



# Crosby® Turnbuckles

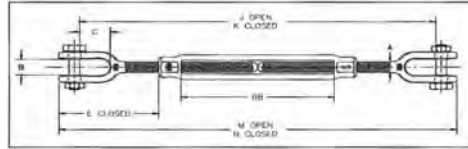
## Jaw & Jaw Turnbuckles



**HG-228  
JAW & JAW**

*Meets the performance requirements of Federal Specifications FF- T-971b, Type 1, Form 1- CLASS 7, and ASTM F-1145, except for those provisions required of the contractor.*

- End fittings are Quenched and Tempered or Normalized, bodies heat treated by normalizing.
- Hot Dip galvanized steel.
- TURNBUCKLES RECOMMENDED FOR STRAIGHT OR IN-LINE PULL ONLY.
- Forged jaw ends are fitted with bolts and nuts for 1/4" through 5/8", and pins and cotters on 3/4" through 2-3/4" sizes.
- Modified UNJ thread on end fittings for improved fatigue properties.
- Body has UNC threads.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these turnbuckles meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.
- Lock Nuts available for all sizes.
- Comprehensive end fitting data provided.
- Fatigue Rated.



**HG-228 Jaw & Jaw Turnbuckle**

Thread Diameter & Take up (in.)	HG-228 Stock Number	Working Load Limit (lbs)*	Weight Each (lbs)	Dimensions (in.)										
				A	B	E Closed	G	J Open	K Closed	M Open	N Closed	BB		
+1/4x4	1032493	500	.37	.25	.45	1.66	.64	11.19	7.19	12.18	8.18	4.07		
+5/16x4-1/2	1032518	800	.56	.31	.50	2.02	.87	13.07	8.57	14.12	9.62	4.58		
+3/8x6	1032536	1200	.85	.38	.53	2.11	.85	16.25	10.25	17.50	11.50	6.10		
1/2x6	1032554	2200	1.82	.50	.64	3.22	1.07	18.65	12.65	20.14	14.14	6.03		
1/2x9	1032572	2200	2.29	.50	.64	3.20	1.07	24.94	15.94	26.43	17.43	9.36		
1/2x12	1032590	2200	2.71	.50	.64	3.20	1.07	30.94	18.94	32.43	20.43	12.36		
5/8x6	1032616	3500	3.21	.63	.79	3.90	1.32	19.74	13.74	21.82	15.82	6.03		
5/8x9	1032634	3500	3.95	.63	.79	3.89	1.32	26.08	17.08	28.16	19.16	9.39		
5/8x12	1032652	3500	4.58	.63	.79	3.89	1.32	32.08	20.08	34.16	22.16	12.39		
3/4x6	1032670	5200	4.80	.75	.97	4.71	1.52	21.09	15.09	23.68	17.68	6.13		
3/4x9	1032698	5200	5.85	.75	.97	4.68	1.52	27.49	18.49	30.08	21.08	9.59		
3/4x12	1032714	5200	6.72	.75	.97	4.68	1.52	33.49	21.49	36.08	24.08	12.59		
3/4x18	1032732	5200	8.45	.75	.97	4.71	1.52	45.49	27.49	48.08	30.08	18.53		
7/8x12	1032750	7200	9.37	.88	1.16	5.50	1.77	34.65	22.65	37.62	25.62	12.16		
7/8x18	1032778	7200	11.8	.88	1.16	5.50	1.77	47.12	29.12	50.09	32.09	18.63		
1x6	1032796	10000	10.4	1.00	1.34	6.09	2.05	23.82	17.82	27.18	21.18	6.18		
1x12	1032812	10000	13.8	1.00	1.34	6.09	2.05	35.82	23.82	39.18	27.18	12.18		
1x18	1032830	10000	17.1	1.00	1.34	6.09	2.05	47.82	29.82	51.18	33.18	18.18		
1x24	1032858	10000	21.0	1.00	1.34	6.06	2.05	60.42	36.42	63.78	39.78	24.84		
1-1/4x12	1032876	15200	21.9	1.25	1.84	8.09	2.82	39.37	27.37	43.58	31.58	12.06		
1-1/4x18	1032894	15200	25.9	1.25	1.84	8.09	2.82	51.37	33.37	55.58	37.58	18.06		
1-1/4x24	1032910	15200	29.8	1.25	1.84	8.09	2.82	63.93	39.93	68.14	44.14	24.62		
1-1/2x12	1032938	21400	32.6	1.50	2.06	8.93	2.81	40.76	28.76	45.68	33.68	12.32		
1-1/2x18	1032956	21400	38.0	1.50	2.06	8.93	2.81	52.76	34.76	57.68	39.68	18.32		
1-1/2x24	1032974	21400	43.5	1.50	2.06	8.93	2.81	65.38	41.38	70.30	46.30	24.94		
1-3/4x18	1033018	28000	53.5	1.75	2.60	9.36	3.35	53.35	35.35	59.16	41.16	18.37		
1-3/4x24	1033036	28000	61.1	1.75	2.60	9.36	3.35	65.35	41.35	71.16	47.16	24.37		
2x24	1033054	37000	96.3	2.00	2.62	11.80	3.74	69.64	45.64	76.72	52.72	24.48		
2-1/2x24	1033072	60000	167	2.50	3.06	13.26	4.44	72.97	48.97	82.18	58.18	24.60		
2-3/4x24	1033090	75000	199	2.75	3.69	14.92	4.19	74.75	50.75	85.50	61.50	24.65		

\* Proof Load is 2.5 times Working Load Limit. Ultimate load is 5 times Working Load Limit. + Mechanical Galvanized.



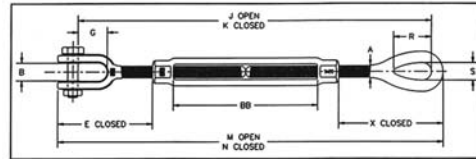
Jaw & Eye Turnbuckles



**HG-227  
JAW & EYE**

*Meets the performance requirements of Federal Specifications FF-1791b, Type 1, Form 1- CLASS 8, and ASTM F-1145, except for those provisions required of the contractor.*

- Hot Dip galvanized steel.
- End fittings are Quenches and Tempered or normalized, bodies heat treated by normalizing.
- Turnbuckles eyes are forged and elongated, by design, to maximize easy attachment in system and minimize stress in the eye. For turnbuckles size 1/4" through 2-1/2", a shackle one size smaller can be reeved through eye.
- Forged jaw ends are fitted with bolts and nuts for 1/4" through 5/8", and pins and cotters on 3/4" through 2-3/4" sizes.
- Modified UNJ thread on end fittings for improved fatigue properties.
- Body has UNC threads.
- Meets or exceed all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these turnbuckles meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.
- TURNBUCKLES RECOMMENDED FOR STRAIGHT OR IN-LINE PULL ONLY.
- Lock Nuts available for all sizes (see page Crosby Catalog).
- For Comprehensive end fitting data (see Crosby Catalog).
- Fatigue Rated.



**HG-227 Jaw & Eye Turnbuckle**

Thread Diameter & Take up (in.)	HG-227 Stock Number	Working Load Limit (lbs)*	Weight Each (lbs)	Dimensions (in.)											
				A	B	E Closed	G	J Open	K Closed	M Open	N Closed	R	S	X Closed	BB
#1/4x4	1031877	500	.33	.25	.45	1.66	.64	11.57	7.57	12.28	8.28	.81	.34	1.76	4.07
#5/16x4-1/2	1031895	800	.52	.31	.50	2.02	.87	13.50	9.00	14.30	9.80	.95	.44	2.20	4.58
#3/8x6	1031911	1200	.80	.38	.53	2.11	.85	16.91	10.91	17.87	11.87	1.13	.53	2.48	6.10
1/2x6	1031939	2200	1.77	.50	.64	3.22	1.07	19.30	13.30	20.48	14.48	1.41	.71	3.56	6.03
1/2x9	1031957	2200	2.25	.50	.64	3.20	1.07	25.59	16.59	26.77	17.77	1.41	.71	3.54	9.36
1/2x12	1031975	2200	2.67	.50	.64	3.20	1.07	31.59	19.59	32.77	20.77	1.41	.71	3.54	12.36
5/8x6	1031993	3500	2.98	.63	.79	3.90	1.32	20.73	14.73	22.27	16.27	1.80	.88	4.35	6.03
5/8x9	1032019	3500	3.72	.63	.79	3.89	1.32	27.07	18.07	28.61	19.61	1.80	.88	4.34	9.39
5/8x12	1032037	3500	4.35	.63	.79	3.89	1.32	33.07	21.07	34.61	22.61	1.80	.88	4.34	12.39
3/4x6	1032055	5200	4.51	.75	.97	4.71	1.52	22.17	16.17	24.09	18.09	2.09	1.00	5.12	6.13
3/4x9	1032073	5200	5.56	.75	.97	4.68	1.52	28.57	19.57	30.49	21.49	2.09	1.00	5.09	9.59
3/4x12	1032091	5200	6.42	.75	.97	4.68	1.52	34.57	22.57	36.49	24.49	2.09	1.00	5.09	12.59
3/4x18	1032117	5200	8.14	.75	.97	4.71	1.52	46.57	28.57	48.49	30.49	2.09	1.00	5.12	18.53
7/8x12	1032135	7200	9.10	.88	1.16	5.50	1.77	35.68	23.68	37.91	25.91	2.38	1.25	5.79	12.16
7/8x18	1032153	7200	11.6	.88	1.16	5.50	1.77	48.15	30.15	50.38	32.38	2.38	1.25	5.79	18.63
1x6	1032171	10000	10.0	1.00	1.34	6.09	2.05	25.03	19.03	27.59	21.59	3.00	1.43	6.50	6.18
1x12	1032199	10000	13.4	1.00	1.34	6.09	2.05	37.03	25.03	39.59	27.59	3.00	1.43	6.50	12.18
1x18	1032215	10000	16.7	1.00	1.34	6.09	2.05	49.03	31.03	51.59	33.59	3.00	1.43	6.50	18.18
1x24	1032233	10000	20.6	1.00	1.34	6.06	2.05	61.63	37.63	64.19	40.19	3.00	1.43	6.47	24.84
1-1/4x12	1032251	15200	20.9	1.25	1.84	8.09	2.82	40.76	28.76	43.98	31.98	3.59	1.82	8.49	12.06
1-1/4x18	1032279	15200	24.8	1.25	1.84	8.09	2.82	52.76	34.76	55.98	37.98	3.59	1.82	8.49	18.06
1-1/4x24	1032297	15200	28.8	1.25	1.84	8.09	2.82	65.32	41.32	68.54	44.54	3.59	1.82	8.49	24.62
1-1/2x12	1032313	21400	30.6	1.50	2.06	8.93	2.81	42.50	30.50	46.21	34.21	4.09	2.12	9.46	12.32
1-1/2x18	1032331	21400	36.0	1.50	2.06	8.93	2.81	54.50	36.50	58.21	40.21	4.09	2.12	9.46	18.32
1-1/2x24	1032359	21400	41.5	1.50	2.06	8.93	2.81	67.12	43.12	70.83	46.83	4.09	2.12	9.46	24.94
1-3/4-18	1032395	28000	52.1	1.75	2.60	9.36	3.35	55.37	37.37	59.77	41.77	4.65	2.38	9.97	18.37
1-3/4x24	1032411	28000	59.7	1.75	2.60	9.36	3.35	67.37	43.37	71.77	47.77	4.65	2.38	9.97	24.37
2x24	1032439	37000	89.9	2.00	2.62	11.80	3.74	72.66	48.66	77.95	53.95	5.81	2.69	13.03	24.48
2-1/2x24	1032457	60000	158	2.50	3.06	13.26	4.44	76.08	52.08	82.68	58.68	6.49	3.12	13.76	24.60
2-3/4x24	1032475	75000	187	2.75	3.69	14.92	4.19	78.05	54.05	85.67	61.67	7.00	3.25	15.09	24.65

\* Proof Load is 2.5 times the Working Load Limit. Ultimate Load is 5 times Working Load Limit. # Mechanical Galvanized.





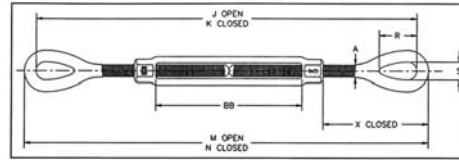
Eye & Eye Turnbuckles



HG-226 Eye & Eye

Meets the performance requirements of Federal Specifications FF-T-791b, Type I, Form 1- CLASS 4, and ASTM F-1145, except for those provisions required of the contractor.

- Hot dip galvanized steel.
- End fittings are Quenched and Tempered or Normalized, bodies heat treated by normalizing.
- Turnbuckle eyes are forged and elongated, by design, to maximize easy attachment in system and minimize stress in the eye. For turnbuckle sizes 1/4” through 2 1/2”, a shackle one size smaller can be reeved through eye.
- Modified UNJ thread on end fittings for improved fatigue properties. Body has UNC threads.
- Meets or exceed all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these turnbuckles meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.
- TURNBUCKLES RECOMMENDED FOR STRAIGHT OR IN-LINE PULL ONLY.
- Lock Nuts available for all sizes (see Crosby Catalog).
- Comprehensive end fitting data (see Crosby Catalog).
- Fatigue Rated.



HG-226 Eye & Eye Turnbuckle

Thread Diameter & Take up (in.)	HG-226 Stock Number	Working Load Limit (lbs)*	Weight Each (lbs)	Dimensions (in.)									
				A	J Open	K Closed	M Open	N Closed	R	S	X Closed	BB	
#1/4X4	1031252	500	.29	.25	11.94	7.94	12.38	8.38	.81	.34	1.76	4.07	
#5/16X4-1/2	1031270	800	.48	.31	13.92	9.42	14.48	9.98	.95	.44	2.20	4.58	
#3/8X6	1031298	1200	.75	.38	17.56	11.56	18.24	12.24	1.13	.53	2.48	6.10	
1/2x6	1031314	2200	1.72	.50	19.94	13.94	20.82	14.82	1.41	.71	3.56	6.03	
1/2x12	1031350	2200	2.63	.50	32.23	20.23	33.11	21.11	1.41	.71	3.54	12.36	
5/8x6	1031378	3500	2.75	.63	21.72	15.72	22.72	16.72	1.80	.88	4.35	6.03	
5/8x12	1031412	3500	4.12	.63	34.06	22.06	35.06	23.06	1.80	.88	4.34	12.39	
3/4x6	1031430	5200	4.22	.75	23.24	17.24	24.50	18.50	2.09	1.00	5.12	6.13	
3/4x12	1031476	5200	6.12	.75	35.64	23.64	36.90	24.90	2.09	1.00	5.09	12.59	
3/4x18	1031494	5200	7.83	.75	47.64	29.64	48.90	30.90	2.09	1.00	5.12	18.53	
7/8x12	1031519	7200	8.83	.88	36.70	24.70	38.20	26.20	2.38	1.25	5.79	12.16	
7/8x18	1031537	7200	11.5	.88	49.17	31.17	50.67	32.67	2.38	1.25	5.79	18.63	
1x6	1031555	10000	9.62	1.00	26.24	20.24	28.00	22.00	3.00	1.43	6.50	6.18	
1x12	1031573	10000	13.0	1.00	38.24	26.24	40.00	28.00	3.00	1.43	6.50	12.18	
1x18	1031591	10000	16.3	1.00	50.24	32.24	52.00	34.00	3.00	1.43	6.50	18.18	
1x24	1031617	10000	20.2	1.00	62.84	38.84	64.60	40.60	3.00	1.43	6.47	24.84	
1-1/4x12	1031635	15200	19.9	1.25	42.14	30.14	44.38	32.38	3.59	1.82	8.49	12.06	
1-1/4x18	1031653	15200	23.8	1.25	54.14	36.14	56.38	38.38	3.59	1.82	8.49	18.06	
1-1/4x24	1031671	15200	27.8	1.25	66.70	42.70	68.94	44.94	3.59	1.82	8.49	24.62	
1-1/2x12	1031699	21400	28.7	1.50	44.24	32.24	46.74	34.74	4.09	2.12	9.46	12.32	
1-1/2x18	1031715	21400	34.1	1.50	56.24	38.24	58.74	40.74	4.09	2.12	9.46	18.32	
1-1/2x24	1031733	21400	39.6	1.50	68.86	44.86	71.36	47.36	4.09	2.12	9.46	24.94	
1-3/4x18	1031779	28000	50.7	1.75	57.38	39.38	60.38	42.38	4.65	2.38	9.97	18.37	
1-3/4x24	1031797	28000	58.2	1.75	69.38	45.38	72.38	48.38	4.65	2.38	9.97	24.37	
2x24	1031813	37000	83.5	2.00	75.68	51.68	79.19	55.18	5.81	2.69	13.03	24.48	
2-1/2x24	1031831	60000	149	2.50	79.18	55.18	83.18	59.18	6.49	3.12	13.76	24.60	
2-3/4x24	1031859	75000	174	2.75	81.34	57.34	85.84	61.84	7.00	3.25	15.09	24.65	

\* Proof Load is 2.5 times the Working Load Limit. Ultimate Load is 5 times Working Load Limit. # Mechanical Galvanized.



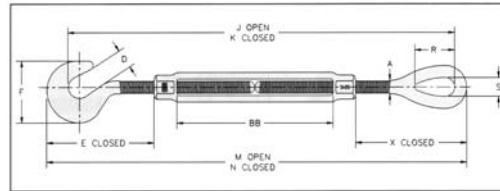
Hook & Eye Turnbuckles



**HG-225  
Hook & Eye**

*Meets the performance requirements of Federal Specifications FF-T-790b, Type 1, Form 1 - Class 6, and ASTM F-1145 except for those provisions required of the contractor.*

- Hot Dip galvanized steel.
- End fittings are Quenched and Tempered or Normalized, bodies heat treated by normalizing.
- Turnbuckle eyes are forged elongated, by design, to maximize easy attachment in system and minimize stress in the eye. For turnbuckle sizes 1/4" through 1", a shackle one size smaller can be reeved through the eye.
- Turnbuckle hooks are forged with a greater cross sectional area that results in a stronger hook with better fatigue properties.
- Meets or exceed all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these turnbuckles meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.
- TURNBUCKLES RECOMMENDED FOR STRAIGHT OR IN-LINE PULL ONLY.
- Modified UNJ thread on end fittings for improved fatigue properties.
- Body has UNC threads.
- Lock Nuts available for all sizes.
- Comprehensive end fitting data provided upon request.
- Fatigue Rated.



FITTINGS & BLOCKS

HG-225 Hook & Eye Turnbuckle

Thread Diameter & Take up (in.)	HG-225 Stock Number	Working Load Limit (lbs)*	Weight Each (lbs)	Dimensions (in.)											
				A	D	E Closed	F	J Open	K Closed	M Open	N Closed	R	S	X Closed	BB
+1/4 x 4	1030636	400	.31	.25	.44	1.67	1.27	11.66	7.66	12.29	8.29	.81	.34	1.76	4.07
+5/16 x 4-1/2	1030654	700	.50	.31	.50	2.00	1.50	13.50	9.00	14.28	9.78	.95	.44	2.20	4.58
+3/8 x 6	1030672	1000	.79	.38	.56	2.28	1.76	17.09	11.09	18.04	12.04	1.13	.53	2.48	6.10
1/2 x 6	1030690	1500	1.80	.50	.65	3.53	2.28	19.57	13.57	20.79	14.79	1.41	.71	3.56	6.03
1/2 x 12	1030734	1500	2.70	.50	.65	3.51	2.28	31.86	19.86	33.08	21.08	1.41	.71	3.54	12.36
5/8 x 6	1030752	2250	2.98	.63	.90	4.24	2.81	21.11	15.11	22.61	16.61	1.80	.88	4.35	6.03
5/8 x 12	1030798	2250	4.35	.63	.90	4.23	2.81	33.45	21.45	34.95	22.95	1.80	.88	4.34	12.39
3/4 x 6	1030814	3000	4.21	.75	.98	5.07	3.33	22.61	16.61	24.45	18.45	2.09	1.00	5.12	6.13
3/4 x 12	1030850	3000	6.52	.75	.98	5.04	3.33	35.01	23.01	36.85	24.85	2.09	1.00	5.09	12.59
3/4 x 18	1030878	3000	8.24	.75	.98	5.07	3.33	47.01	29.01	48.85	30.85	2.09	1.00	5.12	18.53
7/8 x 12	1030896	4000	9.34	.88	1.13	5.82	3.78	36.11	24.11	38.23	26.23	2.38	1.25	5.79	12.16
1 x 12	1030958	5000	13.9	1.00	1.25	6.56	4.25	37.65	25.65	40.06	28.06	3.00	1.43	6.50	12.18

\* Proof Load is 2.5 times Working Load Limit. Ultimate Load is 5 times Working Load Limit. + Mechanical Galvanized.