

INSTALLATION GUIDE



SUPERTIE™

FIBERGLASS FORM-TIE SYSTEMS



THE COIL ROD SERIES: **15K, 24K & 34K**

NEVER PATCH . . . NEVER RUST





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SuperTie™ Fiberglass Coil Rod Form Tie Systems are used to secure concrete formwork during concrete placement and initial hydration, without the inherent limitations of previously popular steel form tie systems.

SuperTie™ Form Tie Systems eliminate the possibility of rust stains as well as the structural deterioration often caused by failure of patching for steel form tie holes. SuperTie™ Systems are appropriate for use in all forming applications but are especially beneficial in situations such as architectural finishes.

1. Superior Finishes: Improved architectural finishes, without patches or rust.

2. No Corrosion: The fiberglass form tie material cannot rust, eliminating the need to have a break-back and the need for subsequent plugging and patching to forestall rust.

3. Saves Money: Saves dramatically on labor costs. Reduces form-tie related costs as much as 70%. Reduced Inventory: One size fits any wall. Bulk lengths are cut to the working measurements at the jobsite.

4. Extends Form Life: All forms and form liners strip easily from the structure without damage from the ties.

5. Natural Insulator: Fiberglass tie, which is left in the structure, is electromagnetically transparent, making it ideal for special situations where magnetic or electrical interference is undesirable. Fiberglass will not promulgate radio frequency and shields nuclear energy.

6. Compatible: SuperTie™ systems are compatible with all job-built and commercially available forming systems.



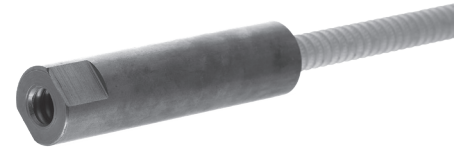
US Patent #7,819,388



RJD Fiberglass Coil Rod systems are available in grey and offered in sizes: 1/2" (15,000 lb), 3/4" (24,000 lb) & 1" (34,000 lb)

SuperTie™ Coil Rod Form Fixture

SuperTie™ Coil Rod form fixtures offer Ultimate Tensile Strengths of 15,000 lb (1/2"), 24,000 lb (3/4"), and 34,000 lb (1"). The Form Fixtures range in length from, respectively, 5", 6", and 8".



SuperTie™ Bearing Plate – BP615/BP300

The SuperTie™ BP615 is a 4"x 4" steel plate and fits the 1/2" coil rod system. The SuperTie™ BP300 is a 5"x 5" steel plate and fits 3/4" & 1" coil rod systems. The SuperTie™ bearing plates are required component of the SuperTie™ Gripper/Form Fixture System when using a wooden forming system.

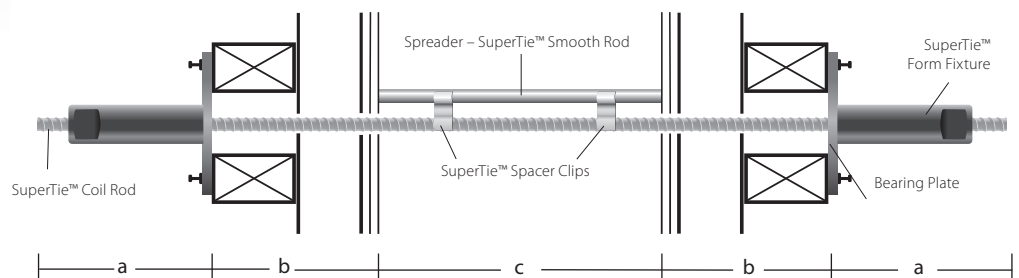


Example for 1/2" System

a. (2) 6" Form Fixture + Rod Tails.....	12"
b. (2) 7.75" forms width.....	15.5"
c. Structure width.....	12"
Total rod length needed.....	39.5"

Ordering SuperTie™ Coil Rods

Formula for a 12" thick structure
[2 (a) + 2 (b) + c = required materials]

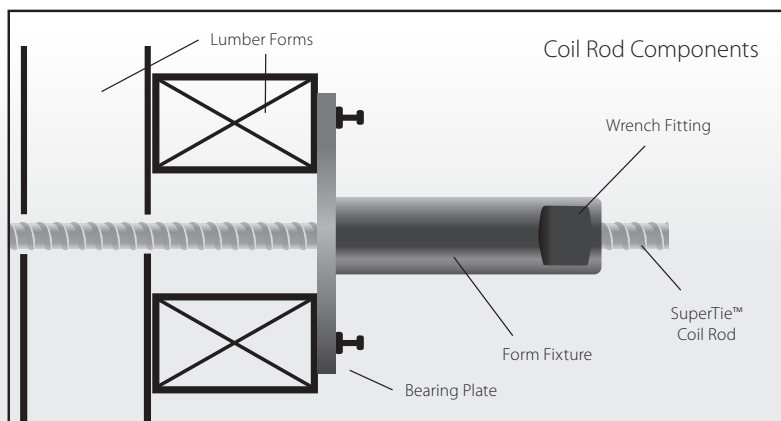


Note: Cut fiberglass rod using a diamond blade.



1508 W Stone Field Way, Ogden, UT 84404
(805) 456-5980
info@rjdindustries.com

INSTALLATION STEPS



Slide the fiberglass rod through the form. Short lengths of fiberglass rod can be used as internal spreaders; these spreaders can be either tied to the rebar cage, or attached to the tie rod by using two Spreader Clips.



Slip Bearing Plate and Form Fixture onto the fiberglass rod. For a battered wall, add wedge shaped spacers so that the fiberglass rod is kept straight. The strength of a bent rod is significantly reduced.



Lock the Form Fixture onto the fiberglass rod by turning the "Form Fixture" clockwise.



On the opposite side of the form, lock another Form Fixture onto the fiberglass rod.



Cut the fiberglass rod between the Form Fixture and the form.



After removing the forms, you will see short lengths of fiberglass rod sticking out of your structure.



To ensure protection of exposed concrete surface, drill a hole slightly larger than rod diameter in a piece of sheet metal, slide over rod, then cut.



Grind the stubs of fiberglass rod off flush to the concrete structure using a grinder with a diamond blade.



The tie will nearly disappear. No breakback. No plugging. No patching.

Warning: Once SuperTie™ installation is complete, the tie must be completely straight through the formwork. Any bending, bowing, sagging, or deflection will drastically lower tie strengths and could result in failure.



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Typical Tie Spacing / Placement Rates per ACI 347 Recommendations

Lateral Pressure of Concrete Equations per ACI 347R-14 with Rate of Placement		
Full liquid Head (SCC) P=W x H (Equation 5.15a)	R < 7 ft/hr P=150 + (9000 x R)/T (Equation 5.15b)	R > 7 ft/hr but < 10 ft/hr P=150 + (43,400/T) + (2800 x R)/T (Equation 5.15c)
KEY: P = Concrete Lateral Pressure, lb/ft² • W = Unit Weight of Concrete, lb/ft³ • H = Height of Concrete Placement, ft R = Rate of Placement, ft/h • T = Temperature of Concrete, °F		

1/2" COIL ROD SYSTEM – 15K

Temperature (°F)					Tie Spacing Data				
40	50	60	70	80					
Maximum Rate of Concrete Placement Height (ft) Per Hour					Horizontal (in.)	Vertical (in.)	Area (ft²)	Form Pressure (psf)	Actual Load (lb)
6.0	7.5	9.0	10.5	12.0	30	24	5.0	1,500.0	7,500
4.7	5.8	7.0	8.2	9.3	30	30	6.3	1,200.0	7,500
3.8	4.7	5.7	6.6	7.6	30	36	7.5	1,000.0	7,500
3.0	3.8	4.6	5.3	6.1	36	36	9.0	833.3	7,500

3/4" COIL ROD SYSTEM – 24K

Temperature (°F)					Tie Spacing Data				
40	50	60	70	80					
Maximum Rate of Concrete Placement Height (ft) Per Hour					Horizontal (in.)	Vertical (in.)	Area (ft²)	Form Pressure (psf)	Actual Load (lb)
*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*

1" COIL ROD SYSTEM – 34K

Temperature (°F)					Tie Spacing Data				
40	50	60	70	80					
Maximum Rate of Concrete Placement Height (ft) Per Hour					Horizontal (in.)	Vertical (in.)	Area (ft²)	Form Pressure (psf)	Actual Load (lb)
14.4	18.1	21.7	25.3	28.9	30	24	5.0	3,400.0	17,000
11.4	14.3	17.1	20.0	22.8	30	30	6.3	2,720.0	17,000
9.4	11.8	14.1	16.5	18.8	30	36	7.5	2,266.7	17,000
7.7	9.7	11.6	13.5	15.5	36	36	9.0	1,888.9	17,000

Note: Tables are relative to SuperTie™ CRFF form tie spacing only. The contractor must consider industry standards for other formwork components: sheathing, accessory lumber and commercially available formwork strengths.

IMPORTANT: When using admixtures, retardants, self-compacting concrete, or other products that create a full liquid head of pressure, a new safe working load must be used at a 2.5:1 ratio in lieu of the 2:1 safe working load which ultimately decreases your tie spacing.

scan for a distributor



RJD Industries, LLC
1508 W Stone Field Way, Ogden, UT 84404
(805) 456-5980 • rjdindustries.com

SuperTie™ CRFF Systems are sold exclusively through quality construction materials dealers. Scan the QR code to see our distributor locations or just call us for the name of the dealer nearest you.