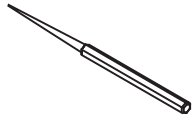


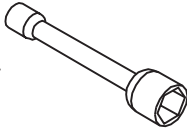
OPTIONS

(2) DRIFT PINS



PART NUMBER - DRIFT

(2) 1/2" MAGNETIC SOCKETS



PART NUMBER - MAG-1/2

WARRANTY

Middle Atlantic Products, Inc. (the "Company") warrants the Spike Series Bonding/Ganging Hardware to be free from defects in material or workmanship under normal use and conditions for the lifetime of the product.

The Company's entire liability to the purchaser, and the purchaser's (or any other party's) sole and exclusive remedy, under this warranty shall be limited, at the Company's option, to either (a) return of and refund of the price paid for, or (b) repair or replacement at the Company's factory of the products purchased, or any part or parts thereof, which the Company has determined to be defective after inspection thereof at the Company's factory.

This warranty does not cover damage due to acts of God, accident, misuse, abuse or negligence by parties other than the Company, or any modification or alteration of the products. In addition, this warranty does not cover damage due to improper handling, assembly, installation or maintenance.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL THE COMPANY BE LIABLE FOR ANY SPECIAL INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES WHATSOEVER (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION OR ANY OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OF THE PRODUCTS PURCHASED, EVEN IF THE COMPANY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE COMPANY'S LIABILITY TO THE PURCHASER (OR ANY OTHER PARTY) HEREUNDER, IF ANY, SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE PRODUCTS PAID TO THE COMPANY.

Corporate Headquarters

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Factory Distribution

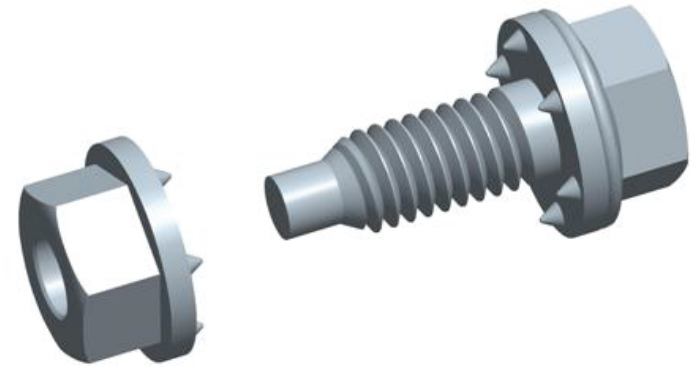
USA: NJ - CA - IL Canada: ON - BC

At Middle Atlantic Products we are always listening. Your comments are welcome.

INSTALLATION INSTRUCTIONS

SPIKE™ SERIES

BONDING/GANGING HARDWARE



THANK YOU

Thank you for purchasing the Spike Series Bonding/Ganging Hardware. Please read these instructions thoroughly before installing this product.

PRODUCT FEATURES

- Attenuates RF and EMI emissions and receptivity when properly grounded
- Used to extend ground plane between enclosures

INTENDED USE

- SPIKE BOLT & NUT is UL Recognized (File #E330888 (KDER2/8)) as an acceptable grounding and bonding device which can be used with audio/video apparatus, racks and other enclosures in lieu of a bonding conductor.

PATENT PENDING

INSTALLATION

IMPORTANT NOTES

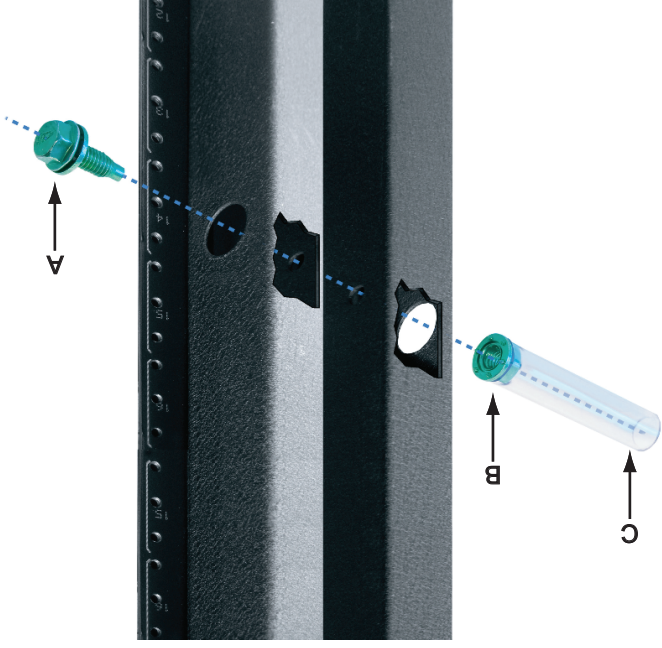
- Ensure the racks are square, level and plumb
- One of the racks must be bonded (per the NEC) with a wire
- Use at least two bolts/nuts in the front and rear of the rack. Can be used in conjunction with GANG-10 hardware (PART NUMBER GANG-10).

- ¹ Remove the plastic plugs from the gangling holes on the racks. Using drift pins will assist in proper alignment (see pg. 4 for options).
- 2) Place the plastic installation tube (C) over the nut (B). **NOTE:** Using a socket wrench on the nut instead of the tube could potentially cause the spikes to not properly pierce the nut/powdercoat.

- 3) Position the hardware into the ganging holes as shown below.
- 4) While holding the tube, tighten the bolt (A) using a 1/2" socket wrench. Using a magnetic socket wrench will ease installation. (see pg. 4 for options)
- 5) Once the bolt and nut are securely in place, you can remove the plastic tube and fully tighten the bolt. This will cause the nut and bolt to pierce the paint or powdercoat.

- 6) For each gangled row, you must apply a regulatory information label (D) on a location that is clearly visible on the rack for viewing by an inspector.

bonding wire in order for the other racks to stay properly bonded.



PARTS LIST

BONDING/GANGING BOLT



24

PART
A

BONDING/GANGING NUT



24

PART
B

PLASTIC INSTALLATION TUBE



(Used To Hold Nut In Place While Tightening The Bolt)

REGULATORY INFORMATION LABEL


$$\frac{12}{107}$$

PART
D

TOOLS REQUIRED
- 1/2" Socket Wrench

- 1/2" Socket Wrench

TOOLS RECOMMENDED

- Drift Pins
- 1/2" Magnetic Socket Wrench (See Page 4 for Details)

PRODUCT OVERVIEW

Metal racks are required by code to be grounded for safety. However, the code is written for 60 HZ applications which does not help signal noise which mostly occurs at higher frequencies.

Routing signal conductors adjacent or close to a ground plane is a very effective and proven method of reducing the undesirable effects of EMC in signal conductors (since the electromagnetic field is confined to the small space between the signal conductor and the ground plane). The greater the surface area of the ground plane, the lower the impedance and the more effective the protection, especially at higher frequencies.

One of the most effective ways to create a large surface area ground plane is to bond equipment racks together. One method is to grind the protective paint (or powder coat) from the ganging points where the racks join, and subsequently bolt the racks together. However, grinding exposes the base metal, which will then be subject to corrosion defeating the intended purpose.

When tightened, the Spike Grounding/Bonding Hardware will break through the painted/powder-coated surfaces from both sides providing electrical continuity while not exposing any bare metal that can lead to corrosion.