

# GRIP-TWIST® 'XT' Mechanical Splices – Dimensions and Data [inch-pound units]



- FOR HIGH STRENGTH, LOW CARBON, CHROMIUM STEEL BARS, ASTM A1035
- FAST, EFFICIENT INSTALLATION
- ELIMINATES LONG LAP LENGTHS, REDUCES CONGESTION
- DEVELOPS STRENGTH:  $1.25 \times f_y$ , GRADES 100 AND 120
- ULTIMATE CAPACITY: GRADES 100 & 120, equal to 150ksi

$f_y$  = SPECIFIED YIELD OF REINFORCING BAR

TAPER THREADED GRIP-TWIST XT	REBAR SIZE	TAPER GRIP-TWIST XT COLOR CODE *	COUPLER WEIGHT (lb)		DIMENSIONS (inches)					
			FEMALE	MALE	BAR INSERTION after swaging		REBAR GAP G	MALE INSERTION H	END ALLOWANCE A	Non-Swaged LENGTH N
					F	M				
	4	Red	0.61	0.60	2 1/4	2 1/4	1 7/8	15/16	1 5/16	1 1/2
	5	Yellow	1.18	1.09	2 11/16	2 11/16	2	1 1/8	1 9/16	1 13/16
	6	Blue	1.63	1.55	3 1/16	3 1/16	2 1/16	1 5/16	1 7/8	2 1/8
	7	Red	3.33	3.25	3 15/16	3 15/16	3 1/8	1 3/4	2 7/16	2 3/4
	8	Yellow	4.72	4.65	4 7/16	4 7/16	3 1/2	2	2 3/4	3 1/8
	9	Blue	5.80	5.90	4 13/16	4 13/16	3 1/2	2 1/8	2 3/4	3 1/8
	10	Black	9.30	9.07	5 3/8	5 3/8	4 1/8	2 3/8	3 1/4	3 5/8
	11	Pink	10.4	10.5	5 5/8	5 5/8	4 5/8	2 11/16	3 5/8	4 1/16
	14	Red	26.0	25.5	6 7/8	6 7/8	7 1/8	3 1/4	5 3/16	5 11/16
	18	Yellow	39.6	39.6	8 1/2	8 1/2	7 1/8	3 5/8	5 3/8	6

GRIP-TWIST XT TRANSITION SERIES	REBAR SIZE	COLOR CODE *		COUPLER WEIGHT (lb)		DIMENSIONS (inches)					
		XT TAPER FEMALE	XT TAPER MALE	FEMALE	MALE	BAR INSERTION after swaging		REBAR GAP G	MALE INSERTION H	END ALLOWANCE A	Non-Swaged LENGTH N
						F	M				
	5/4	Yellow	Red	1.28	0.60	2 11/16	2 1/4	1 15/16	15/16	1 9/16	1 13/16
	6/5	Blue	Yellow	1.80	1.09	3 1/16	2 11/16	2 5/16	1 1/8	1 7/8	2 1/8
	7/6	Red	Blue	3.83	1.55	3 15/16	3 1/16	3	1 5/16	2 7/16	2 3/4
	8/7	Yellow	Red	5.23	3.25	4 7/16	3 15/16	3 7/16	1 3/4	2 3/4	3 1/8
	9/8	Blue	Yellow	6.27	4.65	4 13/16	4 7/16	3 1/2	2	2 3/4	3 1/8
	10/9	Black	Blue	9.90	5.90	5 3/8	4 13/16	4	2 1/8	3 1/4	3 5/8
	11/10	Pink	Black	10.9	9.07	5 5/8	5 3/8	4 1/2	2 3/8	3 5/8	4 1/16
	14/11	Red	Pink	29.8	10.5	6 7/8	5 5/8	6 1/8	2 11/16	5 3/16	5 11/16

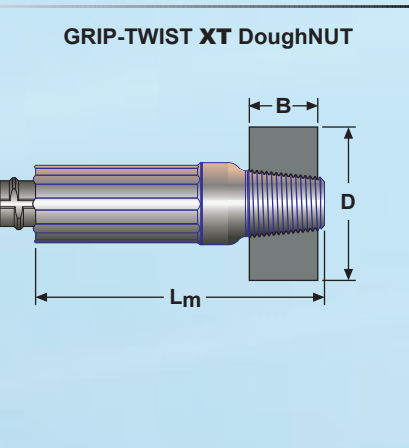
GRIP-TWIST XT POSITION SERIES	REBAR SIZE	TAPER GRIP-TWIST XT POSITION COLOR CODE *	COUPLER WEIGHT (lb)		DIMENSIONS (inches)					
			XT Taper FEMALE	POSITION w/ Stud	BAR INSERTION after swaging F	REBAR GAP G	TAPER MALE INSERTION H	END ALLOWANCE A	Non-Swaged LENGTH N	SPACE after assembly S
	4	Red	0.61	0.98	2 1/4	3 3/4	15/16	1 5/16	1 1/2	1 1/8
	5	Yellow	1.18	1.75	2 11/16	4 3/8	1 1/8	1 9/16	1 13/16	1 1/4
	6	Blue	1.63	2.66	3 1/16	5 3/8	1 5/16	1 7/8	2 1/8	1 5/8
	7	Red	3.33	5.29	3 15/16	6 3/8	1 3/4	2 7/16	2 3/4	1 1/2
	8	Yellow	4.72	7.65	4 7/16	7 1/8	2	2 3/4	3 1/8	1 5/8
	9	Blue	5.80	9.74	4 13/16	7 3/8	2 1/8	2 3/4	3 1/8	1 7/8
	10	Black	9.30	14.4	5 3/8	8 1/4	2 3/8	3 1/4	3 5/8	1 3/4
	11	Pink	10.4	16.6	5 5/8	9 3/8	2 1/2	3 5/8	4 1/16	2 1/8
	14	Red	26.0	40.0	6 7/8	12 1/2	3 1/4	5 3/16	5 11/16	2 1/8
	18	Yellow	39.6	59.5	8 1/2	12 7/8	3 5/8	5 3/8	6	2 1/8

GRIP-TWIST XT FLANGED SERIES	REBAR SIZE	TAPER GRIP-TWIST XT COLOR CODE *	FEMALE COUPLER PLUS FLANGE WEIGHT (lb)		DIMENSIONS (inches)					
					BAR INSERTION after swaging F	FLANGE HEIGHT B	FLANGE WIDTH C	MALE INSERTION H	END ALLOWANCE A	Non-Swaged LENGTH N
	4	Red	0.66		2 1/4	2 3/8	1 5/8	15/16	1 5/16	1 1/2
	5	Yellow	1.23		2 11/16	2 3/4	1 7/8	1 1/8	1 9/16	1 13/16
	6	Blue	1.69		3 1/16	2 15/16	2 1/16	1 5/16	1 7/8	2 1/8
	7	Red	3.40		3 15/16	3 7/16	2 3/8	1 3/4	2 7/16	2 3/4
	8	Yellow	4.81		4 7/16	3 11/16	2 5/8	2	2 3/4	3 1/8
	9	Blue	5.90		4 13/16	3 3/4	2 3/4	2 1/8	2 3/4	3 1/8

REBAR SIZE US [Metric]	COUPLER OUTSIDE DIAMETER (in.)	TAPER GRIP-TWIST XT PART NUMBER		GRIP-TWIST XT TRANSITION PART NUMBER		GRIP-TWIST XT POSITION PART NUMBER			GRIP-TWIST XT FLANGED PART
		FEMALE	MALE	FEMALE TRANSITION	MALE	FEMALE	STUD	POSITION FEMALE	FLANGED FEMALE
#4 [13]	1 1/8	XT4F	XT4M			XT4F	XT4RP	XT4PF	XT4FWFL
#5 [16]	1 3/8	XT5F	XT5M	XT5/4F	XT4M	XT5F	XT5RP	XT5PF	XT5FWFL
#6 [19]	1 9/16	XT6F	XT6M	XT6/5F	XT5M	XT6F	XT6RP	XT6PF	XT6FWFL
#7 [22]	1 15/16	XT7F	XT7M	XT7/6F	XT6M	XT7F	XT7RP	XT7PF	XT7FWFL
#8 [25]	2 3/16	XT8F	XT8M	XT8/7F	XT7M	XT8F	XT8RP	XT8PF	XT8FWFL
#9 [29]	2 3/8	XT9F	XT9M	XT9/8F	XT8M	XT9F	XT9RP	XT9PF	XT9FWFL
#10 [32]	2 3/4	XT10F	XT10M	XT10/9F	XT9M	XT10F	XT10RP	XT10PF	XT10FWFL
#11 [36]	2 7/8	XT11F	XT11M	XT11/10F	XT10M	XT11F	XT11RP	XT11PF	XT11FWFL
#14 [43]	3 13/16	XT14F	XT14M	XT14/11F	XT11M	XT14F	XT14RP	XT14PF	XT14FWFL
#18 [57]	4 9/16	XT18F	XT18M	XT18/14F	XT14M	XT18F	XT18RP	XT18PF	XT18FWFL

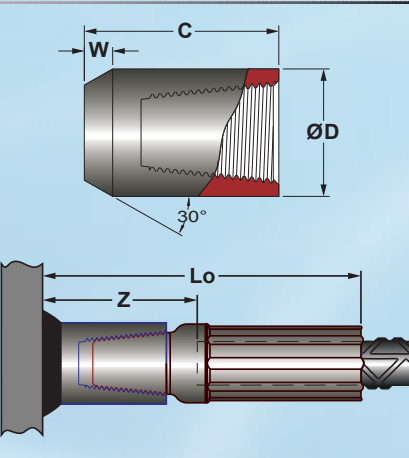
\* COLOR CODE OF COUPLER MUST MATCH COLOR OF DIE SET (See Page 2 for additional information)

# GRIP-TWIST® 'XT' Headed Ends



Rebar Size US [Metric]	XT Male Swaged Length Lm (in.)	Thickness B (in.)	XT DoughNUT Diameter and Weight	
			D (in.)	Wt (lb.)
#4 [13]	3 5/8	3/4	2	0.58
#5 [16]	4 5/16	15/16	2 1/2	1.14
#6 [19]	5	1 1/8	3	1.98
#7 [22]	6 1/2	1 1/2	3 3/4	4.10
#8 [25]	7 1/4	1 5/8	4	4.97
#9 [29]	7 5/8	1 3/4	4 1/2	6.80
#10 [32]	8 9/16	2	5	9.50
#11 [36]	9 3/8	2 1/8	5 1/2	12.4
#14 [43]	12 3/16	2 3/4	7 1/4	27.8
#18 [57]	13 7/8	3 1/8	8 3/4	45.9

# GRIP-TWIST® 'XT' Structural Connectors



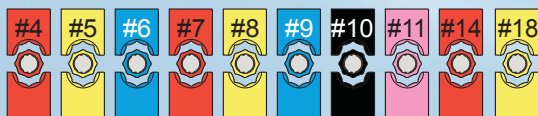
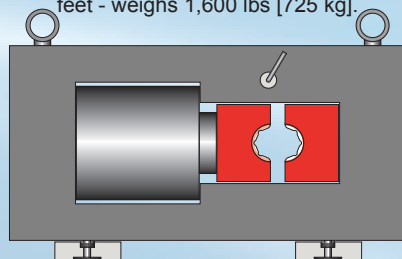
Rebar Size US [Metric]	Taper Grip-Twist XT Color Code	Structural Connector Weight (lbs.)	Structural Connector Outside Dia. D	DIMENSIONS (inches)			
				Structural Connector Length C	Weld Bevel Length W	Gap Z	Overall Length Lo
#4 [13]	Red	0.30	1 1/8	1 11/16	1/4	2 1/8	4 5/16
#5 [16]	Yellow	0.60	1 3/8	2	1/4	2 1/2	5 1/8
#6 [19]	Blue	1.60	1 9/16	2 5/16	5/16	2 15/16	6
#7 [22]	Red	1.60	1 15/16	3	7/16	3 13/16	7 3/4
#8 [25]	Yellow	2.25	2 3/16	3 3/8	1/2	4 3/16	8 9/16
#9 [29]	Blue	2.75	2 3/8	3 9/16	9/16	4 1/2	9 3/8
#10 [32]	Black	4.35	2 3/4	4 1/16	5/8	4 15/16	10 5/16
#11 [36]	Pink	5.05	2 7/8	4 3/8	11/16	5 3/8	11 1/4
#14 [43]	Red	11.75	3 13/16	5 3/4	7/8	7 1/16	14 11/16

# GRIP-TWIST® 'XT' - Equipment and Installation

A Bench Press BP2600 fitted with a two-piece die set and powered by an electrically-driven hydraulic pump is used by the rebar fabricator to efficiently swage Grip-Twist® XT coupler components. The equipment operator depresses a foot control to actuate the system. As the ram extends and pushes the dies towards each other, the coupler component is forced to deform around the rebar and interlock with the bar profile. When a swaging bite has been completed, a pressure switch automatically stops the process and the operator retracts the ram for the next bite. For ease of use, swaging dies are color coded to indicate the rebar and coupler size. Color codes are shown on Grip-Twist® XT Dimensions and Data Charts. *NOTE: Grip-Twist XT coupler components are dimensionally different from standard Grip-Twist products. Consequently, the swaging dies that are used to swage the Grip-Twist XT components are color coded differently from the swaging dies that are used to swage standard Grip-Twist products.*

## BP2600

Bench press for swaging all sizes up to No. 18 [Ø 57mm].  
Double acting cylinder produces 300 tons of force connected to 10 or 15 hp pump for high fabrication shop productivity - includes foot control, lifting eyes and leveling feet - weighs 1,600 lbs [725 kg].



**BPI®**  
Equipment is available for lease or purchase. Equipment must be used in accordance with manuals, lease agreements, manufacturers' directions and all safety instructions.

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