

# Tie-Wire Anchor

## Wedge Anchor

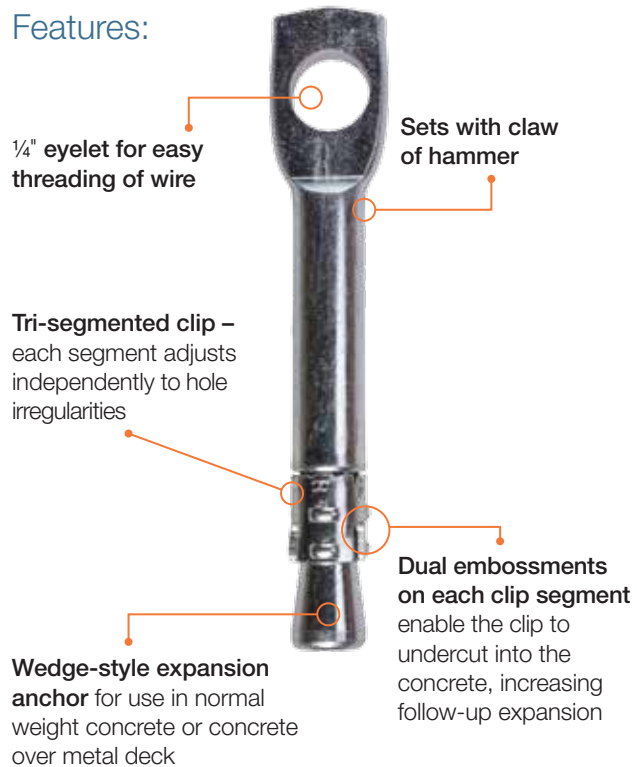


The Tie-Wire anchor is a wedge-style expansion anchor for use in normal-weight concrete or in concrete over metal deck. With a tri-segmented, dual-embossed clip, the Tie-Wire is ideal for the installation of acoustic ceiling grid and is easily set with the claw of a hammer.

**Material:** Carbon steel

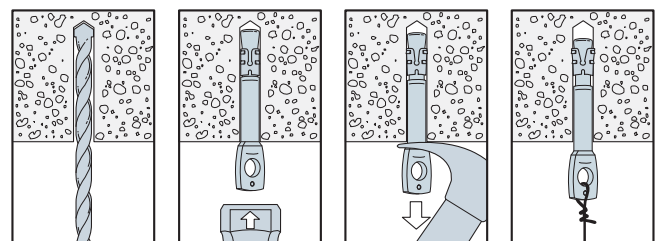
**Finish:** Zinc plated

**Features:**



### Installation:

- Drill a hole at least 1 1/2" deep using a 1/4" diameter carbide tipped bit
- Drive the anchor into the hole until the bottom of the head is flush with the base material
- Set the anchor by prying/pulling the head with the claw end of the hammer



Size	Model No.	Drill Bit Dia. in.	Eyelet Hole Size in.	Quantity	
				Box	Carton
1/4" x 1 1/2"	TW25112	1/4	1/4	100	500

## Tension and Shear Loads for Tie-Wire Anchor in Normal-Weight Concrete

Size in. (mm)	Drill Bit Dia. in.	Embed Depth in. (mm)	Critical End Dist. in. (mm)	Critical Spacing in. (mm)	Tension Load		Shear Load	
					f'c ≥ 2,500 psi (17.2 MPa)		f'c ≥ 2,500 psi (17.2 MPa)	
					Ultimate lbs. (kN)	Allowable lbs. (kN)	Ultimate lbs. (kN)	Allowable lbs. (kN)
¼ (6.4)	¼	1½ (38)	2½ (64)	5 (127)	1,155 (5.1)	290 (1.3)	380 (1.7)	95 (0.4)

1. The allowable loads listed are based on a safety factor of 4.0.
2. The minimum concrete thickness is 1½ times the embedment depth.

## Tension and Shear Loads for Tie-Wire Anchor in the Soffit of Normal-Weight Concrete or Sand-Lightweight Concrete over Metal Deck

Size in. (mm)	Drill Bit Dia. in.	Embed Depth in. (mm)	Critical End Dist. <sup>5</sup> in. (mm)	Critical Spacing in. (mm)	Tension Load		Shear Load	
					f'c ≥ 3,000 psi (20.7 Mpa)		f'c ≥ 3,000 psi (20.7 Mpa)	
					Ultimate lbs. (kN)	Allowable lbs. (kN)	Ultimate lbs. (kN)	Allowable lbs. (kN)
¼ (6.4)	¼	1½ (38)	2½ (64)	5 (127)	1,155 (5.1)	290 (1.3)	460 (2.0)	115 (0.5)

1. The allowable loads listed are based on a safety factor of 4.0.
2. The minimum concrete thickness is 1½ times the embedment depth.
3. Metal deck must be minimum 20 gauge thick with minimum yield strength of 33 ksi.
4. Anchors installed in the bottom flute of the steel deck must have a minimum edge distance of 1½" away from inclined edge of the bottom flute. See the figure below.
5. Critical end distance is defined as the distance from the end of the slab in the direction of the flute.

## Installation in the Soffit of Concrete over Metal Deck

