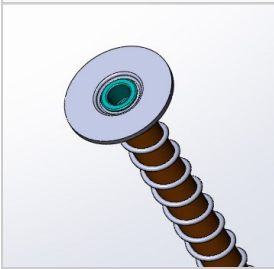




SP12-38 Asphalt Anchors Datasheet V3.7

Overview Asphalt Anchors Corp. has developed the **BoltHold™** family of anchors suitable for mounting structures to asphalt surfaces. The SP12-38 anchor is 12" (30 cm) long and 5/8" (18 mm) in diameter with a 3/8"-16 UNC female thread. A Metric version with a M10x1.25 mm female thread (model SP12-M10) is available but it is not stocked in the USA. See separate datasheet for the SP12-M10.

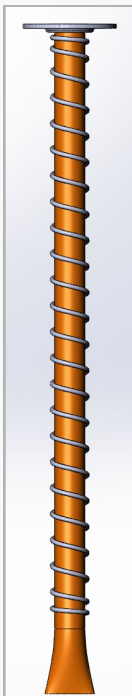
Description The SP12 is constructed from Zinc plated steel. A thick-walled 14 mm tube is the backbone of the anchor. The bottom is flared and sealed to act as a wedge when driving the anchor into the ground. The top incorporates a welded thread and a large washer.



The washer prevents the anchor from dropping through the hole below the surface. The washer also prevents *static* pull forces on the anchor when the structure is attached to the anchor. Such forces are likely if the head of the anchor is smaller than the hole in the base of the structure being attached; in the latter case, as the bolt is tightened, the anchor is pulled up into the base.

About Asphalt: Asphalt is a relatively weak surface, and care must be taken when installing structures to that surface. This is particularly the case when the asphalt is less than 5" (12 cm) thick, as in many parking lots and driveways.

A significant increase in the installed anchor strength can be obtained from the gravel surface **below** the asphalt. The compacted gravel naturally resists sideways forces (shear). Bonding the length of the anchor to the gravel using grout also adds resistance to pull forces on the anchor.



Force Rating The resistance of the installed anchors to extraction depends on the nature of the asphalt and the gravel below it. The SP12 are pull-rated for **2,000 lb.** (950 Kg or 8.9KN) if installed using a 7/8" (22 mm) hole and a recommended grout. At ground level, the installed anchors can resist 1,500 lb. (680 Kg) of shear force (see note 1).

The anchors are designed to resist rotational torque. Torque is generated when tightening the bolt into the anchor. Excessive torque will break the bond between the anchor and the asphalt, or may damage the internal thread or weld in the anchor. The SP12 is rated for a torque of **200 lb-in.**

To find out if the anchors are suitable for your application, make a test installation of at least one anchor. You will be able to leave the anchor in place after the test without the need to remove it as the anchor is flush with the roadway surface.

Grout Selection The term "grout" is used here in a broad meaning; the actual materials can be concrete, or epoxies.

In general, the grout must be self-leveling (meaning that it flows easily, to fill in all the crevices and voids). It must cure to a hard material and must be immune to extended exposure to water and temperature fluctuations.

The most cost effective anchoring results are achieved using our EPX2 expanding cement. You will need 8 oz by weight or 4 FL.oz volume



(120 cc) per anchor. The grout is available from AAC in the USA as the EPX2, in self contained package that covers 1.5 anchor, or in 10 lbs. pails that cover 22 anchors. In Europe the grout is available as the AGE2, in 5 Kg tubs.

Cartridge-type epoxies are available in the market which work well but are 3-5 times more expensive. **Do not use Kwixset or Rockite** as these



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are not suitable for wet applications.

Installation The installation requires drilling a 7/8" (22 mm) hole, 12" (300) mm deep, into the asphalt and the gravel below it. The hole is filled with grout and the anchor is dropped in. The anchor is ready for use in 15 minutes (depending on the grout and ground temperature).

For low temperature installations, see our Application Notes (AN) including AN36.

Always consult the latest installation instructions before installing these anchors. A comprehensive installation manual is available on our web site under "Library". The online manual is updated regularly to reflect the availability of grouts, new installation techniques and user feedback.

Packing

The **BoltHold SP12** anchors are packaged 6 anchors to a "set" carton. 9 Sets are packaged in a master carton (which holds 54 SP12).

Tariffs

The SP12 are shipped under schedule 60. HTS code (export) 7318.19

Note 1: When installing anchors close together, de-rate the pull strength of the additional anchors by 6% for every 1 inch less than 12. Thus an arrangement of 4 SP12 anchors at 4" apart will resist a total pull force of 5,120 lbs (2,000 + (3 x (52% x 2000))).

Anchor Metrics

Anchor Length	309 mm
Anchor body diameter	18 mm
Anchor head diameter	43 mm
Head thickness	2 mm
Anchor weight	0.2 Kg
Internal thread SP12-M10	M10 x 1.25 mm
Internal Thread SP12-38	3/8"-16 UNC
Maximum bolt length	250 mm
Finish	Zinc Plate
Required volume of grout	120 cc (4 FLoz)
Typical pull resistance	2000 lbs. (8.9KN)
Typical shear resistance	1,500 lbs. (681 Kg)
SKU Zinc coated	01-6315.38K
SKU 304 Stainless	01-6315.3SK

Kit Packing Information

Number of anchors per Set	6
Set Carton dimensions, mm	335 x 107 x 84
Set Carton dimensions, inch	13.2 x 4.2 x 3.3"
Set Carton weight	1.6 Kg 3.5 lbs
Set Carton Volume	0.003 CBM
Number of anchors per Master	54
Master Carton dimensions, mm	353 x 338 x 285
Master Carton dimensions, inch	13.9 x 13.3 x 11.2
Master Carton Weight	14.5 Kg 32 lb.
Master carton Volume	0.038 CBM



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