

# Bolt Bollard Installation Instructions

## Tools Required

Rotary Hammer/Impact Drill

Masonry Drill Bit

- *Drill Bit Selection – For each hardware options, below are the sizes of masonry drill bits required:*

- 5" x 1/2" Lag Bolt & Anchor – 1/2" x 5" or longer
- 5" x 1/2" SCREW-BOLT+™ High Performance Screw Anchor – 1/2" x 5" or longer
- POWER-STUD® HD5 Galvanized Wedge Expansion Anchor – 5/8" x 4" or longer

Industrial vacuum (like a SHOP-VAC®) or a leaf blower

Socket Wrench Set or Torque Wrench for the wedge anchor installation

## Installation Instructions (all sizes and hardware types)

- 1) Select the location where you want to install the bollard.
- 2) If installing a square base bollard, check the base for alignment with buildings, gas line, etc.. whatever you are trying to protect.
- 3) Using a smaller masonry drill bit than the one necessary for the mounting holes, drill in the center of each mounting hole, making a mark on the concrete or pavement at the location of all four (4) mounting holes.
- 4) Move the bollard and set it aside in a safe location, being careful not to erase the marks you made in the concrete or pavement.
- 5) Using a drill bit stop, or adhesive tape, on the correct size of masonry drill bit outlined above (in drill bit selection), mark the drill bit with the depth of the holes you need to drill as follows:
  - 5" x 1/2" Lag Bolt & Anchor – drill holes 4 1/2" deep
  - 5" x 1/2" SCREW-BOLT+™ High Performance Screw Anchor – drill holes 4 1/2" deep
  - POWER-STUD® HD5 Galvanized Wedge Expansion Anchor – drill holes 4" deep
- 6) At each of the four (4) locations you marked on the concrete or pavement, drill a hole to correct depth for your mounting hardware.
- 7) Using the industrial vacuum or leaf blower, remove all debris from each hole you drilled.

For installation using the 5" x 1/2" Lag Bolt & Anchor system, tap the four (4) anchor shields, one (1) into each hole you drilled. Tap the anchor shields down into the bottom of the hole.



Four (4) Anchor Shields per Bolt Down Bollard

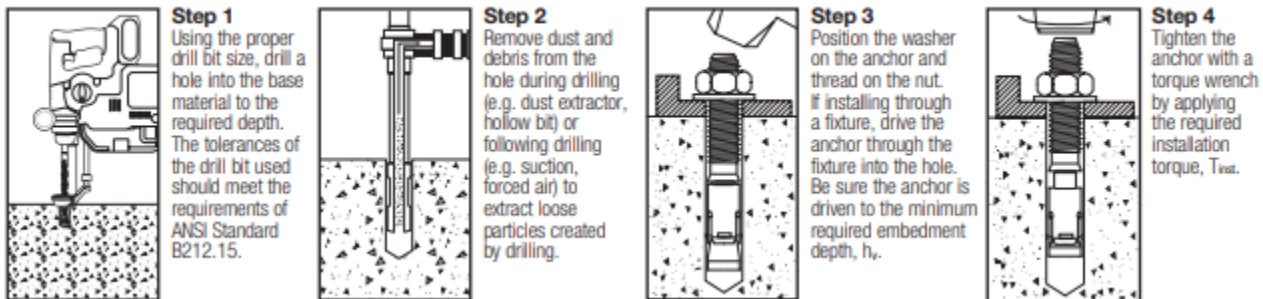
- 8) Reposition the Bolt Down Bollard so that the four (4) mounting holes line up vertically with each of the holes you drilled. Then follow the individual instructions for each of the three (3) mounting systems below:

**For installation using the 5" x 1/2" Lag Bolt & Anchor system** - Place one (1) washer, included in the bag of hardware, on the 5" x 1/2" Lag Bolt and pass it thru a hole in the mounting base. Using a 3/4" socket wrench, tighten the bolt until snug. *DO NOT OVERTIGHTEN*. Repeat for the other three (3) Lag Bolts, one (1) in each mounting hole. Once all four (4) Lag Bolts are snug, work your way around to each bolt, tightening it a little until the Bolt Down Bollard is firmly attached to the pavement or concrete. *DO NOT OVERTIGHTEN*, as this may damage the Lag Bolt and/or Shield Anchor. Your installation is now complete.

**For installation using the 5" x 1/2" SCREW-BOLT+ High Performance Screw Anchor** - Place one (1) washer 5" x 1/2" SCREW-BOLT+ and pass it thru a hole in the mounting base. Using a 3/4" socket wrench, tighten the SCREW-BOLT+ until snug. *DO NOT OVERTIGHTEN*. Repeat for the other three (3) SCREW-BOLTS, one (1) in each mounting hole. Once all four (4) SCREW-BOLTS are snug, work your way around to each bolt, tightening it a little until the Bolt Down Bollard is firmly attached to the pavement or concrete. *DO NOT OVERTIGHTEN*, as this may damage the SCREW-BOLTS. Your installation is now complete.

**POWER-STUD® HD5 Galvanized Wedge Expansion Anchor** - Place one (1) washer and one (1) nut on top a HD5 Wedge Anchor and pass it thru a hole in the mounting base with the washer and nut on top of the mounting base. Using a hammer if necessary, drive the HD5 Wedge Anchor down all the way into the 4" hole you drilled. Using a 3/4" torque wrench, tighten the nut on the wedge anchor until snug. *DO NOT OVERTIGHTEN*. Repeat for the other three (3) Wedge Anchors, one (1) in each mounting hole. Once all four (4) Wedge Anchors are snug, work your way around to each nut tightening it into the bollard is firmly attached to the pavement or concrete. *DO NOT OVERTIGHTEN*, as this may damage the Wedge Expansion Anchors.

#### **Installation Instructions for Power-Stud HD5**



Your installation is now complete.