



The Telespar Advantage

Secure Signage

Using Allied's recommended installation method, street signs are securely fastened to posts with rivets providing greater torsional and windload stability. Signs mounted via this method are more securely fastened and cannot easily be removed or loosened from their posts due to severe weather conditions. This differs from the bracket system commonly used with U-channel and standard post systems. These systems utilize small set screws that can be damaged or vandalized easily making replacement necessary.

Easy Installation, Rapid Replacement

Telespar signposts are installed easily by using either a direct embedded method or breakaway anchor system. Installation can be performed by one-man at ground level eliminating the need for bucket trucks and similar heavy equipment. Replacement is just as easy, having minimal tool requirements.

Safety

The Telespar System was the first to be used effectively in a yielding breakaway concept for small sign-support systems. They are FHWA approved and in compliance with AASHTO specifications.

Cost Savings

Telespar signposts help to reduce costs due to several factors. Because they are square, signs can be mounted on all four sides reducing the amount of hardware required for installation. They also use drive rivets for mounting, which are less costly than traditional cap and cross brackets.

Ease of installation also contributes to cost savings. The unique design of the posts enables them to be easily embedded in the ground. The drive rivets are also simpler to install and can be replaced more quickly than traditional mounting brackets.

Since they are highly resistant to weather damage and more difficult to vandalize replacement costs are also lower. If a signpost does get damaged it can easily be reused by splicing it with another Telespar section. This also helps to reduce expenses.

Two Types of Posts to Meet Your Needs

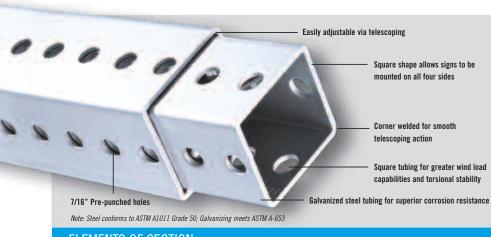
One of the keys to the Telespar signpost system's versatility and ease of installation is its two convenient methods for mounting signage.

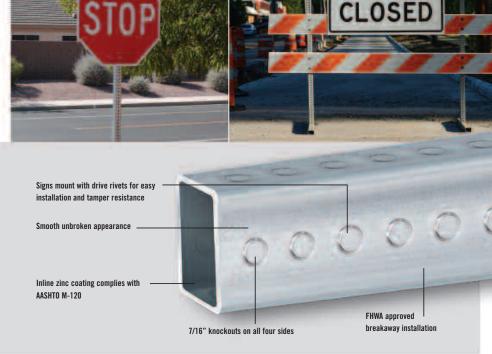
Posts with Pre-Punched Holes

Telespar square posts with 7/16" prepunched holes on 1" centers are corner welded to allow smooth telescoping action.

Posts with Knockouts

Qwik-Punch posts are made with 7/16" knockouts, 1" on the center, on all four sides. This feature allows workers in the field to quickly punch holes exactly where they are needed leaving the balance of the post with a smooth unbroken appearance. These posts offer the same telescoping action and easy installation as standard Telespar posts.





| ELEMENTS OF SECTION | Tube Size Inches | Wall Thickness U.S. Std. Gauge & Inch | Area Sq. In. | Wt./Ft. Lbs. | I In.4 | S In. ³ | r In. | |
|---------------------|------------------|---------------------------------------|--------------|--------------|-----------|-----------------------|----------|--|
| | 1 3/4 x 1 3/4 | 14 (0.083) | 0.392 | 1.71 | 0.201 | 0.230 | 0.716 | |
| | 2 x 2 | 14 (0.083) | 0.474 | 1.99 | 0.296 | 0.296 | 0.790 | |
| | 1 1/2 x 1 1/2 | 12 (0.105) | 0.380 | 1.70 | 0.129 | 0.172 | 0.582 | |
| | 1 3/4 x 1 3/4 | 12 (0.105) | 0.485 | 2.06 | 0.231 | 0.264 | 0.690 | |
| | 2 x 2 | 12 (0.105) | 0.590 | 2.42 | 0.372 | 0.372 | 0.794 | |
| | 2 1/4 x 2 1/4 | 12 (0.105) | 0.695 | 2.77 | 0.561 | 0.499 | 0.898 | |
| | 2 1/2 x 2 1/2 | 12 (0.105) | 0.803 | 3.14 | 0.804 | 0.643 | 1.001 | |
| | 2 3/16 x 2 3/16 | 10 (0.135) | 0.841 | 3.43 | 0.605 | 0.553 | 0.848 | |
| | 2 1/2 x 2 1/2 | 10 (0.135) | 1.010 | 4.01 | 0.979 | 0.783 | 0.985 | |
| | 1 3/4 x 1 3/4 QP | 14 (0.083) | 0.392 | 1.88 | 0.201 | 0.230 | 0.716 | |
| | 2 x 2 QP | 14 (0.083) | 0.474 | 2.16 | 0.296 | 0.296 | 0.790 | |

I = Moment of Inertia

s = Section Modulus

r= Radius of Gyration

Anchoring Options

Installation Guidelines

- 1. Drive a minimum 30" piece of 12 gauge Telespar (anchor) into the soil until only 1-2 inches are left exposed. For a 2-piece anchor, use an 18" piece of tubing for a sleeve, one size larger than the anchor. It is advisable to drive the anchor and sleeve together making sure the holes are aligned.
- Attach the sign to the post at the desired height using drive rivets or bolts.
- 3. Insert the signpost, which is one size smaller than the anchor, approximately 6-8 inches into the anchor base.
- 4. Bolt the signpost to the anchor assembly with a corner bolt.
- 5. When installing in concrete use a pneumatic hammer or concrete drill to break through the surface, the anchor assembly is driven to within 1" of the surface to allow attachment of the signpost. If flush installation is desired clearance should be recessed on two sides to clear the bolt for signpost connection.



6. To install in ashphalt, drive the anchor assembly through the blacktop into the subsoil from ground level. Once the anchor is through the blacktop; use the same instructions as for soil installations.

| 1 | Anchor Type | Description | Unique Feature |
|----|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| | PRIMARY | | |
| | Single Breakaway Anchor | Can be used by one man working at ground level using manual or power equipment | Minimum installation time |
| ı | Two-Piece Breakaway Anchor | Can be created by adding an outer sleeve to the original anchor base. This provides a double wall thickness to create breakaway function. | Yielding breakaway system |
| | SECONDARY | | |
| | Heavy Duty Anchor | For use with larger signposts. The heavy wall eliminates the need for a stiffener sleeve enabling the signpost to break on impact. | Works well in concrete and areas of high impact |
| | Stabilization Anchor Sleeve | Attaches to a single anchor with corner bolt then bolted through the post at top of anchor. Should always be attached to the corner farthest from traffic. | For use with soft or drop-off shoulders in loose or sandy soil |
| V | Omni-Directional Anchor | Designed specifically for ease of installation in loose soil conditions enabling the post to perform well when impacted. | Easily retrofitted to correct problem installations |
| 4. | Slip Base Breakaway System | For use with larger signs when the post is too strong to perform a normal breakaway function. Allows the unit to slip away without creating an unacceptable impact condition. | One of the most economical replacements in the industry |

Fasteners

The Corner Bolt

Requiring only a single wrench, the corner bolt provides a tighter more stable installation by concentrating tension on only one corner of the tubing.

Drive Rivets

Drive rivets provide the convenience of a one-piece fastener with effective tamper-resistant design and fast installation requiring only a hammer.

Hex Nuts and Bolts

Standard hex nuts and bolts can also be used to connect components. A special jam nut is available to help form a permanent tamper resistant connection.

Lock Pins

The lock pin allows for quick temporary connection between telescoping tube sections. Simply align holes between sections, insert the lock pin and allow it to drop into a locking position.

Fittings

In addition to the above listed fasteners, the fittings in the chart below also can be used with the Telespar system.





Lean Manufacturing

Lean manufacturing is the heart of our culture. We strive daily to reach our goals and are committed to attaining the highest level of safety, productivity, quality and customer satisfaction.

Measuring our Improvement

We measure operational efficiencies and utilize these metrics to drive improvement. We have implemented numerous metrics to determine that we are continuing to move forward. On a regular basis we calculate and analyze data such as:

- Order Fill Rates
- Order Error Rates
- On-Time Rates
- Perfect Order Rates

These metrics are the cornerstone of our efforts to deliver world class products and services to your organization.

| Fittings | Tube Size | Cutting Dimensions* | Fittings | Tube Size | Cutting Dimensions* | |
|----------|----------------------------------------------------------------------------------------|--------------------------------------------------|----------|----------------------------------------------------------------|--------------------------------------------------|--|
| TL015 | 1 1/2" sq. Both 1 3/4" sq. tubes 2" sq. must be 2 1/4" sq. same 2 1/2" sq. | 1 3/16" 1 1/16" 15/16" 13/16" 11/16" | TL018 | 1 1/2" sq. 1 3/4" sq. 2" sq. 2 1/4" sq. 2 1/2" sq. | 1 3/16" 1 1/16" 15/16" 13/16" 11/16" | |
| TL016 | 1 1/2" sq. Both 1 3/4" sq. tubes 2" sq. must be 2 1/4" sq. size 2 1/2" sq. | 1 3/16" 1 1/16" 15/16" 13/16" 11/16" | TL019 | 1 1/2" sq. 1 3/4" sq. 2" sq. 2 1/4" sq. 2 1/2" sq. | | |
| TL017 | 1 1/2" sq. 1 3/4" sq. 2" sq. 2 1/4" sq. 2 1/2" sq. | | TLO20 | 1 1/2" sq. 1 3/4" sq. 2" sq. 2 1/4" sq. 2 1/2" sq. | 1' 1' 1' 1' 1' | |

^{*} Distance from edge of tube to center of first hole.

Note: The Telespar sign support system can be directly embedded manually using a drive cap and sledge, with a pneumatic hammer or by means of self-contained power equipment.