

**TABLE 1 - ALLOWABLE NOMINAL TENSION STRENGTH, P<sub>ts</sub>, FOR ELCO BI-FLEX and HILTI BI-METAL KWIK-FLEX FASTENERS<sup>1</sup>**

SCREW SIZE	SCREW TYPE	DRILL POINT TYPE	DRILL CAP. (inch) <sup>2</sup>	TENSION (pounds)								
				COLD-FORMED STEEL GAGE <sup>3</sup> (F <sub>v</sub> = 60 ksi MIN.)					STEEL (A36 MIN.)		ALUMINUM 6063-T5 (F <sub>y</sub> = 16 ksi)	
				18 Ga	16 Ga	14 Ga	12 Ga	1/8"	3/16"	1/4"	1/8"	1/4"
10-16	Self-drill	2	0.150	152	196	264	465	635	-	-	218	-
10-16		3	0.187	-	205	228	414	435	509	-	152	-
12-14		2	0.187	176	250	297	512	867	838	-	173	-
12-14		3	0.210	139	226	267	457	469	672	-	173	372
12-24		5	0.500	-	-	-	-	-	-	747	-	374
1/4-14		2	0.210	206	295	361	610	850	1178	-	200	-
1/4-20		3	0.375	-	227	260	481	749	1228	1356	200	487
1/4-20		5	0.500	-	-	-	-	-	-	-	-	487

1. Nominal strengths are based on laboratory tests and calculations in accordance with American Iron and Steel Institute Standard North American Specification for the Design of Cold-Formed Steel Structural Members, 2007 Edition, and are the minimum of pull-over, pull-out or fastener tension strength.

2. The drill capacity is the maximum metal thickness the fastener can self-drill.

3. The base-metal design thickness of 18 Gage steel is 0.0451"; 16 Gage is 0.0566"; 14 Gage is 0.0713"; and 12 Gage is 0.1017".

**TABLE 2 - ALLOWABLE NOMINAL SHEAR STRENGTH, P<sub>ss</sub>, FOR ELCO BI-FLEX and HILTI BI-METAL KWIK-FLEX FASTENERS<sup>1</sup>**

SCREW SIZE	SCREW TYPE	DRILL POINT TYPE	DRILL CAP. (inch) <sup>2</sup>	SHEAR (pounds)								
				COLD-FORMED STEEL GAGE <sup>3</sup> (F <sub>v</sub> = 60 ksi MIN.)					STEEL (A36 MIN.)		ALUMINUM 6063-T5 (F <sub>y</sub> = 16 ksi)	
				18 Ga	16 Ga	14 Ga	12 Ga	1/8"	3/16"	1/4"	1/8"	1/4"
10-16	Self-drill	2	0.150	427	427	427	427	427	-	-	348	697
10-16		3	0.187	-	427	427	427	427	427	-	348	697
12-14		2	0.187	467	650	650	650	650	650	-	396	792
12-14		3	0.210	467	650	650	650	650	650	-	396	792
12-24		5	0.500	-	-	-	-	-	-	761	396	792
1/4-14		2	0.210	503	707	892	892	892	892	-	458	917
1/4-20		3	0.375	-	707	954	954	954	954	954	458	917
1/4-20		5	0.500	-	-	-	-	-	-	-	458	917

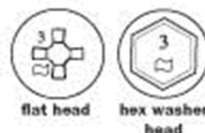
1. Nominal strengths are based on laboratory tests, calculated in accordance with American Iron and Steel Institute Standard North American Specification for the Design of Cold-Formed Steel Structural Members, 2007 Edition.

2. The drill capacity is the maximum metal thickness the fastener can self-drill.

3. Designer shall use the shear value corresponding to the thinner of the connected materials. The base-metal design thickness of 18 Gage steel is 0.0451"; 16 Gage is 0.0566"; 14 Gage is 0.0713"; and 12 Gage is 0.1017".

**TABLE 3 - MINIMUM FASTENER SPACING AND EDGE DISTANCE**

SCREW SIZE (DIAMETER)	FASTENED MATERIAL	MINIMUM SPACING	MINIMUM EDGE DISTANCE
No. 10 (0.190")	Steel	9/16"	9/32"
	Aluminum	25/32"	13/32"
No. 12 (0.216")	Steel	11/16"	3/8"
	Aluminum	7/8"	7/16"
1/4"	Steel	3/4"	3/8"
	Aluminum	1"	1/2"



**FIGURE 1 - TYPICAL IDENTIFICATION: HEAD MARKING**