# **DIMENSIONS AND DATA SHEET**INCH-POUND UNITS



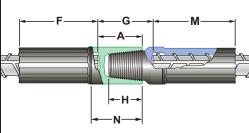


# **GRIP-TWIST®XT MECHANICAL SPLICES**

COLD-SWAGED STEEL COUPLER WITH TAPER THREADED ENDS & OPTIONAL FLANGE

- FOR HIGH STRENGTH, LOW CARBON, CHROMIUM STEEL BARS, ASTM A1035
- FAST, EFFICIENT INSTALLATION Eliminates long lap lengths and reduces congestion.
- DEVELOPED STRENGTH 1.25 x specified yield strength (fy) ASTM A1035 Grades 100 & 120.
- ULTIMATE CAPACITY ASTM A1035 Grades 100 & 120, equal to 150 ksi.
- FULL MECHANICAL SPLICE ACI 318–19 Chapter 18 Exceeds specified tensile strength (fu)
  ASTM A615 Grade 100, equal to 115 ksi.
- CONVENIENCE No special bar end preparation or thread cutting Easy visual inspection. Can be pre–installed using a BPI shop press in a controlled environment. For bars #4 – #18 (Ø 13 – 57 mm).

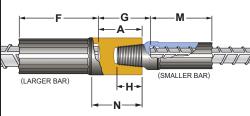
### TAPER THREADED GRIP-TWIST® XT



I REBAR	HAPER THREADED	LCOUPLER	WEIGHT	BIMENCIONE (III)							
SIZE US [Metric]	GRIP-TWIST XT COLOR CODE*	(lb)		BAR INSERTION (AFTER SWAGING)		REBAR GAP	MALE INSERTION	END ALLOWANCE	NON-SWAGED LENGTH		
US [Metric]	COLOR CODE.	FEMALE	MALE	F	M	G	H	Α	N		
#4 [13]	RED	0.62	0.61	2 1/4	2 1/4	1 7/8	<sup>15</sup> /16	1 <sup>5</sup> /16	1 1/2		
#5 [16]	YELLOW	1.18	1.07	2 11/16	2 11/16	2	1 1/8	1 <sup>9</sup> /16	1 <sup>13</sup> / <sub>16</sub>		
#6 [19]	BLUE	1.64	1.57	3 <sup>1</sup> / <sub>16</sub>	3 1/16	2 <sup>7</sup> / <sub>16</sub>	1 <sup>5</sup> /16	1 7/8	2 1/8		
#7 [22]	RED	3.34	3.33	3 <sup>15</sup> /16	3 15/16	3 1/8	1 3/4	2 7/16	2 3/4		
#8 [25]	YELLOW	4.74	4.71	4 <sup>7</sup> /16	4 7/16	3 1/2	2	2 3/4	3 1/8		
#9 [29]	BLUE	5.8	6.0	4 <sup>13</sup> /16	4 13/16	3 1/2	2 1/8	2 3/4	3 1/8		
#10 [32]	BLACK	9.3	9.1	5 3/8	5 3/8	4 1/8	23/8	3 1/4	3 5/8		
#11 [36]	PINK	10.6	10.7	5 5/8	5 5/8	4 5/8	2 11/16	3 <sup>5</sup> /8	4 1/16		
#14 [43]	RED	26	26	6 7/8	6 7/8	7 1/8	3 1/4	5 <sup>3</sup> /16	5 <sup>11</sup> / <sub>16</sub>		
#18 [57]	YELLOW	43	41	8 1/2	8 1/2	7 1/4	4 3/8	5 <sup>13</sup> / <sub>16</sub>	6 <sup>13</sup> / <sub>16</sub>		

ALL DIMENSIONS ARE APPROXIMATE

### **GRIP-TWIST® XT TRANSITION SERIES**

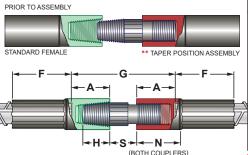


-	REBAR	REBAR SIZE XT COLOR CODE*		COUPLER	WEIGHT	DIMENSIONS (in)							
ı				(lb)		BAR INSERTION (AFTER SWAGING)		REBAR GAP	MALE INSERTION	END ALLOWANCE	NON-SWAGED LENGTH		
ı		FEMALE	MALE	FEMALE	MALE	F	M	G	Н	Α	N		
	5/4	YELLOW	RED	1.28	0.61	2 11/16	2 1/4	1 <sup>15</sup> /16	<sup>15</sup> / <sub>16</sub>	1 <sup>9</sup> /16	1 <sup>13</sup> / <sub>16</sub>		
	6/5	BLUE	YELLOW	1.80	1.07	3 <sup>1</sup> / <sub>16</sub>	2 11/16	2 <sup>5</sup> /16	1 1/8	1 7/8	2 1/8		
	7/6	RED	BLUE	3.83	1.57	3 <sup>15</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>16</sub>	3	1 <sup>5</sup> /16	2 <sup>7</sup> / <sub>16</sub>	2 3/4		
Ħ	8/7	YELLOW	RED	5.23	3.33	4 7/16	3 15/16	3 7/16	1 3/4	2 3/4	3 1/8		
1	9/8	BLUE	YELLOW	6.27	4.71	4 13/16	4 7/16	3 1/2	2	2 3/4	3 1/8		
	10/9	BLACK	BLUE	9.9	6.0	5 3/8	4 13/16	4	2 1/8	3 1/4	3 <sup>5</sup> /8		
	11/10	PINK	BLACK	10.9	9.1	5 5/8	5 3/8	4 1/2	2 3/8	3 5/8	4 1/16		
	14/11	RED	PINK	30	10.7	6 7/8	5 5/8	6 <sup>1</sup> / <sub>8</sub>	2 11/16	5 <sup>3</sup> /16	5 <sup>11</sup> /16		
	18/14	YELLOW	RED	43	26	8 1/2	6 7/8	5 3/4	3 1/4	4 1/2	5 1/2		

ALL DIMENSIONS ARE APPROXIMATE - OTHER TRANSITION SIZES AVAILABLE UPON REQUEST

DIMENSIONS (in)

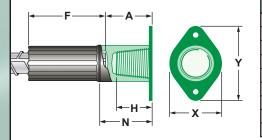
## **GRIP-TWIST® XT POSITION SERIES**



٦					DAD		DIMEN	SIONS (in)		
	REBAR SIZE US [Metric]	GRIP-TWIST XT POSITION COLOR CODE*	COUPLER (II		BAR INSERTION (AFTER SWAGE) <b>F</b>		REBAR GAP <b>G</b>	MALE	END ALLOWANCE <b>A</b>	NON-SWAGED LENGTH <b>N</b>
	#4 [13]	RED	0.62	0.98	2 1/4	1 <sup>1</sup> /8	3 3/4	15/16	1 <sup>5</sup> /16	1 1/2
	#5 [16]	YELLOW	1.18	1.75	2 11/16	1 1/4	4 3/8	1 1/8	1 <sup>9</sup> /16	1 <sup>13</sup> / <sub>16</sub>
	#6 [19]	BLUE	1.64	2.66	3 <sup>1</sup> / <sub>16</sub>	1 5/8	5 3/8	1 <sup>5</sup> /16	1 7/8	2 1/8
	#7 [22]	RED	3.34	5.29	3 <sup>15</sup> /16	1 1/2	6 3/8	1 3/4	2 <sup>7</sup> / <sub>16</sub>	2 3/4
	#8 [25]	YELLOW	4.74	7.65	4 7/16	1 <sup>5</sup> /8	7 1/8	2	2 3/4	3 1/8
	#9 [29]	BLUE	5.8	9.8	4 13/16	1 7/8	7 3/8	2 1/8	2 3/4	3 1/8
A	#10 [32]	BLACK	9.3	14.4	5 3/8	1 3/4	8 1/4	2 3/8	3 1/4	3 5/8
7	#11 [36]	PINK	10.6	16.6	5 5/8	2 1/8	9 3/8	2 11/16	3 5/8	4 1/16
٦	#14 [43]	RED	26	40	6 7/8	2 1/8	12 1/2	3 1/4	5 <sup>3</sup> /16	5 <sup>11</sup> / <sub>16</sub>
	#18 [57]	YELLOW	43	67	8 1/2	2 3/4	14 3/8	4 3/8	5 <sup>13</sup> / <sub>16</sub>	6 <sup>13</sup> / <sub>16</sub>

(BOTH COUPLERS) \*\* EACH TAPER POSITION ASSEMBLY (XT##TPA) CONSISTS OF (1) POSITION COUPLER (XT##PF) AND (1) PRE-INSTALLED STUD (TT##RP) EACH MARKED WITH SEPARATE CODE FOR TRACEABILITY

## **GRIP-TWIST® XT FLANGED SERIES**



REBAR	GRIP-TWIST XT	FEMALE COUPLER	BAR DIMENSIONS (in)							
SIZE	w/ METAL FLANGE	w/ FLANGE WEIGHT	INSERTION		FLANGE	MALE	END ALLOWANCE	NON-SWAGED LENGTH		
US [Metric]	COLOR CODE*	(lb)	(AFTER SWAGE) <b>F</b>	<b>X</b>	HEIGHT <b>Y</b>	H	ALLOWANCE A	N N		
#4 [13]	RED	0.67	2 1/4	1 <sup>5</sup> /8	2 <sup>7</sup> /16	<sup>15</sup> / <sub>16</sub>	1 <sup>5</sup> /16	1 1/2		
#5 [16]	YELLOW	1.26	2 11/16	2	2 <sup>15</sup> / <sub>16</sub>	1 1/8	1 <sup>9</sup> /16	1 13/16		
#6 [19]	BLUE	1.72	3 1/16	2	2 <sup>15</sup> / <sub>16</sub>	1 5/16	1 7/8	2 1/8		
#7 [22]	RED	3.44	3 <sup>15</sup> /16	2 3/8	3 3/8	1 3/4	2 <sup>7</sup> / <sub>16</sub>	2 3/4		
#8 [25]	YELLOW	4.87	4 7/16	2 5/8	3 11/16	2	2 3/4	3 1/8		
#9 [29]	BLUE	5.9	4 13/16	2 3/4	3 3/4	2 1/8	2 3/4	3 1/8		
#10 [32]	BLACK	9.5	5 3/8	3 1/8	4 1/8	2 3/8	3 1/4	3 5/8		
#11 [36]	PINK	10.8	5 <sup>5</sup> /8	3 1/4	4 1/4	2 11/16	3 5/8	4 1/16		
#14 [43]	RED	27	6 7/8	3 7/8	5 3/4	3 1/4	5 <sup>3</sup> /16	5 <sup>11</sup> / <sub>16</sub>		

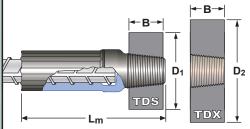
ALL DIMENSIONS ARE APPROXIMATE - PLASTIC FLANGE ALSO AVAILABLE FOR SIZES #4 AND #5 - ASK FOR DETAILS



## **DIMENSIONS AND DATA SHEET INCH-POUND UNITS**



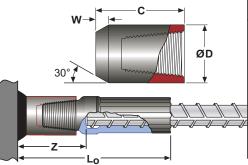




- 1	REBAR	COMPLETE XT MALE	THICKNESS	HEAD DIAMETER AND WEIGHT						
	SIZE	SWAGED LENGTH	(in)	TDS SER	RIES [5Ab]	TDX SERIES [10Ab]				
	US [Metric]	L <sub>m</sub> (in)	В	D <sub>1</sub> (in)	Wt (lb)	D <sub>2</sub> (in)	Wt (lb)			
	#4 [13]	3 5/8	7/8	1 3/4	0.50	2 3/16	0.85			
	#5 [16]	4 <sup>5</sup> /16	<sup>15</sup> /16	1 7/8	0.57	2 5/8	1.28			
	#6 [19]	5	1 1/4	2 3/16	1.02	2 7/8	1.98			
	#7 [22]	6 1/2	1 1/2	2 <sup>13</sup> / <sub>16</sub>	1.97	3 7/8	4.32			
	#8 [25]	7 1/4	1 <sup>5</sup> /8	3 1/4	2.90	4 1/4	5.59			
	#9 [29]	7 <sup>5</sup> /8	1 7/8	3 <sup>7</sup> / <sub>16</sub>	3.66	4 3/4	8.23			
	#10 [32]	8 <sup>9</sup> /16	2	3 7/8	4.97	5 1/4	10.5			
	#11 [36]	9 3/8	2 1/8	4 1/4	6.50	5 3/4	13.7			
	#14 [43]	12 <sup>3</sup> / <sub>16</sub>	2 3/4	5 1/2	13.5	7 1/2	29			
	#18 [57]	14 <sup>5</sup> / <sub>16</sub>	3 5/8	6 <sup>1</sup> / <sub>4</sub>	24.5	8 3/8	48			

ALL DIMENSIONS ARE APPROXIMATE





1	REBAR	TAPER THREADED	STRUCTURAL	DIMENSIONS (III)							
١,	SIZE US [Metric]	GRIP-TWIST <b>XT</b> MALE COLOR CODE *	CONNECTOR WEIGHT (lb)	XT STR CONN. OUTSIDE DIA D	XT STR CONN. LENGTH C	WELD BEVEL LENGTH W	REBAR GAP <b>Z</b>	OVERALL LENGTH L <sub>0</sub>			
[	#4 [13]	RED	0.32	1 1/8	1 <sup>11</sup> / <sub>16</sub>	1/4	2 1/8	4 <sup>5</sup> /16			
	#5 [16]	YELLOW	0.58	1 <sup>3</sup> /8	2	1/4	2 1/2	5 1/8			
	#6 [19]	BLUE	0.83	1 <sup>9</sup> / <sub>16</sub>	2 <sup>5</sup> /16	<sup>5</sup> /16	2 <sup>15</sup> / <sub>16</sub>	6			
	#7 [22]	RED	1.58	1 <sup>15</sup> /16	3	7/16	3 <sup>13</sup> / <sub>16</sub>	7 3/4			
	#8 [25]	YELLOW	2.24	2 <sup>3</sup> / <sub>16</sub>	3 3/8	1/2	4 <sup>3</sup> /16	8 <sup>9</sup> /16			
	#9 [29]	BLUE	2.8	2 3/8	3 5/8	<sup>9</sup> /16	4 1/2	9 3/8			
	#10 [32]	BLACK	4.5	2 3/4	4 1/8	5/8	5	10 <sup>5</sup> /16			
4	#11 [36]	PINK	5.1	2 7/8	4 3/8	<sup>11</sup> /16	5 <sup>3</sup> /8	11 <sup>1</sup> / <sub>4</sub>			
	#14 [43]	RED	12	3 <sup>13</sup> / <sub>16</sub>	5 3/4	7/8	7 <sup>1</sup> /16	14 <sup>11</sup> /16			
	#18 [57]	YELLOW	20	4 <sup>9</sup> /16	6 <sup>5</sup> /8	1	3 <sup>5</sup> /8	16 <sup>9</sup> /16			

ALL DIMENSIONS ARE APPROXIMATE

REBAR SIZE	COUPLER OUTSIDE	PART NUMBERS		TTGT XT TRANSITION PART NUMBERS		TAPER GRIP-TWIST XT POSITION PART NUMBERS			TTGT <b>XT</b> FLANGED	GRIP-TWIST: PART NU		TTGT <b>XT</b> STRUCTURAL
US [Metric]	DIAMETER (in)	FEMALE	MALE	TRANSITION FEMALE	MALE	FEMALE	STUD	POSITION COUPLER	FEMALE P/N	TDS [5Ab]	TDX [10Ab]	CONN. P/N
#4 [13]	1 1/8	XT04F	XT04M			XT04F	TT05RP	XT04PF	XT04FWFL	05TDS	05TDX	TT05SC
#5 [16]	1 <sup>3</sup> /8	XT05F	XT05M	XT05/04F	XT04M	XT05F	TT06RP	XT05PF	XT05FWFL	06TDS	06TDX	TT06SC
#6 [19]	1 <sup>9</sup> /16	XT06F	XT06M	XT06/05F	XT05M	XT06F	TT07RP	XT06PF	XT06FWFL	07TDS	07TDX	TT07SC
#7 [22]	1 <sup>15</sup> / <sub>16</sub>	XT07F	XT07M	XT07/06F	XT06M	XT07F	TT09RP	XT07PF	XT07FWFL	09TDS	09TDX	TT09SC
#8 [25]	2 <sup>3</sup> / <sub>16</sub>	XT08F	M80TX	XT08/07F	XT07M	XT08F	TT10RP	XT08PF	XT08FWFL	10TDS	10TDX	TT10SC
#9 [29]	2 3/8	XT09F	XT09M	XT09/08F	M80TX	XT09F	TT11RP	XT09PF	XT09FWFL	11TDS	11TDX	TT11SC
#10 [32]	2 3/4	XT10F	XT10M	XT10/09F	XT09M	XT10F	TT1213RP	XT10PF	XT10FWFL	13TDS	13TDX	TT13SC
#11 [36]	2 7/8	XT11F	XT11M	XT11/10F	XT10M	XT11F	TT14RP	XT11PF	XT11FWFL	14TDS	14TDX	TT14SC
#14 [43]	3 7/8	XT14F	XT14M	XT14/11F	XT11M	XT14F	TT18RP	XT14PF	XT14FWFL	18TDS	18TDX	TT18SC
#18 [57]	4 5/8	XT18F	XT18M	XT18/14F	XT14M	XT18F	XT18RP	XT18PF		20TDS	20TDX	TT20SC

\*\* MATCHING THREAD SIZE COINCIDES WITH LARGER, STANDARD GRIP-TWIST® DoughNUT™

## TAPER THREADED 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: Taper Threaded 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 used to swage standard Grip-Twist products.

### \* COLOR CODE OF COUPLER MUST MATCH COLOR OF DIE SET

### **BP2600**

Bench press for swaging all sizes up to #18 [Ø 57mm]. Double acting cylinder produces 300 tons of force connected to 10 or 15 hp pump for high fabrication shop productivity. Press includes foot control, lifting eyes and leveling feet.





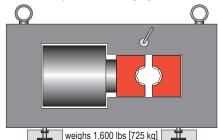












BPI® Equipment is available for lease or purchase.

Equipment must be used in accordance with manuals, lease agreements. manufacturers' directions and all safety instructions.

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