

# Ground Control Systems® Varsity® Bike Dock (DV-215) Installation Instructions For Surface Mounting

## REQUIRED FOR INSTALLATION

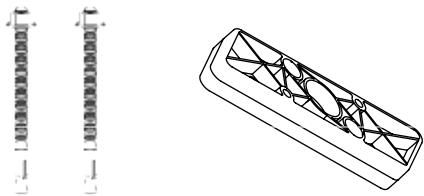
1. Gloves
  2. 3/8" Hammer Drill and Drill Motor
  3. 9/16" & 3/4" Deep Well Socket and Driver
  4. Small vacuum and bore brush (pipe cleaner), or compressed air
  5. Hammer or Rubber Mallet
  6. \*Torque Wrench-250 ft. pounder
  7. \*Protractor
- \*recommended

**NOTE:** These instructions are for installation of the Varsity® Bike Dock on CONCRETE ONLY, using the WAK-215 wedge anchor kit.

**CAUTION:** Gloves MUST be worn when installing a Galvanized Varsity® Bike Dock.

1. Remove the wedge anchor kits (WAK 215)\* from the Varsity® box or locate the kits if shipped separately.

\*WAK-215 Anchor kits sold separately. Contact Ground Control for more info.



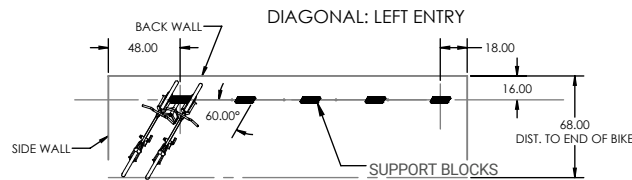
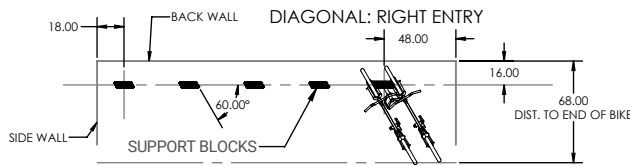
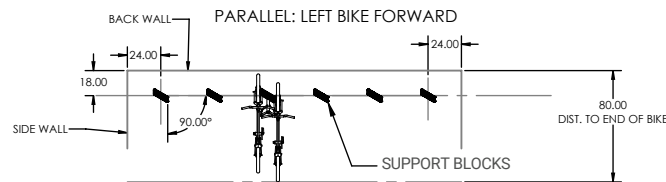
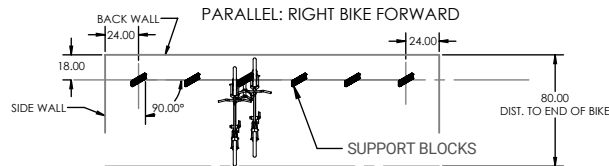
## WAK-215

Items Included:

1. Nylon Support Block QTY. 1
2. SS 3/8" wedge anchors X 5" long QTY. 2
3. SS 3/8-16 Nut QTY. 2
4. SS 3/8" washer QTY. 2

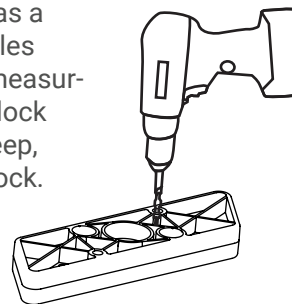
2. Begin the installation by marking the location of each of the Varsity® Bike Docks. Follow the layout instructions below or, if applicable, the drawings provided to you.

With the locations of the docks marked, set the Support Block in place at each installation location. Orient the Block as shown below, according to your dock configuration.

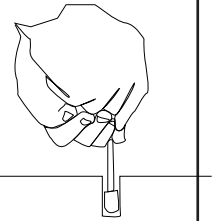


3. Using WAK-215 Support Block as a drilling template, begin drilling holes with a 3/8" Hammer Drill. When measuring from the top of the Support Block the holes should measure 5.5" deep, measured from top of support block.

**TIP:** Place one foot between the holes on the support block to prevent movement.

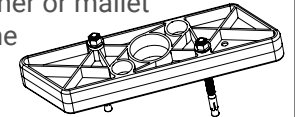
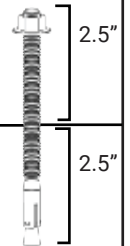


4. Remove the Support Block to clean out and around the holes. To clear debris from the hole, use a vacuum and small brush or, use a blast of air.

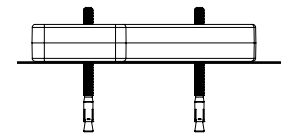


**NOTE:** Ensure the holes are a minimum of 2-3/4" deep

5. After removing the nut and washer, insert the wedge anchors roughly 3/4" into previously drilled holes. Replace the Support Block over the anchors. **NOTE:** Proper placement of the support block will prevent bending and help guide the anchors into each hole—**double check that the block is correctly oriented.** Replace the nuts and washers after ensuring the block's orientation. Continue driving the anchors into the holes, using a hammer or mallet if necessary, until the washer meets the support block.



6. Remove the nut and washer from the top of the anchor. Do this for both anchors.



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7. Remove the contents from the box and make sure all the components are there.

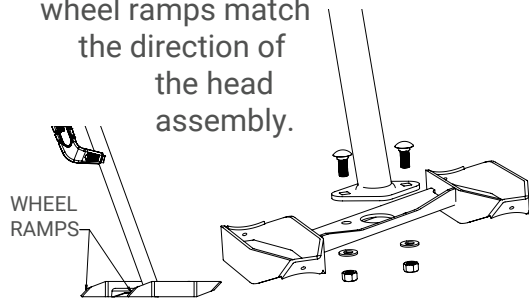
- Items Included:**
1. Head Assembly
  2. Base Plate
  3. 1/2" Carriage Bolt (2)
  4. Washers (2)
  5. Nuts (2)

DV215



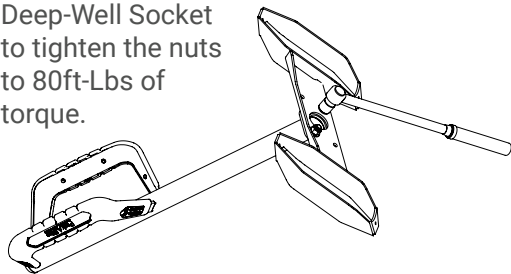
8. Attach the Head Assembly to the Base Plate with the two 1/2" carriage bolts.

**NOTE:** make sure wheel ramps match the direction of the head assembly.

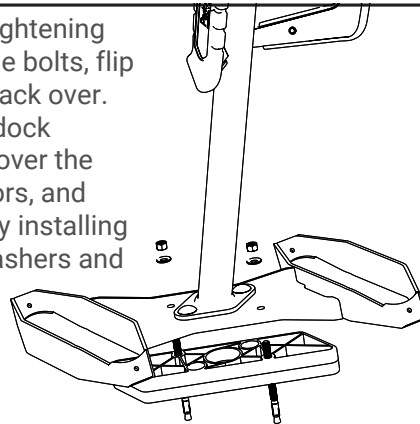


9. Flip the dock over and attach the washers and nuts to the carriage bolts located on the underside of the base.

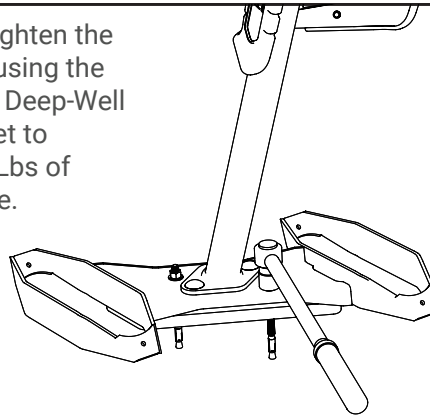
Use the 3/4" Deep-Well Socket to tighten the nuts to 80ft-Lbs of torque.



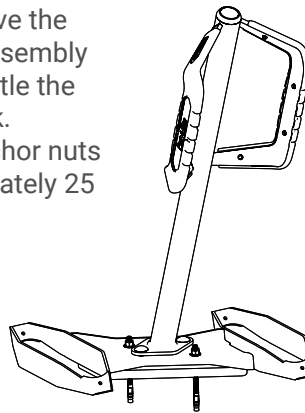
10. After tightening the carriage bolts, flip the dock back over. Place the dock assembly over the 3/8" anchors, and secure it by installing the two washers and nuts.



11. Tighten the nuts using the 9/16" Deep-Well Socket to 30ft\_Lbs of torque.



12. Bump and move the top of the head assembly around to help settle the Varsity® Bike Dock. Re-tighten the anchor nuts again to approximately 25 to 30 ft\_Lbs.



**NOTE:** Once the Dock is installed, we recommend peening over the top of the threads to help deter possible theft of the dock or the bike and the dock. Use of a thread locking compound such as loctite 294 is also acceptable.

High security anchor options are available. Please contact Ground Control at 800-630-7225.

For questions or concerns regarding the assembly and installation of the Varsity® Bike Dock, please call Ground Control at 800-630-7225 or email us at [info@groundcontrolsystems.com](mailto:info@groundcontrolsystems.com).

A short demonstration video of a Varsity® Bike Dock Installation can be viewed on our website at [www.groundcontrolsystems.com](http://www.groundcontrolsystems.com) or on our Youtube channel at [www.youtube.com/user/Parkabike](http://www.youtube.com/user/Parkabike). Other videos demonstrating different configurations of the dock can be also be viewed for ideas before installation.

These installation instructions are intended for the install of the Varsity® Bike Dock in concrete only. For information on installing in other base materials, including asphalt or aggregate, please call or email us.

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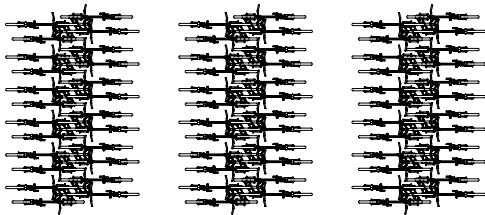
# Ground Control Systems® Varsity® Bike Dock (DV-215) Layout Instructions

## REQUIRED FOR LAYOUT

1. Chalk Line
2. Measuring Tape

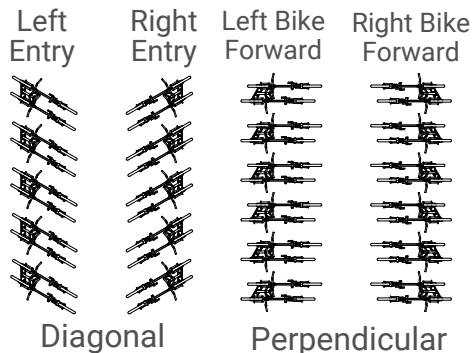
**NOTE:** These instructions are for Configuring the layout of the Varsity® Bike Dock (DV-215).

The Varsity® Bike Dock is highly versatile, in order to meet your high density demands.



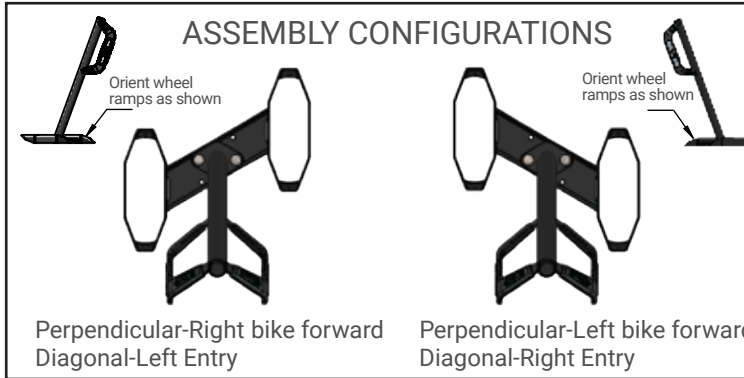
Ultra-high density rows

The Varsity® Bike Dock has four configurations: Left and Right Entry Diagonal, Left bike and Right bike forward Parallel.



Diagonal

Perpendicular



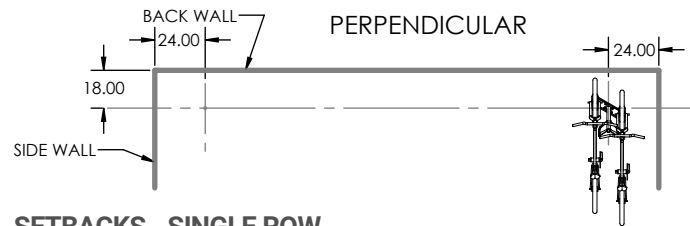
Perpendicular-Right bike forward  
Diagonal-Left Entry

Perpendicular-Left bike forward  
Diagonal-Right Entry

## SETBACKS - SINGLE ROW

### Perpendicular Configurations

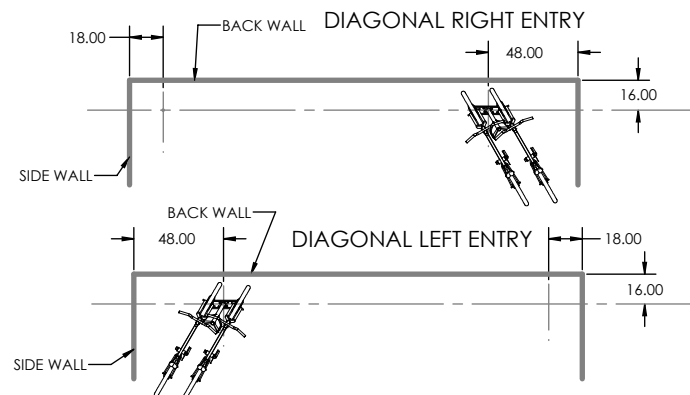
Back Wall: 18" to center of Dock  
Side walls: 24" to center of Dock



## SETBACKS - SINGLE ROW

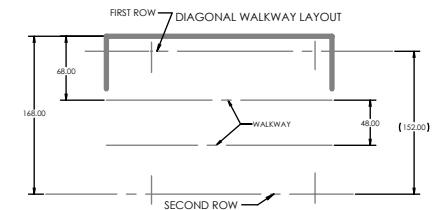
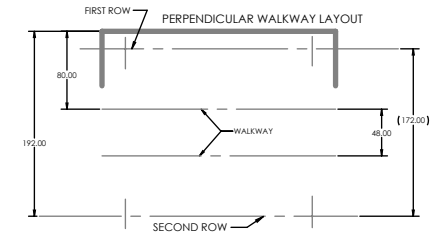
### Diagonal Configurations

Back Wall: 16" to center of Dock  
Side walls: 18" or 48" to center of Dock



Mark the row line using the chalk line. Mark the ends according to the setbacks. Measure the length of the usable row. Equally space the location of the docks, using spacing found from the following table.

If making **multiple rows**, a walkway, or load zone is needed. Ground control recommends a minimum of 48". Please check your local ordinances for walkway minimum distances.



**NOTE:** Two diagonal rows can fit in a width of 15' 4", while two perpendicular rows can fit in a width of 17' 4" using 48" walkways.

Dock spacing is driven by the aisle spacing between bikes: 24" meets APBP guidelines, while 18" is the minimum recommended by Ground Control.

Table 1: Dock Spacing On Center

	WIDTH OF AISLE		
	24"	21"	18"
DIAGONAL	44.5"	41"	37.5"
PERPENDICULAR	38"	35"	32"

Mark the locations of each of the docks onto the row line.

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# GROUND CONTROL SYSTEMS™ Paver/Asphalt Anchor Kit (PAK-215) Installation Instructions

## REQUIRED FOR INSTALLATION

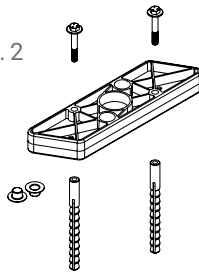
1. Safety glasses, goggles, dust mask and ear plugs
2. 3/8" Hammer Drill with 5/8" X 12" bit, and 3/8" bit
3. Epoxy mixing tools (plunger and mixing nozzle)
4. Torque wrench and matching 9/16" socket
5. Disposable towels
6. Compressed air

NOTE: These instructions are for installation of Paver/Asphalt anchors in ASPHALT OR PAVERS ONLY.

CAUTION: Be sure to wear safety protection when drilling holes.

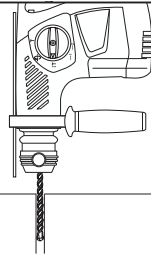
In each PAK-215 Kit:

1. P/A Anchors 3/8" X 16-UNC - QTY. 2
2. Bolt - 3/8 X 16 UNC X 2.5" - QTY. 2
3. Washer - 3/8" - QTY. 2
4. Support Block - QTY. 1
5. Caplugs - QTY. 2
6. Polybag - QTY. 1



\*Epoxy sold separately  
40mL recommended per anchor

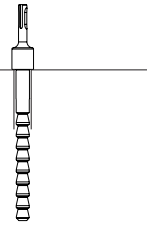
1. Review your layout drawing and verify setbacks (according to local ordinances, if applicable) to determine the installation location and orientation of the Varsity® Dock. Using the support block as a drilling template, mark or pilot drill (3/8" drill bit) to locate the two anchor holes. Remove the block. Drill the 5/8" anchor holes to a depth of 8".



To prevent cracking of the paver brick, it is recommended to drill into the center of the brick. Moving the dock to ensure both holes are in the center is advised.

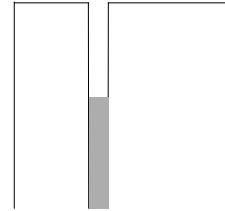
Hint: using tape to mark the depth on the drill bit helps to ensure the proper depth has been reached.

2. Sweep away any excess dirt and dust. Use the compressed air to blow the hole clean. Dry-fit the anchor into the hole using the install tool to ensure the proper clearance has been achieved.



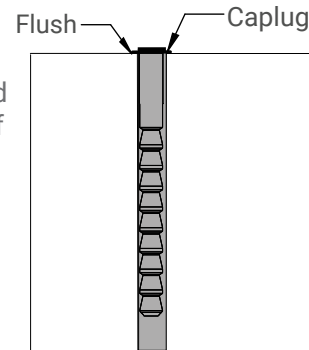
Attach the installation tool to the hammer drill along with the anchor.

3. Prepare the epoxy: Mix and inject/pour into the hole. Fill the hole with approximately 40mL of mixed epoxy.

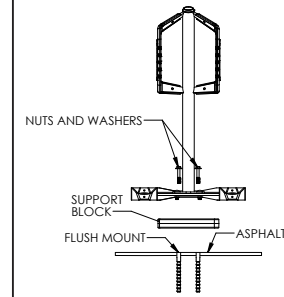


4. Slowly plunge the anchor into the hole while spinning it. If there is little-to-no resistance, angle the drill slightly, and rotate in a circular motion while continuing to spin the anchor until flush with the surface of the asphalt. Clean away any excess epoxy with a disposable towel.

5. Remove the installation tool and insert the caplug and make sure the top of the anchor remains flush to the surface of the concrete. Wipe away the excess epoxy again if necessary. Repeat this step for the other anchor hole.

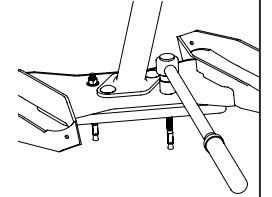


6. Allow the epoxy to fully cure, according to the manufacturer's recommendation before proceeding



7. Remove the Caplug. Place the plastic Support Block over the anchors, place the fully assembled Varsity® Dock on top of it, and secure the dock to the anchors using the washers and bolts included in the anchor kit.

8. Torque the bolts to 18 ft-Lbs using the torque wrench and 9/16" socket. Bump and move the Dock to help settle it. Torque the bolts again to 18 ft-Lbs.



For questions or concerns regarding installation using Paver/Asphalt anchors, please call Ground Control at 800-630-7225 or email us at [info@groundcontrolsystems.com](mailto:info@groundcontrolsystems.com)

A short demonstration video on how to install this type of anchor can be found in our video library.

These installation instructions are intended for the install of Paver/Asphalt anchors in ASPHALT OR PAVERS ONLY. For instructions on installing a Varsity® Dock in other substrates, please contact Ground Control or download our installation instructions from our website.

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**FEATURES**

For anchoring in asphalt or paver substrate  
 Can be used for light to heavy-duty anchoring in asphalt or pavers  
 All steel anchors  
 Injection molded support block raises the dock  
 Elevated dock height aids in removal of debris  
 Support block eliminates electrolysis thereby reducing corrosion

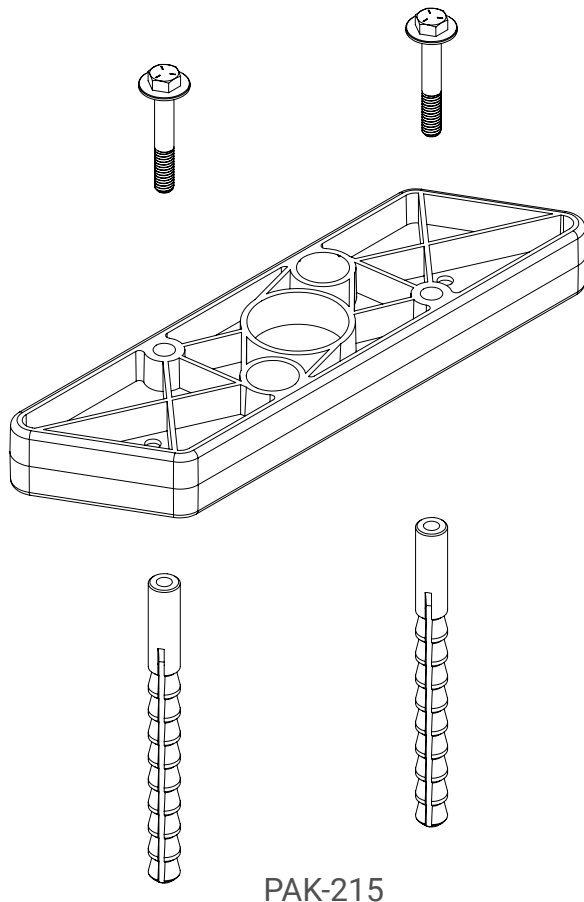
**INCLUDED IN THE KIT**

Paver/Asphalt Anchor 3/8" X 16-UNC - QTY. 2  
 Bolt - 3/8" X 16-UNC X 2.5" - QTY. 2  
 Washer - 3/8" - QTY. 2  
 Support block - QTY. 1  
 Caplugs - QTY. 2  
 Polybag - 6" X 16" - QTY. 1

**ADHESIVE OPTIONS**

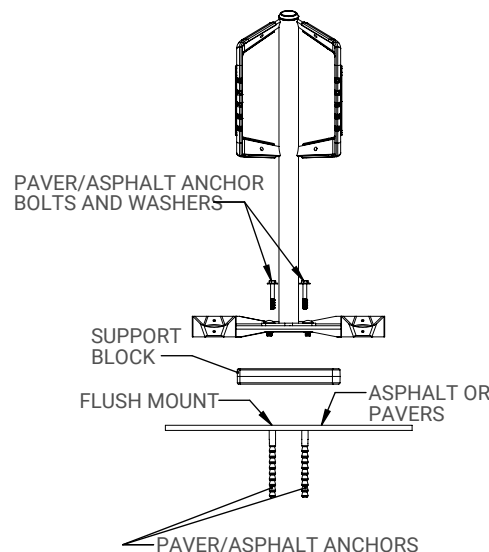
- 50mL epoxy - Single anchor\* (Epoxy sold separately)
- 400mL epoxy - 10x anchors\* (Epoxy sold separately)
- Bulk epoxy - Large projects\*\* (Epoxy sold separately)

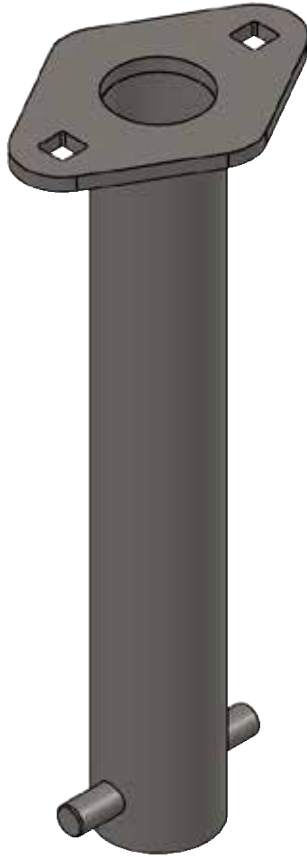
\*25-40mL required per anchor depending on substrate  
 \*\*Please call Ground Control for details



For installation details, please refer to our installation instructions, available on our website

**SURFACE MOUNT- PAVERS/ASPHALT**





SGM-215 - STINGER

**FEATURES**

- Anchors a Varsity® Dock (DV-215) directly into ground
- Eliminates pouring a slab of concrete\* - Reduces project cost
- Elevated dock height aids in removal of debris
- Prevents Varsity® Dock from contacting ground - Reduces corrosion, extending life of Dock

\*minimal concrete work required

**MATERIALS**

All steel construction

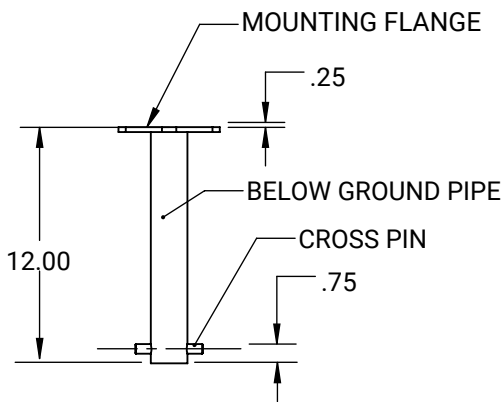
**INCLUDED IN THE KIT**

STINGER - In-Ground Mount - QTY. 1

**FINISH OPTIONS**

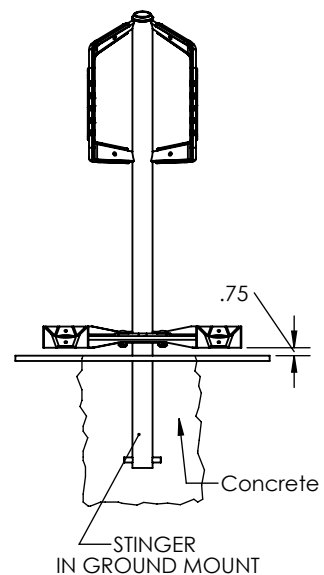
Zinc Rich Primer (Standard)

For installation details, please refer to our installation instructions, available on our website



In Ground Mount - Stinger

IN-GROUND MOUNT- STINGER



**FEATURES**

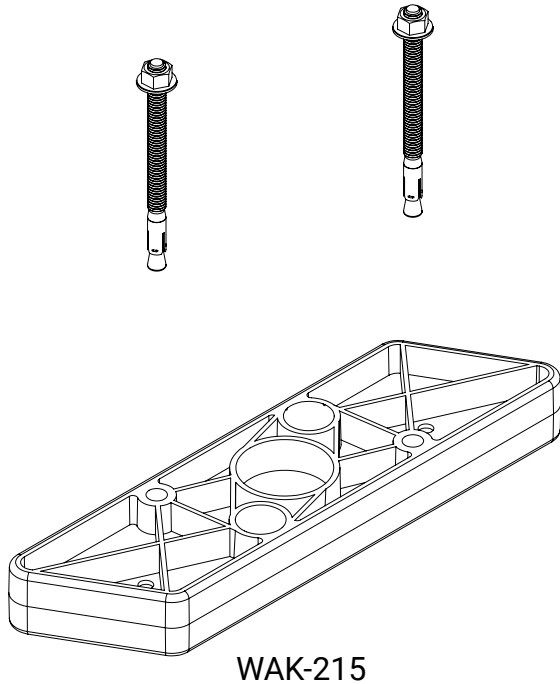
- Used on solid concrete only - cannot be used in brick or block
- Meets or exceeds G.S.A. specifications
  - FF-S-325 Group 11, Type 4, Class 1
- Can be used for light to heavy-duty anchoring in solid concrete
- All stainless steel anchors
- Injection molded support block raises the dock
- Elevated dock height aids in removal of debris
- Support block eliminates electrolysis thereby reducing corrosion

**INCLUDED IN THE KIT**

- Wedge Anchor 3/8" X 16-UNC X 5" - QTY. 2
- Support block - QTY. 1
- Polybag - 6" X 16" - QTY. 1

**TECH NOTES**

- Drill hole diameter: 3/8"
- Minimum embedment: 1 1/2"
- Pull out strength (2000 PSI concrete): 3229#
- Work load strength (2000 PSI concrete): 807#
- Shear strength (2000 PSI concrete): 4318#
- Tightening torque: 25-30 Ft-Lbs.



\*For installations details, please refer to our installation instructions, available on our website

**SURFACE MOUNT- CONCRETE**

