# DIMENSIONS AND DATA SHEET INCH-POUND UNITS



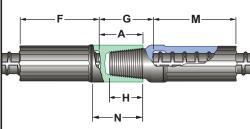


## **GRIP-TWIST® XT MECHANICAL SPLICES**

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, 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.

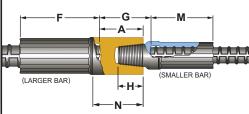
#### TAPER THREADED GRIP-TWIST® XT



	REBAR	TAPER THREADED	COUPLER WEIGHT		DIMENSIONS (in)							
SIZE		GRIP-TWIST XT	(lb)		BAR INSERTION (AFTER SWAGING)		REBAR GAP	MALE INSERTION	END ALLOWANCE	NON-SWAGED LENGTH		
	US [Metric]	COLOR CODE*	FEMALE	MALE	F	M	Ğ	Н	Α	N		
	#4 [13]	RED	0.62	0.61	2 1/4	2 1/4	1 7/8	15/16	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 1/16	3 <sup>1</sup> / <sub>16</sub>	2 7/16	1 <sup>5</sup> /16	1 7/8	2 1/8		
	#7 [22]	RED	3.34	3.33	3 15/16	3 <sup>15</sup> /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		
٦	#9 [29]	BLUE	5.8	6.0	4 13/16	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	2 3/8	3 1/4	3 5/8		
	#11 [36]	PINK	10.6	10.7	5 5/8	5 <sup>5</sup> /8	4 5/8	2 11/16	3 <sup>5</sup> /8	4 <sup>1</sup> / <sub>16</sub>		
	#14 [43]	RED	26	26	6 7/8	6 7/8	7 1/8	3 1/4	5 <sup>3</sup> / <sub>16</sub>	5 11/16		
	#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 13/16		

ALL DIMENSIONS ARE APPROXIMATE

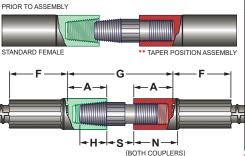
#### **GRIP-TWIST® XT TRANSITION SERIES**



- 1	REBAR XT COLOR CODE*		COUPLER WEIGHT		DIMENSIONS (In)						
	SIZE			(lp)		BAR INSERTION		REBAR GAP	MALE		NON-SWAGED
	OIZL	TRANS.	TAPER	ì,	(.2)		(AFTER SWAGING)		INSERTION	ALLOWANCE	LENGTH
-		FEMALE	MALE	FEMALE	MALE	F	M	G	H	Α	N
-	5/4	YELLOW	RED	1.28	0.61	2 11/16	2 1/4	1 <sup>15</sup> /16	15/16	1 <sup>9</sup> /16	1 <sup>13</sup> / <sub>16</sub>
1	6/5	BLUE	YELLOW	1.80	1.07	3 1/16	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 15/16	3 1/16	3	1 5/16	2 7/16	2 3/4
H	8/7	YELLOW	RED	5.23	3.33	4 7/16	3 <sup>15</sup> / <sub>16</sub>	3 <sup>7</sup> /16	1 3/4	2 3/4	3 1/8
٦	9/8	BLUE	YELLOW	6.27	4.71	4 13/16	4 <sup>7</sup> /16	3 1/2	2	2 3/4	3 1/8
1	10/9	BLACK	BLUE	9.9	6.0	5 3/8	4 13/16	4	2 1/8	3 1/4	3 5/8
1	11/10	PINK	BLACK	10.9	9.1	5 5/8	5 3/8	4 1/2	2 3/8	3 5/8	4 <sup>1</sup> / <sub>16</sub>
1	14/11	RED	PINK	30	10.7	6 7/8	5 <sup>5</sup> /8	6 <sup>1</sup> /8	2 11/16	5 <sup>3</sup> /16	5 <sup>11</sup> /16

ALL DIMENSIONS ARE APPROXIMATE - OTHER TRANSITION SIZES AVAILABLE UPON REQUEST

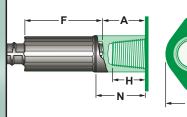
#### **GRIP-TWIST® XT POSITION SERIES**



1	REBAR	GRIP-TWIST XT	COUPLER	WEIGHT	BAR		DIMENSIONS (in)						
	SIZE	POSITION	(11	b)	INSERTION (AFTER SWAGE)		REBAR GAP	MALE	END ALLOWANCE	NON-SWAGED LENGTH			
	US [Metric]	COLOR CODE*	FEMALE	POSITION w/ STUD	F	S	G	H	ALLOWANCE	N			
	#4 [13]	RED	0.62	0.98	2 1/4	1 1/8	3 3/4	<sup>15</sup> / <sub>16</sub>	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			
ı	#7 [22]	RED	3.34	5.29	3 <sup>15</sup> /16	1 1/2	6 3/8	1 <sup>3</sup> / <sub>4</sub>	2 7/16	2 3/4			
ı	#8 [25]	YELLOW	4.74	7.65	4 <sup>7</sup> /16	1 5/8	7 1/8	2	2 3/4	3 1/8			
	#9 [29]	BLUE	5.8	9.8	4 <sup>13</sup> /16	1 7/8	7 3/8	2 1/8	2 3/4	3 1/8			
4	#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			
i	#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			
	#14 [43]	RED	26	40	6 <sup>7</sup> /8	2 1/8	12 1/2	3 1/4	5 <sup>3</sup> /16	5 <sup>11</sup> /16			
	#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> /16			

\*\* 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**



	#4
1	#5
	#6
Y	#7
	#8
↓	#9
	#10
	#11

REBA	ΔR	GRIP-TWIST XT	FEMALE COUPLER	BAR	DIMENSIONS (in)						
SIZI US [Me	E	w/METAL FLANGE COLOR CODE*	w/ FLANGE WEIGHT (lb)	INSERTION (AFTER SWAGE) <b>F</b>	FLANGE WIDTH X	FLANGE HEIGHT Y	MALE INSERTION <b>H</b>	END ALLOWANCE <b>A</b>	NON-SWAGED LENGTH <b>N</b>		
#4 [1	13]	RED	0.67	2 1/4	1 5/8	2 <sup>7</sup> /16	<sup>15</sup> /16	1 <sup>5</sup> /16	1 1/2		
#5 [1	16]	YELLOW	1.26	2 11/16	2	2 <sup>15</sup> / <sub>16</sub>	1 1/8	1 <sup>9</sup> /16	1 <sup>13</sup> /16		
#6 [1	19]	BLUE	1.72	3 1/16	2	2 15/16	1 5/16	1 7/8	2 1/8		
#7 [2	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 [2	25]	YELLOW	4.87	4 7/16	2 5/8	3 11/16	2	2 3/4	3 1/8		
#9 [2	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 [4	43]	RED	27	6 <sup>7</sup> /8	3 13/16	5 <sup>3</sup> / <sub>4</sub>	3 1/4	5 <sup>3</sup> /16	5 <sup>11</sup> / <sub>16</sub>		

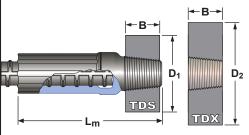
ALL DIMENSIONS ARE APPROXIMATE – PLASTIC FLANGE ALSO AVAILABLE FOR SIZES #4 AND #5 – ASK FOR DETAILS



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

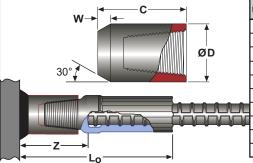






		R AND WEIGHT	THICKNESS	COMPLETE XT MALE	REBAR			
	IES [10Ab]	TDX SER	RIES [5Ab]	TDS SEF	(in)	SWAGED LENGTH	SIZE	
b)	Wt (lb)	D <sub>2</sub> (in)	Wt (lb)	D <sub>1</sub> (in)	В	L <sub>m</sub> (in)	US [Metric]	
5	0.85	2 3/16	0.50	1 3/4	7/8	3 5/8	#4 [13]	
3	1.28	2 5/8	0.57	1 7/8	<sup>15</sup> / <sub>16</sub>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





ш	REBAR				DIMENSIONS (in)							
ı	SIZE JS [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> /16	2 <sup>5</sup> /16	<sup>5</sup> /16	2 <sup>15</sup> / <sub>16</sub>	6				
Γ	#7 [22]	RED	1.58	1 <sup>15</sup> / <sub>16</sub>	3	7/16	3 13/16	7 3/4				
	#8 [25]	YELLOW	2.24	2 3/16	3 3/8	1/2	4 3/16	8 <sup>9</sup> /16				
	#9 [29]	BLUE	2.8	2 3/8	3 5/8	9/16	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	11/16	5 <sup>3</sup> /8	11 1/4				
	#14 [43]	RED	12	3 13/16	5 3/4	7/8	7 <sup>1</sup> /16	14 11/16				
	#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

l													
REBAR SIZE	COUPLER OUTSIDE	OUTSIDE PART NUMBERS		TTGT <b>XT</b> 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	XT04SC	
#5 [16]	1 <sup>3</sup> /8	XT05F	XT05M	XT05/04F	XT04M	XT05F	TT06RP	XT05PF	XT05FWFL	06TDS	06TDX	XT05SC	
#6 [19]	1 9/16	XT06F	XT06M	XT06/05F	XT05M	XT06F	TT07RP	XT06PF	XT06FWFL	07TDS	07TDX	XT06SC	
#7 [22]	1 <sup>15</sup> /16	XT07F	XT07M	XT07/06F	XT06M	XT07F	TT09RP	XT07PF	XT07FWFL	09TDS	09TDX	XT07SC	
#8 [25]	2 <sup>3</sup> /16	XT08F	M80TX	XT08/07F	XT07M	XT08F	TT10RP	XT08PF	XT08FWFL	10TDS	10TDX	XT08SC	
#9 [29]	2 3/8	XT09F	XT09M	XT09/08F	M80TX	XT09F	TT11RP	XT09PF	XT09FWFL	11TDS	11TDX	XT09SC	
#10 [32]	2 3/4	XT10F	XT10M	XT10/09F	XT09M	XT10F	TT1213RP	XT10PF	XT10FWFL	13TDS	13TDX	XT10SC	
#11 [36]	2 7/8	XT11F	XT11M	XT11/10F	XT10M	XT11F	TT14RP	XT11PF	XT11FWFL	14TDS	14TDX	XT11SC	
#14 [43]	3 13/16	XT14F	XT14M	XT14/11F	XT11M	XT14F	TT18RP	XT14PF	XT14FWFL	18TDS	18TDX	XT14SC	
#18 [57]	4 5/8	XT18F	XT18M	XT18/14F	XT14M	XT18F	XT18RP	XT18PF		20TDS	20TDX	XT18SC	

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

#### 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 No. 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.







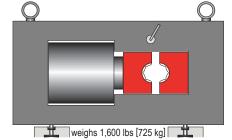












**BPI®** Equipment is available for lease or purchase.

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

While the information contained in this document is believed to be accurate at the time of publication, BPI reserves the right to make changes, design modifications, corrections and other revisions as it sees fit, without notice. All products described herein are supplied in accordance with BPI's standard Terms and Conditions of Sale. This document is of a promotional nature only. Aspects of structural design, evaluation of product fitness for use, suitability or similar attributes are the responsibility of others.





## DOWNLOAD THE FREE BARSPLICE APP AND FOLLOW US ON SOCIAL MEDIA!





Barsplice Products, Inc., 4900 Webster Street, Dayton OH 45414, USA Tel: 937-275-8700 • www.barsplice.com • e-mail: bar@barsplice.com

