

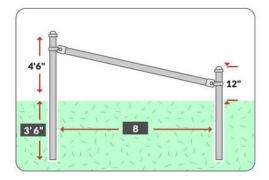
# INSTALLATION GUIDE AND SPECIFICATIONS

# YOUR GUIDE TO BUILDING WITH FENCE BULLET

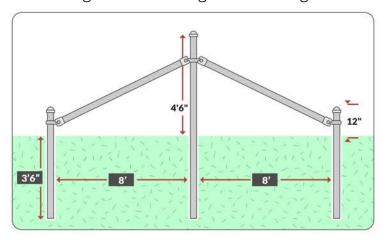
This is your guide to constructing with Fence Bullet. Included in this guide are installation instructions and tips for a variety or braces and rail fence design assemblies. Angle braces are superior to strength to H braces and we highly recommend angle braces in the brace. If an angle is not used cross bracing should be considered as the posts could rack in the direction of the wire pull over time. If after reviewing this guide you need additional installation and product information, contact Bullet Fence systems at 918-759-1654 or email: info@bulletfence.com

# **SINGLE PIPE ANGLE BRACES**

Angle End Brace



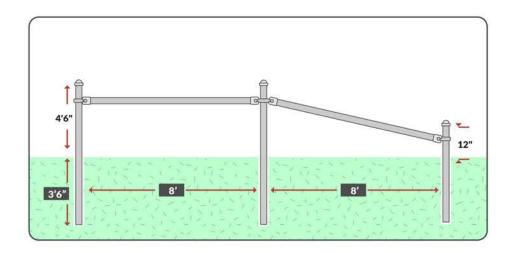
Inline Angle Brace or Single Corner Angle Brace



Order: One angle brace for angle end brace kit, two angle brace kits for inline or corner brace.

Don't forget caps!

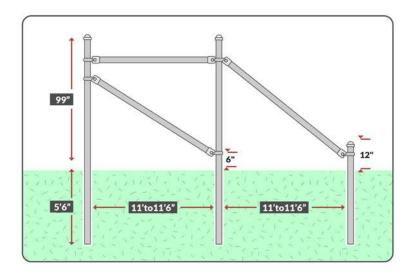
# **DOUBLE PIPE BRACE**



Order: One angle brace and one straight brace kit, two of each for a corner brace.

Don't forget caps!

## HIGH FENCE DOUBLE PIPE BRACE



Order: 2 angle kits and one straight, 4 Angle and 2 straight kits for a corner. Don't forget the caps!

## **RAIL FENCE**









10' OC / 8' OC +1 extra post per line

+1 extra post per line

### **INSTALLAION TIPS AND PLANNING**

Fence braces are the foundation of you fence. Construction starts with set posts. Because most brace failure is due to post set to shallow in the ground. A major consideration for post depth should be the soil strength and properties. Posts should be set deeper in sands and soils that are high shrink swell. The setting method is also a factor. Are post holes angered and posts set in cement? Typically if cemented in a 12 inch diameter hole depths will not exceed 42 inches, where as if posts are driven, pipe will normally be driven to meet resistance, meaning that would likely be a minimum depth and could possibly be much deeper.

Plan you fence out in detail, make a drawing, and answer these questions: How many gates and where are they going to be? Locate the hills and valley that will require bracing. Where will all the turns be? What angle will the turns be? What will be the pull lengths for each section of the fence? How many wires and/or what is the fencing material that will be used? What is the height of the fence? All of these questions will play apart in determining the amount and design of the bracing used.

The Fence Bullet is available in 2 3/8" - 2 7/8" - 3 1/2" - 4 1/2" post sizes. The sleeve slides over 2 3/8" OD pipe for all cross members and angle braces. We recommend 3 1/2" schedule 40 pipe to be used where heavy gates are being hung. Inline brace assemblies should never be set more than 1320' apart and braces should be set at all major elevation changes and fence turns.

# WORDS ON PICKING THE RIGHT FENCE BULLET KIT AND INSTALLATION CONSIDERATIONS

#### A word on Angle and Straight versions:

- Both versions on are adjustable by sliding the sleeve away from the post and hinging the sleeve and rail.
- The the angle version is best suited for 3:1 slope but will and will angle easily produce an angle of flat too of 60 degree.
- The straight version is best for flatter slope but will adjust to about a 45 degree angle. Care should be taken to not extend the sleeve beyond the head of the bolt/nut.

#### A word on band types:

- One way bands are used on ends of braces or rail fencing. They can also used on line posts where turns need to be made.
- One way bands can be stacked and will have a offset horizontal appearance which may or may not be critical.
- You have choice on a double brace. You can stack a one-way band or use a 2-way band if going straight.
- ★ 2-way bands should be used on straight sections of rail fence.
- 2-way bands can be used on existing fence posts to add a brace or be stacked to give a 4-way brace post.
- If horizontal appearance is critical use a 2-way band (180 degree, straight only) or the drill and pin method (90 to 270 degree) can be used.

#### A word on using using the drill and pin option:

This is a new method that requires that you drill a 3/8" hole though the pipe post and the center of the band. This method allows the fence be horizontal from post to post while allowing a turn at the post. See below for the new drop in install.

#### A word on cutting pipe and the NEW DROP IN INSTALL:

Cut all rails with a saw to produce a clean cut. The sleeve will not slide over a torch cut without grinding. The below installation instruction calls for square cuts of the rail pipe.

#### **NEW DROP IN INSTALL:**

I believe a quicker and easier method is to cut one end square the other end cut on about a 30 degree angle, this allows a rail to drop in to bands that can be installed first. Measure the distance between the installed carriage bolts. Measure an mark the pipe with a dot. Cut a 30 degree angle at the dot. The angled rail end should be installed on the band side when using the drill and pin method.



## PATENT PENDING

Fence Bullet is a no weld adjustable pipe connector. It joins a pipe post sizes of you choose to a 2 3/8" OD pipe. The connector's intended use is for compression fence brace or rail fence.

#### **Assembly Instructions**



Contents of package: (2) 3/8 X 3-inch carriage bolts, (4) standard nuts, (2) flange nuts, (2) pipe bands (2) tube sleeves (Fence Bullets) Tools Needed: 9/16 and 7/16- inch open end wrenches, saw to cut pipe, measuring tape and marker. Installation starts with set post(s) and pipe for cross member.

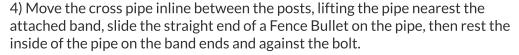
1) Assemble each band by threading one nut on the carriage bolt about 3/4 of length from bolt end. Insert the carriage bolt into the band's square openings. Thread a second nut on the bolt, tighten the nut to the band.

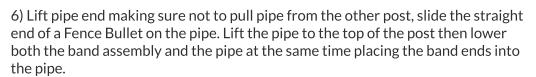
2) Mark desired cross member height on posts. Slide an assembled band over the post to the marked height, pointing the band to the adjoining post. Tighten the outside nut on band assembly with a 9/16-inch wrench, securing the band to the post. A 7/16-inch end wrench may be needed to hold the bolt neck.





3) Measure the distance between adjoining posts. Subtract  $1\frac{1}{2}$  inches from measured length. This length will allow pipe to fit between the band bolts tightly. Measure, mark, and cut the pipe to length.







7) Rest the pipe on the band ends while leveling or making height adjustments. Secure the band to the post by tightening the outside nut using a 9/16-inch end



- 8) Lift each end of the cross pipe and slide the Fence Bullet to the post, fitting the slots to the bolts and the cope against the post.
- 9) To complete the connection, thread a flange nut on each bolt and tighten snugly to the Fence Bullet using a 9/16-inch wrench.

Angle and rail versions assemble with minor variation. If using the angle version, attach the low connection first. If making multiple connections on single posts start with the lowest rail. Stack each additional connection and work up as needed.

