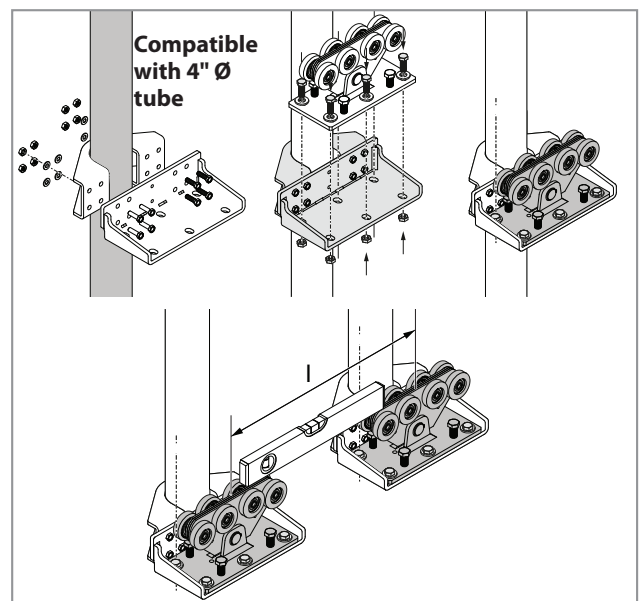
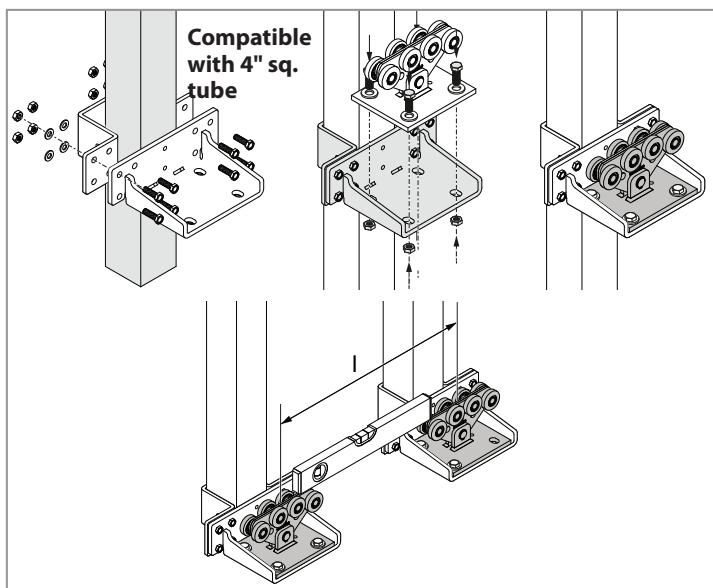
Alternate carriage mounting options

We recommend mounting cantilever hardware on a single pad that has been poured into the ground below the frost line as the best practice for cantilever hardware systems. This permanently ties the two carriages together on one solid foundation for permanent alignment and significantly reduces independent movement of the carriages.

The carriages may be post mounted or pier mounted instead of pad mounted, and if done properly, it will not significantly impact the performance of the gate, although it will likely shorten the service life of the gate.

Post Mount Installation Suggestions

In a typical post mount installation, you will set the posts into 16" to 26" diameter holes and mount the carriages to brackets bolted or welded to the posts. Post brackets are available for the Mini and Piccolo systems (steel and aluminum) and are designed to fit either 4" round or 4" square posts.



The hole diameter and depth are determined by the configured pad size. You need half the amount of concrete poured into each post hole to carry the weight of the gate without failing.

The recommend installation method is to mount the post brackets to fall-over posts installed on the opposite side of the gate from the fence line. Mount the post brackets as close to the ground as possible. The bottom of the bracket plate should be within 2" of the ground level. When possible it is best to let the bottom plate rest on the concrete pier holding the post.



Setback from the Opening

- The "front" Gate mounting post should be set back 13" from the edge of the opening to the center of the post.
- The "rear" gate mounting post should be set so the center to center distance between the front and rear posts is the interaxis (i) distance from the configuration.

Setback from the Fence line

1. For Post Brackets installed on fall-over post facing fence:
(Post Brackets mounted on fall-over posts on the opposite side of the gate)
- Since Duragates are shorter, we use the concrete as part of the gate's counterweight. You need to use the amount of concrete as shown in a minimum length configuration to hold the gate in the ground. Calculate the size of the post holes needed to carry half the the weight of the foundation using the formula:

$$\text{Volume(hole)} = \pi r^2 h$$

Or use an online calculator like this one:

<https://www.calculatorsoup.com/calculators/construction/concrete-calculator.php>

Continuing the example above, for a foundation 63" long x 24" wide x 36" deep, you would need two holes 26" diameter and 51" deep.

- Dig the holes and set the posts in concrete equal to the volume specified by the configuration. gate.
- Dig the hole to a depth below the frost line.
- Connect the two carriage support posts mechanically in two positions, if possible. This keeps the two carriages from moving independently in the direction of the gate and reduces misalignment over time.

Gate Profile	Post Setback for UL325
2"	6-1/2"
2-1/2"	6-3/4"
3"	6-7/8"
4"	7-3/8"
6"	8-3/8"



Here's an example of carriages mounted on post brackets instead of a pad:

Pier Mount Installation Suggestions

In a pier mount installation, you would pour two separate concrete foundations, typically 16" to 26" diameter holes dug to a min of 48", or below the frost line if it is deeper. The carriage is mounted directly on the concrete pier, and the rest of the installation is the same.

- Place the "front" pier just behind the end post at the opening so the carriage can set about 10 inches behind the post.
- Place the "back" pier at the position specified by the configuration to match the carriage spacing (I).
- Since DuraGates are shorter, we use the concrete as part of the gate's counterweight. You need to use the amount of concrete as shown in a minimum length configuration to hold the gate in the ground. Calculate the size of the post holes needed to carry half the the weight of the foundation using the formula:

$$\text{Volume(hole)} = \pi r^2 h$$

Or use an online calculator like this one:

<https://www.calculatorsoup.com/calculators/construction/concrete-calculator.php>

Continuing the example above, for a foundation 63" long x 24" wide x 36" deep, you would need two holes 26" diameter and 51" deep.

- Dig the holes and set the posts in concrete equal to the volume specified by the configuration gate.
- Dig the hole to a depth below the frost line.

