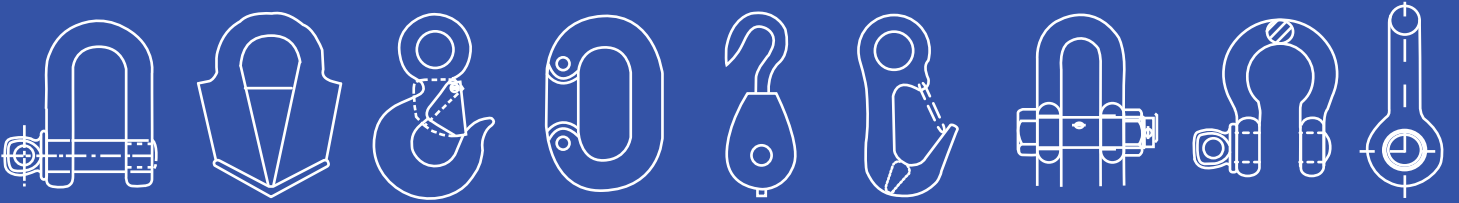


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# 产品索引 Product Series

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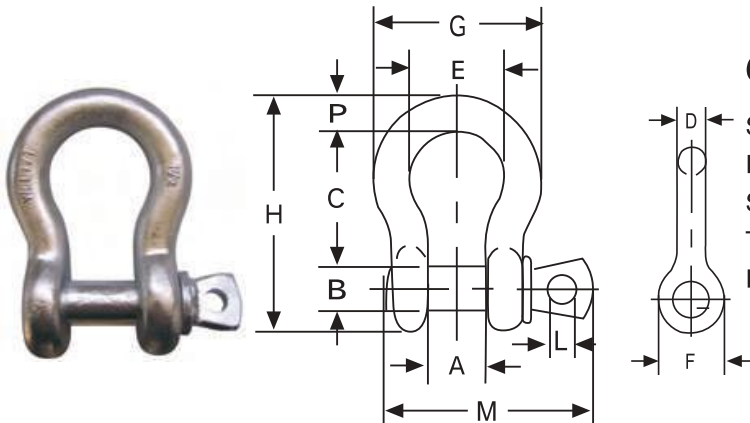


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# SHACKLES

## DROP FORGED ANCHOR SHACKLES

### SCREW PIN ANCHOR SHACKLE



#### G-209 S-209

SCREW PIN ANCHOR SHACKLES MEET THE PERFORMANCE REQUIREMENTS OF FEDERAL SPECIFICATION RR-C-271D TYPE IVA, GRADE A, CLASS 2, EXCEPT FOR THOSE PROVISIONS REQUIRED OF THE CONTRACTOR.

CAPACITIES 1/3 THRU 55 METRIC TONS.

- ★ FORGED – QUENCHED AND TEMPERED, WITH ALLOY PIN.
- ★ WORKING LOAD LIMIT PERMANENTLY SHOWN ON EVERY SHACKLE.
- ★ HOT DIP GALVANIZED OR SELF-COLORED

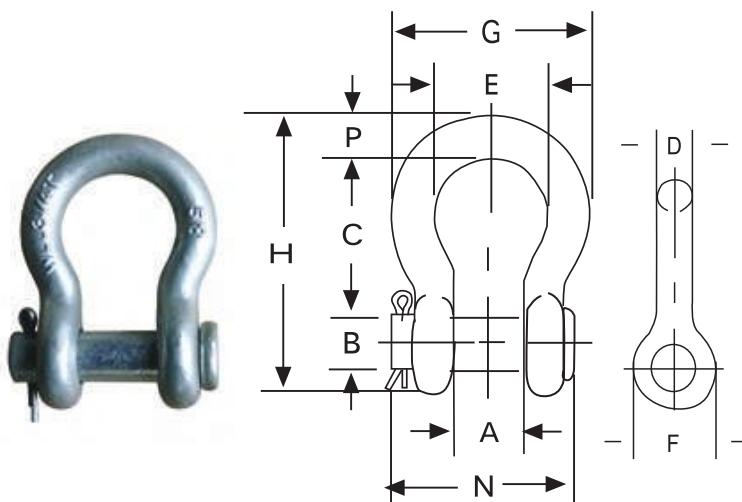
NOMINAL SIZE (IN.)	WORKING LOAD LIMIT (T)*	WEIGHT EACH (KG)	DIMENSIONS (MM)											TOLERANCE +/-	
			A	B	C	D	E	F	G	H	L	M	P	C	A
3/16	1/3	0.03	9.65	6.35	22.4	4.85	15.2	14.2	24.9	37.3	4.06	28.4	4.85	1.50	1.50
1/4	1/2	0.05	11.9	7.85	28.7	6.35	19.8	15.5	32.5	46.7	4.85	35.1	6.35	1.50	1.50
5/16	3/4	0.09	13.5	9.65	31.0	7.85	21.3	19.1	37.3	53.0	5.60	42.2	7.85	3.30	1.50
3/8	1	0.14	16.8	11.2	36.6	9.65	26.2	23.1	45.2	63.0	6.35	51.5	9.65	3.30	1.50
7/16	1-1/2	0.17	19.1	12.7	42.9	11.2	29.5	26.9	51.5	74.0	7.85	60.5	11.2	3.30	1.50
1/2	2	0.33	20.6	16.0	47.8	12.7	33.3	30.2	58.5	83.5	9.65	68.5	12.7	3.30	1.50
5/8	3-1/4	0.62	26.9	19.1	60.5	16.0	42.9	38.1	74.5	106	11.2	85.0	17.5	6.35	1.50
3/4	4-3/4	1.07	31.8	22.4	71.5	19.1	51.0	46.0	89.0	126	12.7	101	20.6	6.35	1.50
7/8	6-1/2	1.64	36.6	25.4	84.0	22.4	58.0	53.0	102	148	12.7	114	24.6	6.35	1.50
1	8-1/2	2.28	42.9	28.7	95.5	25.4	68.5	60.5	119	167	14.2	129	26.9	6.35	1.50
1-1/8	9-1/2	3.36	46.0	31.8	108	29.5	74.0	68.5	131	190	16.0	142	31.8	6.35	1.50
1-1/4	12	4.31	51.5	35.1	119	32.8	82.5	76.0	146	210	17.5	156	35.1	6.35	1.50
1-3/8	13-1/2	6.14	57.0	38.1	133	36.1	92.0	84.0	162	233	19.1	174	38.1	6.35	3.30
1-1/2	17	7.80	60.5	41.4	146	39.1	98.5	92.0	175	254	20.6	187	41.1	6.35	3.30
1-3/4	25	12.6	73.0	51.0	178	46.7	127	106	225	313	25.4	231	57.0	6.35	3.30
2	35	20.4	82.5	57.0	197	53.0	146	122	253	348	31.0	263	61.0	6.35	3.30
2-1/2	55	38.9	105	70.0	267	69.0	184	145	327	453	35.1	330	79.5	6.35	6.35

NOTE: MAXIMUM PROOF LOAD IS 2.0 TIMES THE WORKING LOAD LIMIT. MINIMUM ULTIMATE STRENGTH IS 6 TIMES THE WORKING LOAD LIMIT. FOR WORKING LOAD LIMIT REDUCTION DUE TO SIDE LOADING APPLICATIONS, SEE PAGE 26.

# SHACKLES

## DROP FORGED ANCHOR SHACKLES

### ROUND PIN ANCHOR SHACKLE



#### G-213 S-213

ROUND PIN ANCHOR SHACKLES MEET THE PERFORMANCE REQUIREMENTS OF FEDERAL SPECIFICATION RR-C-271D TYPE IVA, GRADE A, CLASS 1, EXCEPT FOR THOSE PROVISIONS REQUIRED OF THE CONTRACTOR.

CAPACITIES 1/3 THRU 35 METRIC TONS.

- ★ FORGED – QUENCHED AND TEMPERED, WITH ALLOY PIN.
- ★ WORKING LOAD LIMIT PERMANENTLY SHOWN ON EVERY SHACKLE.
- ★ HOT DIP GALVANIZED OR SELF-COLORED.

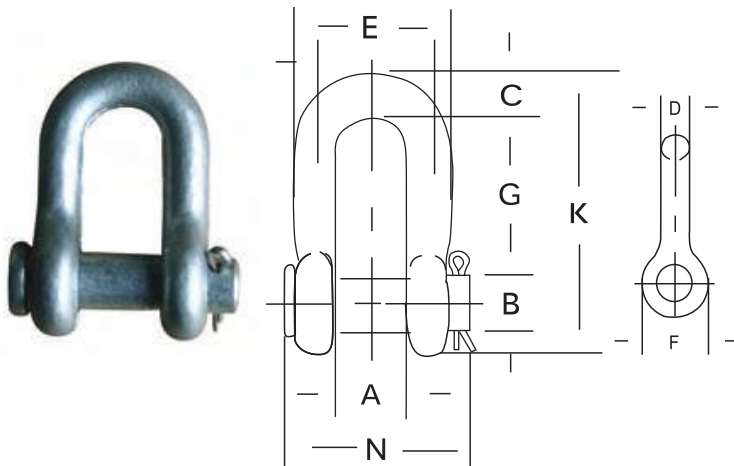
NOMINAL SIZE (IN.)	WORKING LOAD LIMIT (T)*	WEIGH EACH (KG)	DIMENSIONS (MM)										TOLERANCE +/-	
			A	B	C	D	E	F	G	H	N	P	C	A
1/4	1/2	0.06	11.9	7.85	28.7	6.35	19.8	15.5	32.5	46.7	34.0	6.35	1.50	1.50
5/16	3/4	0.08	13.5	9.65	31.0	7.85	21.3	19.1	37.3	53.0	40.4	7.85	1.50	1.50
3/8	1	0.13	16.8	11.2	36.6	9.65	26.2	23.1	45.2	63.0	47.2	9.65	3.30	1.50
7/16	1-1/2	0.17	19.1	12.7	42.9	11.2	29.5	26.9	51.5	74.0	54.0	11.2	3.30	1.50
1/2	2	0.32	20.6	16.0	47.8	12.7	33.3	30.2	58.5	83.5	60.5	12.7	3.30	1.50
5/8	3-1/4	0.68	26.9	19.1	60.5	16.0	42.9	38.1	74.5	106	74.0	17.5	3.30	1.50
3/4	4-3/4	1.05	31.8	22.4	71.5	19.1	51.0	46.0	89.0	126	87.0	20.6	6.35	1.50
7/8	6-1/2	1.58	36.6	25.4	84.0	22.4	58.0	53.0	102	148	96.5	24.6	6.35	1.50
1	8-1/2	2.27	42.9	28.7	95.5	25.4	68.5	60.5	119	167	115	26.9	6.35	1.50
1-1/8	9-1/2	3.16	46.0	31.8	108	29.5	74.0	68.5	131	190	130	31.8	6.35	1.50
1-1/4	12	4.42	51.5	35.1	119	32.8	82.5	76.0	146	210	140	35.1	6.35	1.50
1-3/8	13-1/2	6.01	57.0	38.1	133	36.1	92.0	84.0	162	233	156	38.1	6.35	3.30
1-1/2	17	7.82	60.5	41.4	146	39.1	98.5	92.0	175	254	165	41.1	6.35	3.30
1-3/4	25	13.4	73.0	51.0	178	46.7	127	106	225	313	197	57.0	6.35	3.30
2	35	20.8	82.5	57.0	197	53.0	146	122	253	348	222	61.0	6.35	3.30

NOTE: MAXIMUM PROOF LOAD IS 2.0 TIMES THE WORKING LOAD LIMIT. MINIMUM ULTIMATE STRENGTH IS 6 TIMES THE WORKING LOAD LIMIT. FOR WORKING LOAD LIMIT REDUCTION DUE TO SIDE LOADING APPLICATIONS, SEE PAGE 26.

# SHACKLES

## DROP FORGED ANCHOR SHACKLES

### ROUND PIN CHAIN SHACKLE



#### G-215 S-215

ROUND PIN CHAIN SHACKLES MEET THE PERFORMANCE REQUIREMENTS OF FEDERAL SPECIFICATION RR-C-271D TYPE IVB, GRADE A, CLASS 1, EXCEPT FOR THOSE PROVISIONS REQUIRED OF THE CONTRACTOR.

CAPACITIES 1/3 THRU 55 METRIC TONS.

- ★ FORGED – QUENCHED AND TEMPERED, WITH ALLOY PIN.
- ★ WORKING LOAD LIMIT PERMANENTLY SHOWN ON EVERY SHACKLE.
- ★ HOT DIP GALVANIZED OR SELF-COLORED.

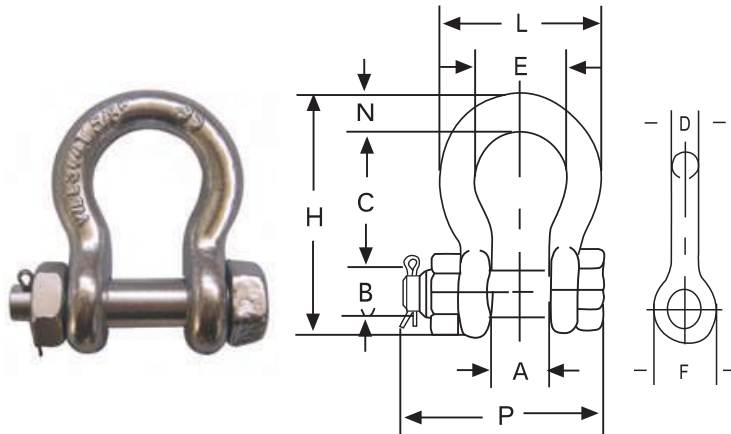
NOMINAL SIZE (IN.)	WORKING LOAD LIMIT (T)*	WEIGHT EACH (KG)	DIMENSIONS (MM)									TOLERANCE +/-	
			A	B	C	D	E	F	G	K	N	G	A
1/4	1/2	0.05	11.9	7.85	6.35	6.35	24.6	15.5	22.4	40.4	34.0	1.50	1.50
5/16	3/4	0.08	13.5	9.65	7.85	7.85	29.5	19.1	26.2	48.5	40.4	1.50	1.50
3/8	1	0.11	16.8	11.2	9.65	9.65	35.8	23.1	31.8	58.5	47.2	3.30	1.50
7/16	1-1/2	0.18	19.1	12.7	11.2	11.2	41.4	26.9	36.6	67.5	54.0	3.30	1.50
1/2	2	0.23	20.6	16.0	12.7	12.7	46.0	30.2	41.4	77.0	60.5	3.30	1.50
5/8	3-1/4	0.55	26.9	19.1	15.7	16.0	58.5	38.1	51.0	95.5	74.0	3.30	1.50
3/4	4-3/4	0.91	31.8	22.4	20.6	19.1	70.0	46.0	60.5	115	87.0	6.35	1.50
7/8	6-1/2	1.49	36.6	25.4	24.6	22.4	81.0	53.0	71.5	135	96.5	6.35	1.50
1	8-1/2	2.15	42.9	28.7	25.4	25.4	93.5	60.5	81.0	151	115	6.35	1.50
1-1/8	9-1/2	2.86	46.0	31.8	31.8	28.7	103	68.5	91.0	172	130	6.35	1.50
1-1/4	12	4.08	51.5	35.1	35.1	31.8	115	76.0	100	191	140	6.35	3.30
1-3/8	13-1/2	5.44	57.0	38.1	38.1	35.1	127	84.0	111	210	156	6.35	3.30
1-1/2	17	7.33	60.5	41.4	41.1	38.1	137	92.0	122	230	165	6.35	3.30
1-3/4	25	13.6	73.0	51.0	54.0	44.5	162	106	146	279	197	6.35	3.30
2	35	19.6	82.5	57.0	51.0	51.0	184	122	172	312	222	6.35	3.30

NOTE: MAXIMUM PROOF LOAD IS 2.0 TIMES THE WORKING LOAD LIMIT. MINIMUM ULTIMATE STRENGTH IS 6 TIMES THE WORKING LOAD LIMIT. FOR WORKING LOAD LIMIT REDUCTION DUE TO SIDE LOADING APPLICATIONS, SEE PAGE 26.

# SHACKLES

## DROP FORGED ANCHOR SHACKLES

### BOLT-TYPE ANCHOR SHACKLE



G-2130 S-2130

BOLT-TYPE ANCHOR SHACKLES MEET THE PERFORMANCE REQUIREMENTS OF FEDERAL SPECIFICATION RR-C-271D TYPE IVA, GRADE A, GRADE A, CLASS 3, EXCEPT FOR THOSE PROVISIONS REQUIRED OF THE CONTRACTOR.

CAPACITIES 1/3 THRU 200 METRIC TONS.

- ★ FORGED – QUENCHED AND TEMPERED, WITH ALLOY PIN.
- ★ WORKING LOAD LIMIT PERMANENTLY SHOWN ON EVERY SHACKLE.
- ★ HOT DIP GALVANIZED OR SELF-COLORED.

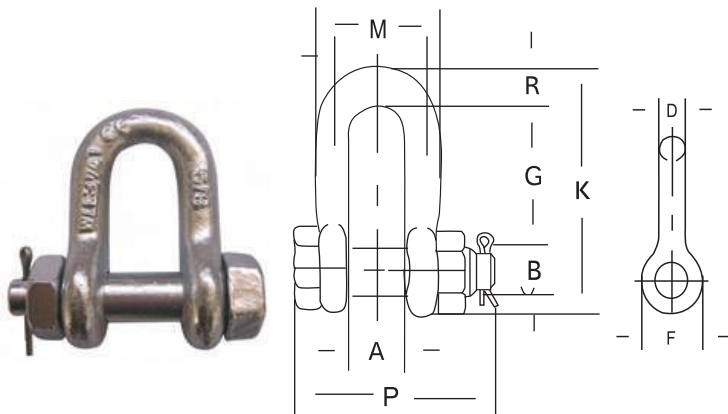
NOMINAL SIZE (IN.)	WORKING LOAD LIMIT (T)*	WEIGHT EACH (KG)	DIMENSIONS (MM)									TOLERANCE +/-	
			A	B	C	D	E	F	H	L	N	G	A
3/16	1/3‡	0.03	9.65	6.35	22.4	4.85	15.2	14.2	37.3	24.9	4.85	1.50	1.50
1/4	1/2	0.05	11.9	7.85	28.7	6.35	19.8	15.5	46.7	32.5	6.35	1.50	1.50
5/16	3/4	0.10	13.5	9.65	31.0	7.85	21.3	19.1	53.0	37.3	7.85	3.30	1.50
3/8	1	0.15	16.8	11.2	36.6	9.65	26.2	23.1	63.0	45.2	9.65	3.30	1.50
7/16	1-1/2	0.22	19.1	12.7	42.9	11.2	29.5	26.9	74.0	51.5	11.2	3.30	1.50
1/2	2	0.36	20.6	16.0	47.8	12.7	33.3	30.2	83.5	58.5	12.7	3.30	1.50
5/8	3-1/4	0.76	26.9	19.1	60.5	16.0	42.9	38.1	106	74.5	17.5	6.35	1.50
3/4	4-3/4	1.23	31.8	22.4	71.5	19.1	51.0	46.0	126	89.0	20.6	6.35	1.50
7/8	6-1/2	1.79	36.6	25.4	84.0	22.4	58.0	53.0	148	102	24.6	6.35	1.50
1	8-1/2	2.57	42.9	28.7	95.5	25.4	68.5	60.5	167	119	26.9	6.35	1.50
1-1/8	9-1/2	3.75	46.0	31.8	108	28.7	74.0	68.5	190	131	31.8	6.35	1.50
1-1/4	12	5.31	51.5	35.1	119	31.8	82.5	76.0	210	146	35.1	6.35	1.50
1-3/8	13-1/2	7.18	57.0	38.1	133	35.1	92.0	84.0	233	162	38.1	6.35	3.30
1-1/2	17	9.43	60.5	41.4	146	38.1	98.5	92.0	254	175	41.1	6.35	3.30
1-3/4	25	15.4	73.0	51.0	178	44.5	127	106	313	225	57.0	6.35	3.30
2	35	23.7	82.5	57.0	197	51.0	146	122	348	253	61.0	6.35	3.30
2-1/2	55	44.6	105	70.0	267	66.5	184	145	453	327	79.5	6.35	6.35
3	85	70	127	82.5	330	76.0	200	165	546	365	92.0	6.35	6.35
3-1/2	120	120	133	95.5	372	92.0	229	203	626	419	105	6.35	6.35
4	150	153	140	108	368	104	254	229	653	468	116	6.35	6.35

NOTE: MAXIMUM PROOF LOAD IS 2.0 TIMES THE WORKING LOAD LIMIT. MINIMUM ULTIMATE STRENGTH IS 6 TIMES THE WORKING LOAD LIMIT. FOR WORKING LOAD LIMIT REDUCTION DUE TO SIDE LOADING APPLICATIONS, SEE PAGE 26.

# SHACKLES

## DROP FORGED ANCHOR SHACKLES

### BOLT-TYPE CHAIN SHACKLE



G-2150 S-2150

BOLT-TYPE CHAIN SHACKLES MEET THE PERFORMANCE REQUIREMENTS OF FEDERAL SPECIFICATION RR-C-271D

TYPE IVB, GRADE A, CLASS 3, EXCEPT FOR THOSE PROVISIONS REQUIRED OF THE CONTRACTOR.

CAPACITIES 1/3 THRU 85 METRIC TONS.

- ★ FORGED – QUENCHED AND TEMPERED, WITH ALLOY PIN.
- ★ WORKING LOAD LIMIT PERMANENTLY SHOWN ON EVERY SHACKLE.
- ★ HOT DIP GALVANIZED OR SELF-COLORED.

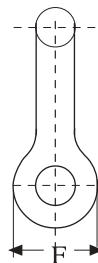
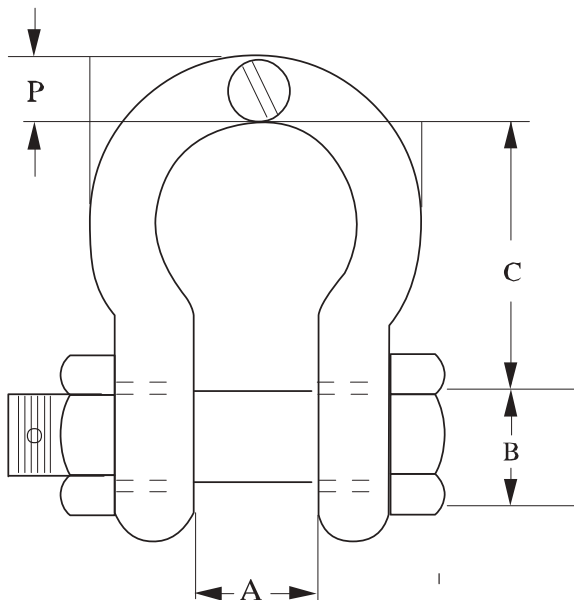
NOMINAL SIZE (IN.)	WORKING LOAD LIMIT (T)*	WEIGHT EACH (KG)	DIMENSIONS (MM)									TOLERANCE +/-	
			A	B	D	F	G	K	M	P	R	G	A
1/4	1/2	0.06	11.9	7.85	6.35	15.5	19.1	40.4	24.6	39.6	6.35	1.50	1.50
5/16	3/4	0.10	13.5	9.65	7.85	19.1	25.4	48.5	29.5	46.2	7.85	1.50	1.50
3/8	1	0.15	16.8	11.2	9.65	23.1	31.0	58.5	35.8	55.0	9.65	3.30	1.50
7/16	1-1/2	0.22	19.1	12.7	11.2	26.9	36.1	67.5	41.1	63.5	11.2	3.30	1.50
1/2	2	0.34	20.6	16.0	12.7	30.2	41.4	77.0	46.0	71.0	12.7	3.30	1.50
5/8	3-1/4	0.67	26.9	19.1	16.0	38.1	51.0	95.5	58.5	89.5	16.0	3.30	1.50
3/4	4-3/4	1.14	31.8	22.4	19.1	46.0	60.5	115	70.0	103	20.6	6.35	1.50
7/8	6-1/2	1.74	36.6	25.4	22.4	53.0	71.5	135	81.0	120	24.6	6.35	1.50
1	8-1/2	2.52	42.9	28.7	25.4	60.5	81.0	151	93.5	135	25.4	6.35	1.50
1-1/8	9-1/2	3.45	46.0	31.8	28.7	68.5	91.0	172	103	150	31.8	6.35	1.50
1-1/4	12	4.90	51.5	35.1	31.8	76.0	100	191	115	165	35.1	6.35	1.50
1-3/8	13-1/2	6.24	57.0	38.1	35.1	84.0	111	210	127	183	38.1	6.35	3.30
1-1/2	17	8.39	60.5	41.4	38.1	92.0	122	230	137	196	41.1	6.35	3.30
1-3/4	25	14.2	73.0	51.0	44.5	106	146	279	162	230	54.0	6.35	3.30
2	35	21.2	82.5	57.0	51.0	122	172	312	184	264	51.0	6.35	3.30
2-1/2	55	38.6	105	70.0	66.5	145	203	377	238	344	66.5	6.35	6.35
3	85	56	127	82.5	76.0	165	216	429	279	419	89.0	6.35	6.35

NOTE: MAXIMUM PROOF LOAD IS 2.0 TIMES THE WORKING LOAD LIMIT. MINIMUM ULTIMATE STRENGTH IS 6 TIMES THE WORKING LOAD LIMIT. FOR WORKING LOAD LIMIT REDUCTION DUE TO SIDE LOADING APPLICATIONS, SEE PAGE 26.



# SHACKLES

## ALLOY BOLT TYPE ANCHOR SHACKLES



### G-2140 / S-2140

G-2140 MEETS THE PERFORMANCE REQUIREMENTS OF FEDERAL SPECIFICATION RR-C-271D, TYPE IVA, GRADE B CLASS 3 EXCEPT FOR THOSE PROVISIONS REQUIRED OF THE CONTRACTOR. FOR ADDITIONAL INFORMATION, SEE PAGE 26.

- ◆ QUENCHED AND TEMPERED.
- ◆ ALLOY BOWS, ALLOY BOLTS.
- ◆ FORGED ALLOY STEEL 30 THRU 175 METRIC TONS.
- ◆ WORKING LOAD LIMIT IS PERMANENTLY SHOWN ON EVERY SHACKLE.
- ◆ ALL SIZES ARE INDIVIDUALLY PROOF TESTED TO 2.0 TIMES THE WORKING LOAD LIMIT.
- ◆ PINS ARE GALVANIZED.

NOMINAL SHACKLE SIZE (IN.)	WORKING LOAD LIMIT (IN)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)												TOLERANCE	
			A	B	C	D	E	F	G	H	J	K	L	A	E	
1-1/2	30	20.8	2.38	3.62	1.62	1.63	5.75	1.39	6.88	7.75	10.00	3.88	1.54	.13	.25	
1-3/4	40	33.9	2.88	4.19	2.25	2.00	7.00	1.75	8.86	9.06	12.34	5.00	1.84	.13	25	
2	55	52.0	3.25	4.81	2.40	2.25	7.75	2.00	9.97	10.41	13.68	5.75	2.08	.13	25	
2-1/2	85	96.0	4.12	5.69	3.12	2.75	10.50	2.62	12.87	13.56	17.84	7.25	2.71	.25	25	
3	120	178.0	5.00	6.50	3.62	3.25	13.00	3.00	14.36	16.50	21.50	7.88	3.11	.25	25	
3-1/2	150	265.0	5.25	8.00	4.12	3.75	14.63	3.75	16.50	19.00	24.62	9.00	3.62	.25	25	
4	175	338.0	5.50	9.00	4.56	4.25	14.50	4.00	18.42	19.75	25.69	10.00	4.10	.25	25	
4-3/4**	200	450.0	7.25	10.50	6.00	4.75	15.62	3.75	21.00	20.50	29.25	11.00	4.50	.25	25	
5**	250	600.0	8.50	12.00	6.50	5.00	20.00	3.88	24.50	21.97	35.00	13.00	4.50	.25	25	

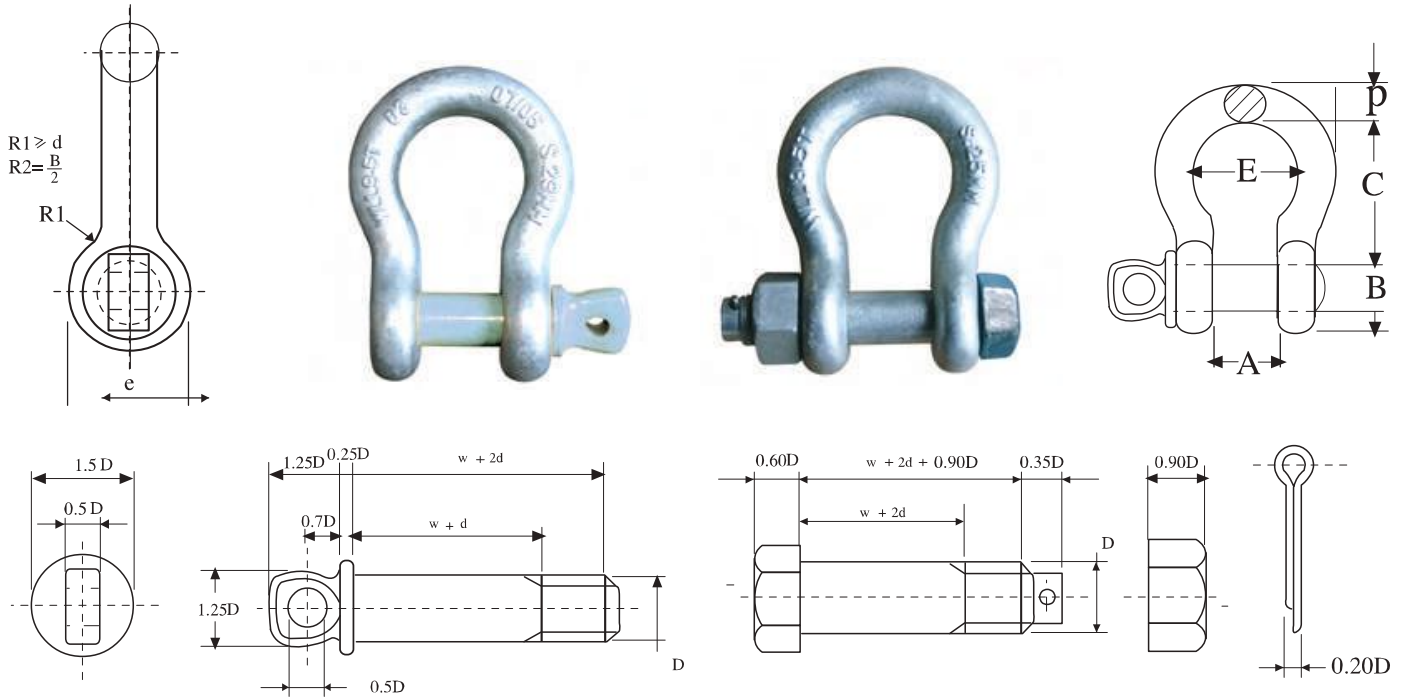
\* NOTE: MAXIMUM PROOF LOAD IS 2.0 TIMES THE WORKING LOAD LIMIT. MINIMUM ULTIMATE LOAD IS 4 TIMES THE WORKING LOAD LIMIT ON 200 THRU 250 METRIC TONS. FOR SIZES 30 THRU 175 METRIC TONS, MINIMUM ULTIMATE LOAD IS 5.4 TIMES THE WORKING LOAD LIMIT.

FURNISHED WITH ROUND HEAD BOLTS WITH WELDED HANDLE.

FOR WORKING LOAD LIMIT REDUCTION DUE TO SIDE LOADING APPLICATIONS' SEE PAGE 26'

# SHACKLES

## ALLOY STEEL GRADE'S' BOW SHACKLES TO AS2741-2002



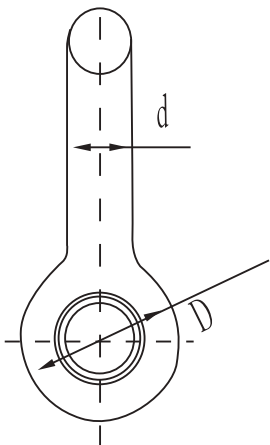
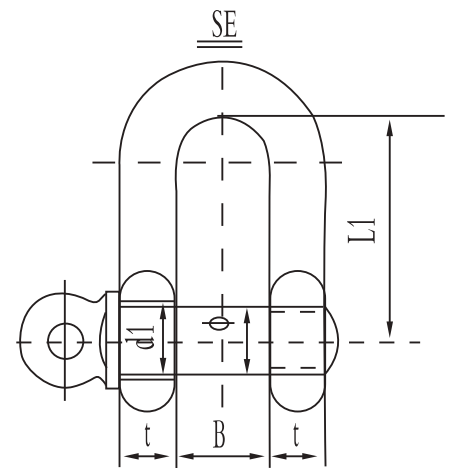
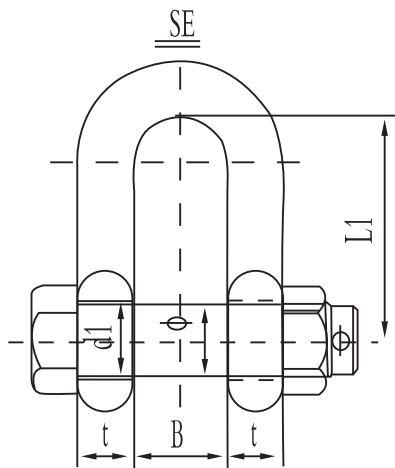
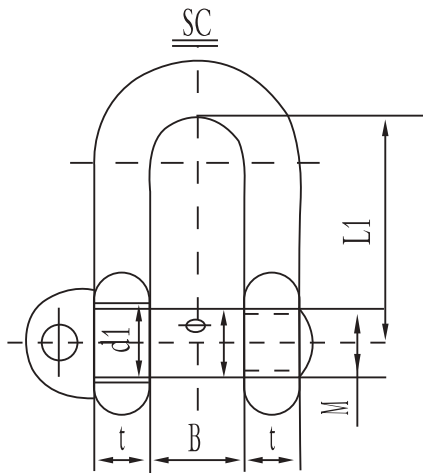
- ◆ MADE FROM HI-CARBON STEEL BODY WITH ALLOY STEEL PIN, QUENCHED & TEMPERED.
- ◆ COMPLETE WITH FULLY MACHINED PIN & PIN HOLE.
- ◆ DESIGNED FOR LIFTING PURPOSE.

NOMINAL SIZE (MM)	WORKING LOAD LIMIT (TON)	DIMENSIONS (MM)						TEST FORCE ( KN)	
		d	D	W	B	L	e	DESTRUCTIVE TEST, (MIN.)	PRODUCTION PROOF TEST
5	0.33	5	6	10	15	22	14	16.2	6.5
6	0.5	6	8	12	20	29	17	24.6	9.9
8	0.75	8	10	13	21	31	21	36.8	14.8
10	1	10	11	17	26	37	25	49.1	19.7
11	1.5	11	13	18	29	43	27	73.6	29.5
13	2	13	16	21	33	48	33	98.1	39.3
16	3.2	16	19	27	43	61	40	157	62.8
19	4.7	19	22	32	51	72	48	231	92.2
22	6.5	22	25	37	58	84	54	319	128
25	8.5	25	29	43	68	95	60	417	167
29	9.5	29	32	46	74	108	67	466	187
32	12	32	35	52	83	119	76	589	236
35	13	35	38	57	92	133	84	638	255
38	17	38	41	60	98	146	92	834	334
44	25	44	51	73	127	178	110	1230	491
51	35	51	57	83	146	197	127	1720	687
57	45	57	63	95	160	222	143	2210	883
63	55	63	70	105	184	267	152	2700	1080
70	70	70	76	114	194	305	194	3440	1380
76	85	76	83	127	200	330	200	4170	1670
89	120	89	95	146	241	381	241	5890	2360
102	150	102	108	165	279	432	235	7360	2950

- ◆ MINIMUM BREAKING LOAD IS 6 TIMES THE WLL.

# SHACKLES

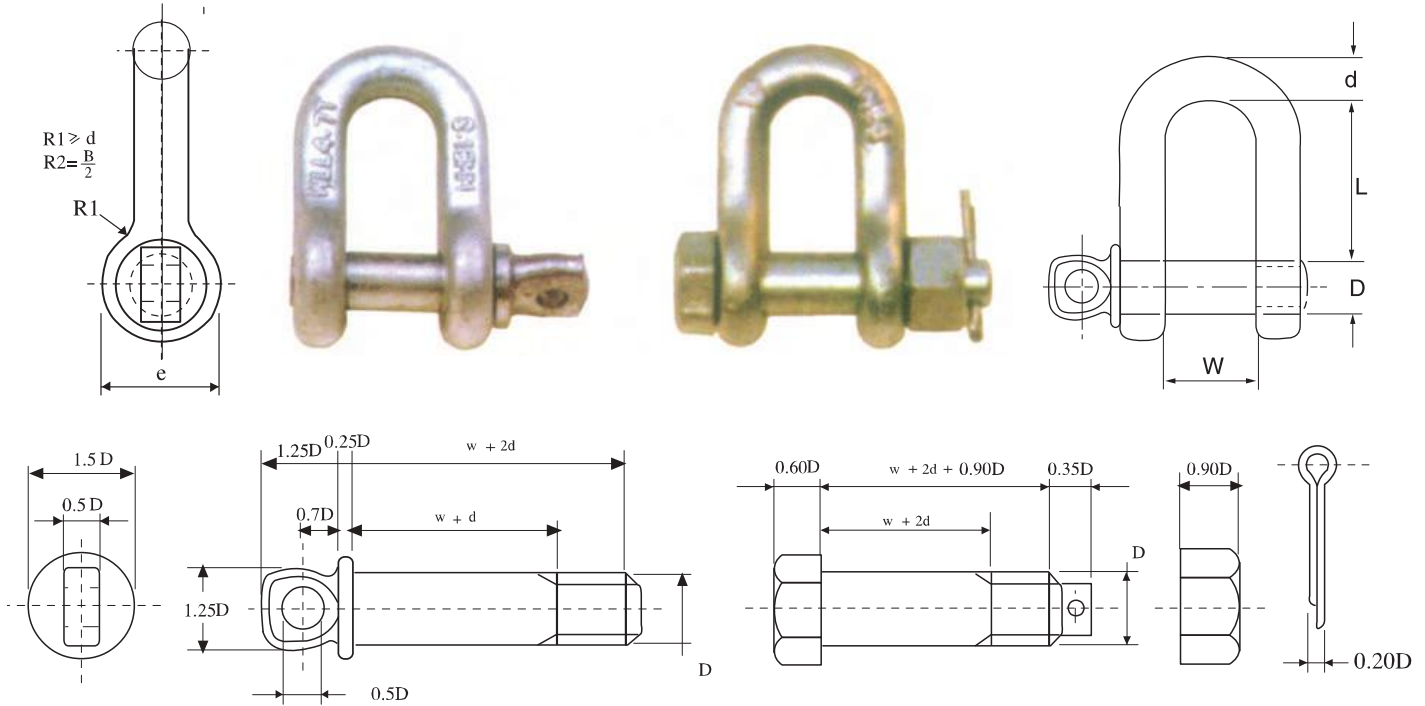
SE;SD;SA,SHACKLE TO JIS B2801-1997



SIZE	M	B	L1	d1	D	Φ	t
12	M14 × 2	20	48	16	32	15	12
14	M16 × 2	24	56	18	36	17	14
16	M18 × 2.5	26	64	20	40	19	16
18	M20 × 2.5	29	72	22	45	21	18
20	M24 × 3	31	80	25	50	24	20
22	M24 × 3	34	88	27.5	55	26	22
24	M30 × 3.5	39	96	31.5	62	30	24
26	M30 × 3.5	41	104	33	66	32	26
28	M33 × 3.5	43	112	35	70	34	28
30	M36 × 4	45	120	37	75	36	30

# SHACKLES

## ALLOY STEEL GRADE'S' DEE SHACKLES TO AS2741-1992



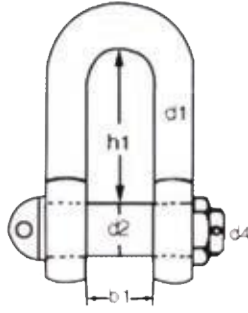
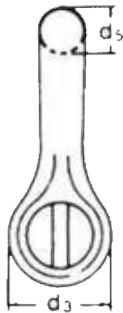
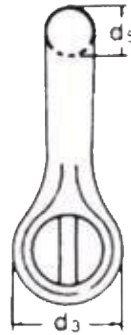
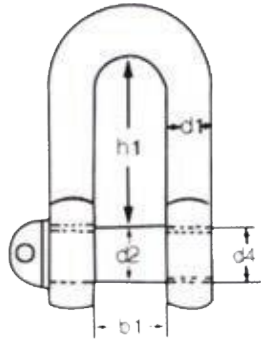
- ◆ MADE FROM HI-CARBON STEEL BODY WITH ALLOY STEEL PIN, QUENCHED & TEMPERED.
- ◆ COMPLETE WITH FULLY MACHINED PIN & PIN HOLE.
- ◆ DESIGNED FOR LIFTING PURPOSE.

NOMINAL SIZE (MM)	WORKING LOAD LIMIT (TON)	DIMENSIONS (MM)					TEST FORCE (KN)	
		d	D	W	L	e	DESTRUCTIVE TEST, (MIN.)	PRODUCTION PROOF TEST
6	0.5	6	8	12	22	17	24.6	9.9
8	0.75	8	10	13	26	21	36.8	14.8
10	1	10	11	17	32	25	49.1	19.7
11	1.5	11	13	18	37	27	73.6	29.5
13	2	13	16	21	41	33	98.1	39.3
16	3.2	16	19	27	51	40	157	62.8
19	4.7	19	22	32	60	48	231	92.2
22	6.5	22	25	37	71	54	319	128
25	8.5	25	29	43	81	60	417	167
29	9.5	29	32	46	90	67	466	187
32	12	32	35	52	100	76	589	236
35	13	35	38	57	113	84	638	255
38	17	38	41	60	124	92	834	334
44	25	44	51	73	146	110	1230	491
51	35	51	57	83	171	127	1720	687
57	45	57	63	95	181	143	2210	883
63	55	63	70	105	203	152	2700	1080
70	70	70	76	114	216	160	3440	1380
76	85	76	83	127	229	178	4170	1670
89	120	89	95	146	267	203	5890	2360
102	150	102	108	165	318	235	7360	2950

- ◆ MINIMUM BREAKING LOAD IS 6 TIMES THE WLL.

# SHACKLES

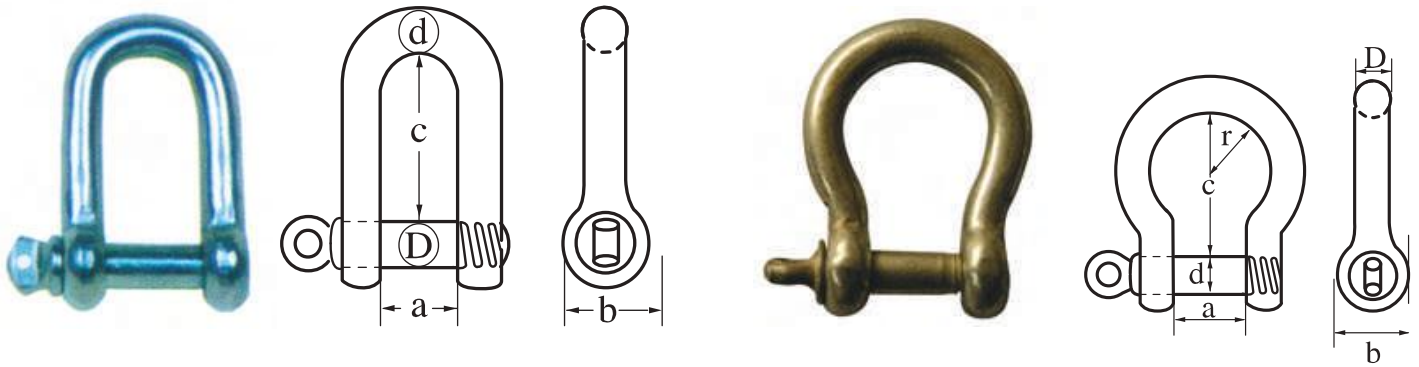
## GALVANIZED DIN 82101 SHACKLE



Nominal Size	Form A Form C	Working Load Limit(kgs)	Weight Each (kgs)		Dimensions(mm)						
					Fprm A	Form C	d	d	d	d	d
0.1	-	100	0.02	-	4	5	10	M5	5	7	15.5
0.16	-	160	0.02	-	5	6	12	M6	6	8	18.0
0.25	-	250	0.05	-	7	8	16	M8	8	11	24.0
0.4	0.4	400	0.09	0.10	8	10	20	M10	10	14	30.0
0.6	0.6	630	0.17	0.18	10	12	24	M12	12	17	36.0
1	1	1000	0.36	0.39	13	16	32	M16	15	21	49.0
1.6	1.6	1600	0.75	0.80	17	20	40	M20	19	27	61.0
2	2	2000	1.00	1.08	19	22	44	M22	21	30	67.0
2.5	2.5	2500	1.32	1.40	21	24	48	M24	23	33	73.0
3	3	3150	1.85	2.00	24	27	54	M27	26	38	83.5
4	4	4000	2.50	2.70	27	30	60	M30	29	42	91.0
5	5	5000	4.00	4.30	30	36	72	M36	33	47	111.0
6	6	6300	5.40	5.80	34	39	78	M39	37	53	119.5
8	8	8000	7.90	8.50	38	45	90	M45	41	60	139.5
10	10	10000	10.00	10.80	42	48	96	M48	45	66	147.5
12	12	12500	13.50	14.40	47	52	104	M52	50	73	158.0
16	16	16000	19.20	20.50	52	60	120	M60	55	81	185.0
20	20	20000	28.00	29.50	58	68	136	M68	61	90	211.0
25	25	25000	34.00	36.00	63	72	144	M72	67	100	221.0
-	32	31500	-	49.50	70	80	160	M80	74	110	246.0
-	40	40000	-	69.00	79	90	180	M90	84	125	276.0

# SHACKLES

## EUROPE TYPE LARGE DEE AND LARGE BOW SHACKLES



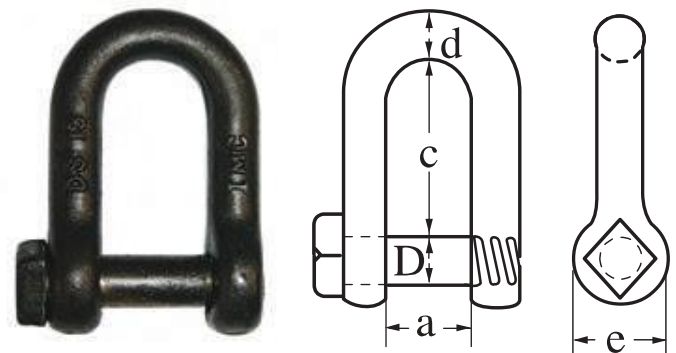
LARGE DEE SHACKLES						
SWL kg	D mm	d mm	a mm	c mm	b mm	WEIGHT PER 100PCS (KG)
80	5	5	10	19	11	1.85
100	6	6	13	25	11	3.3
200	8	8	16	32	18	6.8
320	10	10	19	38	20	12.6
520	12	12	25	51	26	23
800	16	16	32	64	33	48.5
1100	20	20	38	76	40	78
1500	22	22	44	89	50	126
2100	25	25	51	100	57	194
3000	28	28	57	115	68	291
3500	32	32	64	127	73	417
5000	38	38	76	152	85	655
7000	45	45	90	180	96	1213
8000	50	50	102	200	108	1698

LARGE BOW SHACKLES							
SWL kg	D mm	d mm	a mm	c mm	r mm	b mm	WEIGHT PER 100 PCS (KG)
80	5	5	10	19	8	11	1.9
100	6	6	13	25	10	14	3.4
200	8	8	16	32	12	18	7
320	10	10	19	38	16	20	13
520	12	12	25	51	19	26	26
800	16	16	32	64	28	33	50
1100	20	20	38	76	33	40	80
1500	22	22	44	89	37	50	130
2100	25	25	51	100	40	57	200
3000	28	28	57	115	47	68	310
3500	32	32	64	127	52	73	430
5000	38	38	76	152	63	85	700
7000	45	45	90	180	75	96	1250
8000	50	50	102	200	78	108	1750

## EUROPE TYPE TRAWLING SHACKLES

### WITH SQUARE HEAD SCREW PIN

SWL kg	D mm	d mm	a mm	c mm	e mm	WEIGHT PER 100PCS (KG)
80	5	5	10	19	11	1.9
100	6	6	13	25	14	3.4
200	8	8	16	32	18	7
320	10	10	19	38	20	13
520	12	12	25	51	6	24
800	16	16	32	64	33	50
1100	20	20	38	76	40	80
1500	22	22	44	89	50	130
2100	25	25	51	100	57	200
3000	28	28	57	115	68	300
3500	32	32	64	127	73	430
5000	38	38	76	152	85	675
7000	45	45	90	180	96	1250
8000	50	50	102	200	108	1750



# SHACKLES

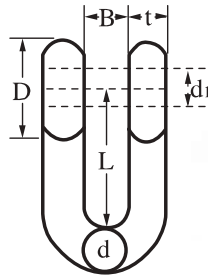
## JIS COMMERCIAL STANDARD SHACKLES



(1) SCREW PIN CHAIN SHACKLE "D" TYPE WITHOUT COLLAR



(2) SCREW PIN CHAIN SHACKLE "D" TYPE WITH COLLAR



(1) (2) (6) (8) SIZE (APPROX)



(3) SCREW PIN ANCHOR SHACKLE "BOW" TYPE WITHOUT COLLAR



(4) SCREW PIN ANCHOR SHACKLE "BOW" TYPE WITH COLLAR



(5) OVAL PIN CHAIN SHACKLE



(6) CARVER SHACKLE WITH COUNTER SUNK SLOTTED HEAD



(7) TRAWLING CHAIN SHACKLE



(8) BOLT & NUT PIN SHACKLE

(1)(2)(6)(8) SIZE (APPROX.)

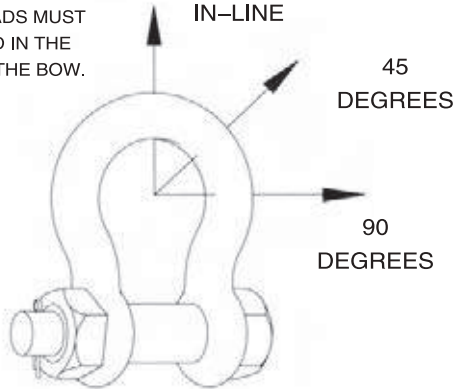
Nominal size		B mm	D mm	L mm	d1 mm	WLL Ton
mm	in					
4.8	3/16"	10	10	18.5	5.0	0.09
6	1/4"	12	11	25	6.5	0.15
8	5/16"	14	15	31	8.5	0.25
9	3/8"	18	17	36	10	0.40
12	1/2"	24	23	46	13	0.60
16	5/8"	30	32	59	17	1.10
19	3/4"	36	37	74	20	1.60
22	7/8"	43	43	86	23	2.50
25	1"	47	50	95	27	3.00
28	1-1/8"	55	56	110	30	3.50
32	1-1/4"	64	64	130	34	4.50
38	1-1/2"	76	76	145	40	6.00
44	1-3/4"	80	90	160	47	8.50
50	2"	90	100	185	53	10.00
65	2-1/2"	110	130	240	68	18.00
75	3"	120	150	300	78	24.00

WEIGHT ( APPROX.)

(1) kg	(2) kg	(3) kg	(4) kg	(5) kg	(6) kg	(7) kg	(8) kg
0.013	0.014	0.024	0.026	-	-	-	-
0.026	0.028	0.026	0.028	-	-	-	-
0.046	0.049	0.062	0.065	-	-	-	-
0.07	0.073	0.077	0.080	0.073	0.065	0.075	0.100
0.17	0.18	0.190	0.200	0.15	0.17	0.186	0.215
0.40	0.42	0.475	0.495	0.37	0.41	0.455	0.50
0.70	0.72	0.78	0.80	0.62	0.67	0.78	0.83
1.10	1.18	1.18	1.26	1.00	1.10	1.40	1.30
1.70	1.80	1.80	1.90	1.53	1.60	1.75	2.05
2.40	2.50	2.55	2.65	2.20	2.35	2.40	3.00
3.60	3.70	3.90	4.00	3.20	3.35	3.60	4.23
6.00	6.10	6.90	7.00	5.25	5.70	6.00	7.10
10.00	-	-	-	-	-	-	10.70
12.00	-	-	-	-	-	-	17.00
28.00	-	-	-	-	-	-	33.00
44.00	-	-	-	-	-	-	50.00

# SHACKLES

ANGLE LOADS MUST BE APPLIED IN THE PLANE OF THE BOW.

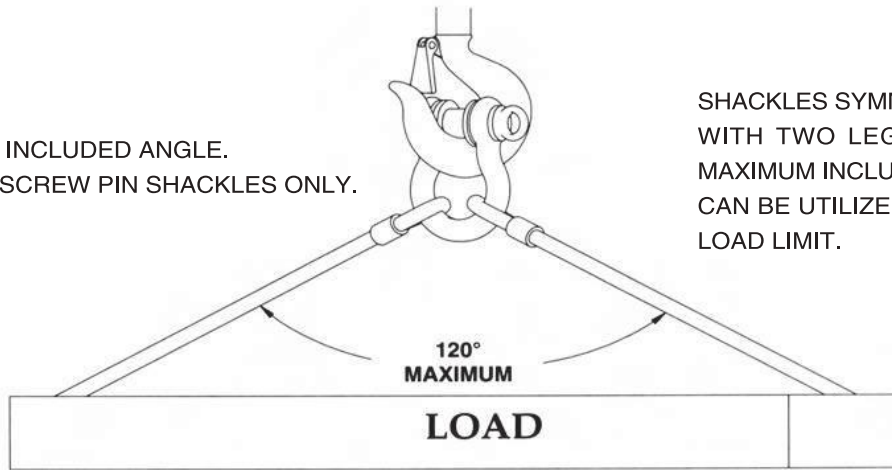


SIDE LOADING REDUCTION CHART FOR SCREW PIN AND BOLT TYPE SHACKLES ONLY**	
ANGLE OF SIDE LOAD FROM VERTICAL IN-LINE OF SHACKLE	ADJUSTED WORKING LOAD LIMIT
0° IN-LINE*	100% OF RATED WORKING LOAD LIMIT
45° FROM IN-LINE*	70% OF RATED WORKING LOAD LIMIT
90° FROM IN-LINE*	50% OF RATED WORKING LOAD LIMIT

\* IN-LINE LOAD IS APPLIED PERPENDICULAR TO PIN.

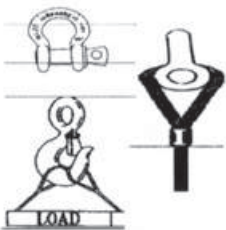
\*\*DO NOT SIDE LOAD ROUND PIN SHACKLES

NEVER EXCEED 120° INCLUDED ANGLE. USE BOLT TYPE AND SCREW PIN SHACKLES ONLY.



SHACKLES SYMMETRICALLY LOADED WITH TWO LEG SLINGS HAVING A MAXIMUM INCLUDED ANGLE OF 120° CAN BE UTILIZED TO FULL WORKING LOAD LIMIT.

### WIRE ROPE SLINGS AND CONNECTIONS TO FITTINGS

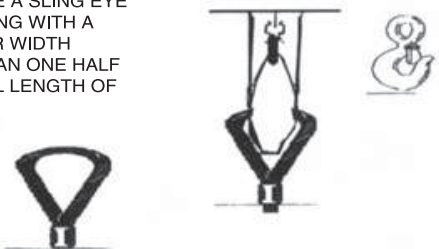


USE A THIMBLE TO PROTECT SLING AND TO INCREASE D/d

NEVER PLACE EYE OVER A FITTING SMALLER DIAMETER OR WIDTH THAN THE ROPE'S DIAMETER

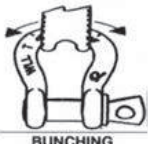
### WIRE ROPE SLINGS AND CONNECTIONS TO FITTINGS

NEVER PLACE A SLING EYE OVER A FITTING WITH A DIAMETER OR WIDTH GREATER THAN ONE HALF THE NATURAL LENGTH OF THE EYE



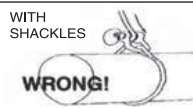
### SYNTHETIC SLINGS RATED LOAD

FOLDINGS, BUNCHING OR PINCHING OF SYNTHETIC SLINGS, WHICH OCCURS WHEN USED WITH SHACKLES, HOOKS OR OTHER APPLICATIONS WILL REDUCE THE RATED LOAD

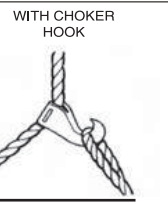


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### CHOKER HITCH FORMED

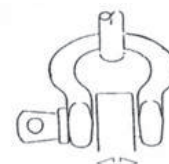


PLACE PIN IN EYE OF SLING



### CROSBY SHACKLES POINT LOADING

POINT LOADING OF CROSBY SHACKLE BOWS IS ACCEPTABLE



POINT LOADING OF CROSBY SHACKLE PINS IS ACCEPTABLE AS LONG AS LOAD IS REASONABLY CENTERED ON THE PIN

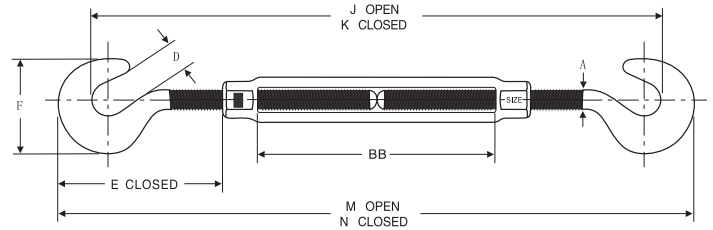
ALTHOUGH POINT LOADING IS ACCEPTABLE, A PAD EYE WIDTH OF 80% OR MOTR OF SHACKLE SPREAD IS BEST PRACTICE



# TURNBUCKLES

## HOT DIP GALVANIZED DROP FORGED TURNBUCKLES HOOK & HOOK

CONFORMS TO FEDERAL SPECIFICATION FF-T-791B, TYPE 1, FORM 1-CLASS 5



- ◆ HOT DIP GALVANIZED
- ◆ END FITTINGS ARE QUENCHED AND TEMPERED BODIES ARE NORMALIZED
- ◆ PROOF LOAD IS 2.5 TIMES WORKING LOAD LIMIT  
ULTIMATE LOAD IS 5 TIMES WORKING LOAD LIMIT

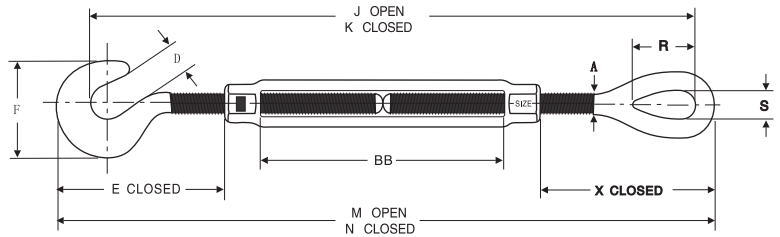
## HOOK & HOOK DIMENSIONS(IN),APPROX

THREAD DIA & TAKE UP (IN.)	WORKING LOAD LIMIT (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS(IN.)								
			A	D	E CLOSED	F	J OPEN	K CLOSED	M OPEN	N CLOSED	BB
1/4X4	400	0.30	0.25	0.45	1.59	1.27	11.12	7.12	11.94	7.94	4.00
5/16X4 1/2	700	0.47	0.31	0.50	1.94	1.50	12.81	8.31	13.81	9.31	4.50
3/8X6	1000	0.78	0.38	0.56	2.30	1.77	16.50	10.50	17.72	11.72	6.00
1/2X6	1500	1.60	0.50	0.66	2.94	2.28	18.82	11.82	20.38	13.38	6.00
1/2X9	1500	1.83	0.50	0.66	2.94	2.28	24.82	14.82	26.38	16.38	9.00
1/2X12	1500	2.28	0.50	0.66	2.94	2.28	30.82	17.82	32.38	19.38	12.00
5/8X6	2250	2.75	0.63	0.9	3.69	2.81	20.50	13.25	22.50	15.25	6.00
5/8X9	2250	3.38	0.63	0.9	3.69	2.81	26.50	16.25	28.50	18.25	9.00
5/8X12	2250	3.50	0.63	0.9	3.69	2.81	32.50	19.25	34.50	21.25	12.00
3/4X6	3000	3.89	0.75	0.98	4.52	3.33	22.38	14.88	24.78	17.28	6.00
3/4X9	3000	5.28	0.75	0.98	4.52	3.33	28.38	17.88	30.78	20.28	9.00
3/4X12	3000	5.43	0.75	0.98	4.52	3.33	34.38	20.88	36.78	23.28	12.00
3/4X18	3000	8.12	0.75	0.98	4.52	3.33	46.38	26.88	48.78	29.28	18.00
7/8X12	4000	8.10	0.88	1.13	5.19	3.78	36.00	22.25	38.75	25.00	12.00
7/8X18	4000	9.95	0.88	1.13	5.19	3.78	48.00	28.25	50.75	31.00	18.00
1X6	5000	9.33	1.00	1.25	5.84	4.25	25.63	17.63	28.69	20.69	6.00
1X12	5000	11.93	1.00	1.25	5.84	4.25	37.63	23.63	40.69	26.69	12.00
1X18	5000	14.00	1.00	1.25	5.84	4.25	49.63	29.63	52.69	32.69	18.00
1X24	5000	17.25	1.00	1.25	5.84	4.25	61.63	35.63	64.69	38.69	24.00
1-1/4X12	6500	20.58	1.25	1.50	7.22	5.13	40.44	25.94	44.06	29.56	12.00
1-1/4X18	6500	23.00	1.25	1.50	7.22	5.13	52.44	31.94	56.06	35.56	18.00
1-1/4X24	6500	27.00	1.25	1.50	7.22	5.13	64.44	37.94	68.06	41.56	24.00
1-1/2X12	7500	27.50	1.50	1.88	8.34	5.75	43.94	28.94	47.44	32.44	12.00
1-1/2X18	7500	31.00	1.50	1.88	8.34	5.75	55.96	34.94	59.44	38.44	18.00
1-1/2X24	7500	37.50	1.50	1.88	8.34	5.75	67.94	40.94	71.44	44.44	24.00

# TURNBUCKLES

## HOT DIP GALVANIZED DROP FORGED TURNBUCKLES HOOK & EYE

CONFORMS TO FEDERAL SPECIFICATION FF-T-791B, TYPE 1, FORM 1-CLASS 6



- ◆ HOT DIP GALVANIZED
- ◆ END FITTINGS ARE QUENCHED AND TEMPERED BODIES ARE NORMALIZED
- ◆ PROOF LOAD IS 2.5 TIMES WORKING LOAD LIMIT  
ULTIMATE LOAD IS 5 TIMES WORKING LOAD LIMIT

## HOOK & EYE

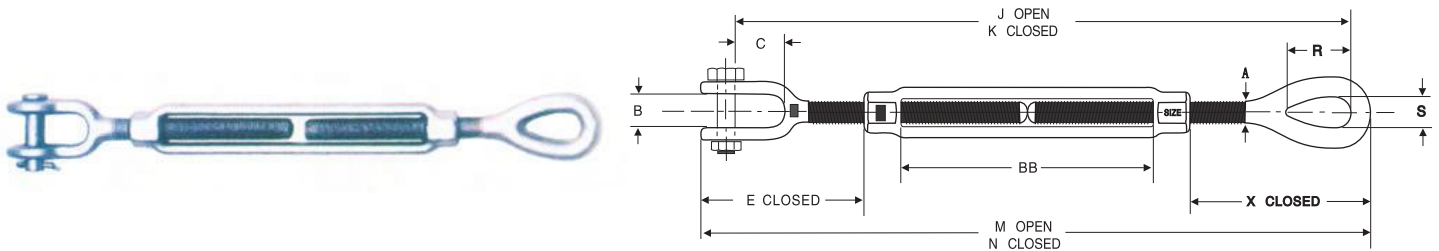
### DIMENSIONS(IN) APPROX

THREAD DIA & TAKE UP (IN.)	WORKING LOAD LIMIT (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS(IN.)									
			A	D	E CLOSED	F	J OPEN	K CLOSED	M Open	S	N CLOSED	BB
1/4X4	400	0.29	0.25	0.45	1.59	1.27	11.46	7.46	12.09	0.34	1.75	4.00
5/16X4-1/2	700	0.49	0.31	0.50	1.94	1.50	13.19	8.69	13.47	0.44	2.09	4.50
3/8X6	1000	0.78	0.38	0.56	2.30	1.77	16.98	10.98	17.94	0.53	2.52	6.00
1/2X6	1500	1.61	0.50	0.66	2.94	2.28	19.45	12.45	20.67	0.72	3.23	6.00
1/2X9	1500	1.85	0.50	0.66	2.94	2.28	25.45	15.45	26.67	0.72	3.23	9.00
1/2X12	1500	2.26	0.50	0.66	2.94	2.28	31.45	18.45	32.67	0.72	3.23	12.00
5/8X6	2250	2.70	0.63	0.90	3.69	2.81	21.96	13.96	22.72	0.88	3.90	6.00
5/8X9	2250	3.13	0.63	0.90	3.69	2.81	27.96	16.96	28.72	0.88	3.90	9.00
5/8X12	2250	3.78	0.63	0.90	3.69	2.81	33.21	19.96	34.72	0.88	3.90	12.00
3/4X6	3000	3.89	0.75	0.98	4.52	3.33	23.13	15.63	24.95	1.00	4.69	6.00
3/4X9	3000	4.61	0.75	0.98	4.52	3.33	29.13	18.63	30.95	1.00	4.69	9.00
3/4X12	3000	5.83	0.75	0.98	4.52	3.33	35.13	21.63	36.95	1.00	4.69	12.00
3/4X18	3000	6.33	0.75	0.98	4.52	3.33	47.13	27.63	48.95	1.00	4.69	18.00
7/8X12	4000	8.10	0.88	1.13	5.19	3.78	36.53	22.78	38.66	1.25	5.10	12.00
7/8X18	4000	9.95	0.88	1.13	5.19	3.78	48.53	28.78	50.66	1.25	5.10	18.00
1X6	5000	9.33	1.00	1.25	5.84	4.25	26.80	18.80	29.20	1.44	6.36	6.00
1X12	5000	11.93	1.00	1.25	5.84	4.25	38.80	24.80	41.20	1.44	6.36	12.00
1X18	5000	14.00	1.00	1.25	5.84	4.25	50.80	30.80	53.20	1.44	6.36	18.00
1X24	5000	17.25	1.00	1.25	5.84	4.25	62.80	36.80	65.20	1.44	6.36	24.00
1-1/4X12	6500	19.00	1.25	1.50	7.22	5.13	41.63	27.13	44.56	1.81	7.72	12.00
1-1/4X18	6500	23.00	1.25	1.50	7.22	5.13	53.63	33.13	56.56	1.81	7.72	18.00
1-1/4X24	6500	24.00	1.25	1.50	7.22	5.13	65.63	39.13	68.56	1.81	7.72	24.00
1-1/2X12	7500	27.50	1.50	1.88	8.34	5.75	44.72	29.72	47.72	2.12	8.62	12.00
1-1/2X18	7500	31.00	1.50	1.88	8.34	5.75	56.72	35.72	59.72	2.12	8.62	18.00
1-1/2X24	7500	37.50	1.50	1.88	8.34	5.75	68.72	41.72	71.72	2.12	8.62	24.00

# TURNBUCKLES

## HOT DIP GALVANIZED DROP FORGED TURNBUCKLES JAW & EYE

CONFORMS TO FEDERAL SPECIFICATION FF-T-791B, TYPE 1, FORM 1-CLASS 8



- ◆ HOT DIP GALVANIZED
- ◆ END FITTINGS ARE QUENCHED AND TEMPERED BODIES ARE NORMALIZED
- ◆ PROOF LOAD IS 2.5 TIMES WORKING LOAD LIMIT  
ULTIMATE LOAD IS 5 TIMES WORKING LOAD LIMIT

### JAW & EYE

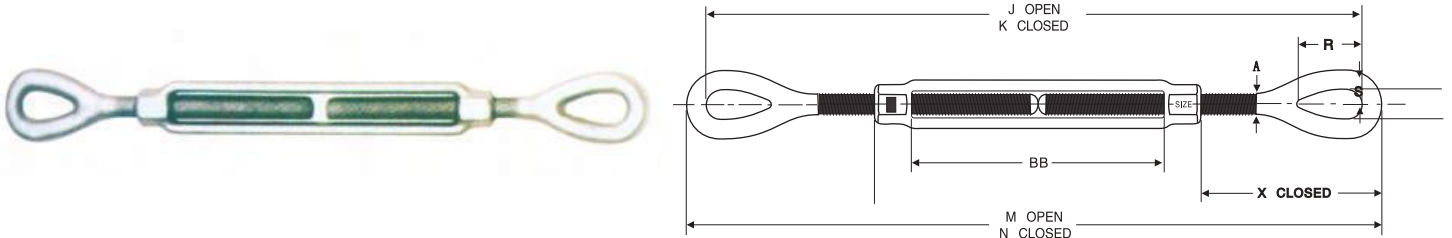
#### DIMENSIONS(IN),APPROX

THREAD DIA & TAKE UP (IN.)	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	500	0.30	0.25	0.45	1.58	0.62	11.35	7.35	12.07	8.07	0.78	0.34	1.75	4.00
5/16X4-1/2	800	0.50	0.31	0.50	1.98	0.87	13.71	8.71	14.01	9.51	0.94	0.44	2.09	4.50
3/8X6	1200	0.80	0.38	0.54	2.12	0.87	16.81	10.81	17.77	11.77	1.12	0.53	2.52	6.00
1/2X6	2200	1.51	0.50	0.55	2.75	1.06	19.29	12.29	20.48	13.48	1.42	0.72	3.23	6.00
1/2X9	2200	1.71	0.50	0.55	2.75	1.06	25.29	15.29	26.48	16.48	1.42	0.72	3.23	9.00
1/2X12	2200	2.08	0.50	0.55	2.75	1.06	31.29	18.29	32.48	19.48	1.42	0.72	3.23	12.00
5/8X6	3500	2.35	0.63	0.82	3.50	1.31	20.99	13.74	22.53	15.28	1.80	0.88	3.90	6.00
5/8X9	3500	3.17	0.63	0.82	3.50	1.31	26.99	16.74	28.53	18.28	1.80	0.88	3.90	9.00
5/8X12	3500	3.61	0.63	0.82	3.50	1.31	32.99	19.74	34.53	21.28	1.80	0.88	3.90	12.00
3/4X6	5200	4.00	0.75	1.03	4.18	1.50	22.69	15.19	24.61	17.11	2.09	1.00	4.69	6.00
3/4X9	5200	4.75	0.75	1.03	4.18	1.50	28.69	18.19	30.61	20.11	2.09	1.00	4.69	9.00
3/4X12	5200	5.93	0.75	1.03	4.18	1.50	34.69	21.19	36.61	23.11	2.09	1.00	4.69	12.00
3/4X18	5200	7.00	0.75	1.03	4.18	1.50	46.69	27.19	48.61	29.11	2.09	1.00	4.69	18.00
7/8X12	7200	8.36	0.88	1.23	4.85	1.75	36.09	22.34	38.32	24.57	2.38	1.25	5.10	12.00
7/8X18	7200	9.75	0.88	1.23	4.85	1.75	48.09	28.34	50.32	30.57	2.38	1.25	5.10	18.00
1X6	10000	8.92	1.00	1.31	5.53	2.06	26.34	18.34	28.89	20.89	3.00	1.44	6.36	6.00
1X12	10000	11.20	1.00	1.31	5.53	2.06	38.34	24.34	40.89	26.89	3.00	1.44	6.36	12.00
1X18	10000	13.30	1.00	1.31	5.53	2.06	50.34	30.34	52.89	32.89	3.00	1.44	6.36	18.00
1X24	10000	17.00	1.00	1.31	5.53	2.06	62.34	36.34	64.89	38.89	3.00	1.44	6.36	24.00
1-1/4X12	15200	19.42	1.25	1.86	7.21	2.81	41.32	26.82	44.55	30.05	3.56	1.81	7.72	12.00
1-1/4X18	15200	24.18	1.25	1.86	7.21	2.81	53.32	32.82	56.05	36.05	3.56	1.81	7.72	18.00
1-1/4X24	15200	28.50	1.25	1.86	7.21	2.81	65.32	38.82	68.55	42.05	3.56	1.81	7.72	24.00
1-1/2X12	21400	28.99	1.50	2.25	7.88	2.81	73.50	28.50	47.25	32.25	4.06	2.12	8.62	12.00
1-1/2X18	21400	35.00	1.50	2.25	7.88	2.81	55.50	34.50	59.25	38.25	4.06	2.12	8.62	18.00
1-1/2X24	21400	39.18	1.50	2.25	7.88	2.81	67.50	40.50	71.25	44.25	4.06	2.12	8.62	24.00
1-3/4X18	28000	53.75	1.75	2.60	9.40	3.38	55.38	37.38	59.78	41.78	4.62	2.38	10.00	18.00
1-3/4X24	28000	60.68	1.75	2.60	9.40	3.38	67.38	43.38	71.78	47.78	4.62	2.38	10.00	24.00
2X24	37000	89.00	2.00	2.62	11.86	3.69	72.62	48.62	77.95	53.95	5.75	2.69	13.09	24.00
2-1/2X24	60000	150.00	2.50	3.06	13.56	4.44	75.80	51.80	82.40	58.40	6.50	3.12	13.78	24.00
2-3/4X24	75000	183.00	2.75	3.68	15.22	4.19	77.88	53.88	85.50	61.50	7.00	3.25	15.22	24.00

# TURNBUCKLES

## HOT DIP GALVANIZED DROP FORGED TURNBUCKLES EYE & EYE

CONFORMS TO FEDERAL SPECIFICATION FF-T-791B, TYPE 1, FORM 1-CLASS 4



- ◆ HOT DIP GALVANIZED
- ◆ END FITTINGS ARE QUENCHED AND TEMPERED BODIES ARE NORMALIZED
- ◆ PROOF LOAD IS 2.5 TIMES WORKING LOAD LIMIT  
ULTIMATE LOAD IS 5 TIMES WORKING LOAD LIMIT

## EYE & EYE

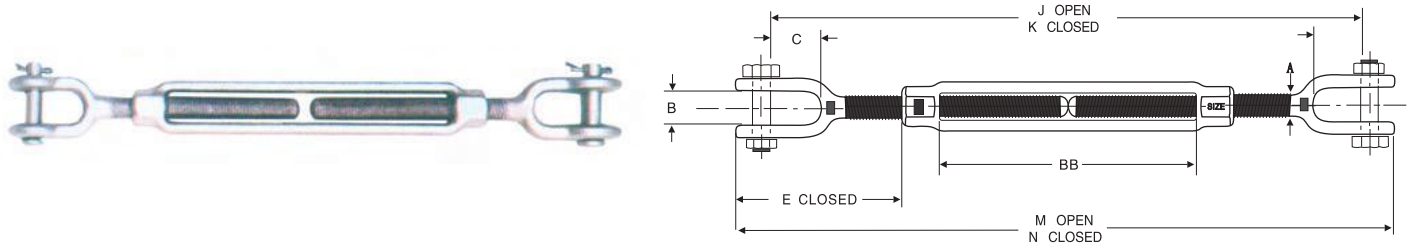
### DIMENSIONS(IN),APPROX

THREAD DIA & TAKE UP (IN.)	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	500	0.26	0.25	11.80	7.80	12.25	8.25	0.78	0.34	1.75	4.00
5/16X4-1/2	800	0.45	0.31	13.56	9.06	14.12	9.62	0.94	0.44	2.09	4.50
3/8X6	1200	0.76	0.38	17.47	11.47	18.16	12.16	1.12	0.53	2.52	6.00
1/2X6	2200	1.54	0.50	20.08	13.08	20.96	13.96	1.42	0.72	3.23	6.00
1/2X9	2200	1.13	0.50	26.08	16.08	26.96	16.96	1.42	0.72	3.23	9.00
1/2X12	2200	2.14	0.50	32.08	19.08	32.96	19.96	1.42	0.72	3.23	12.00
5/8X6	3500	3.28	0.63	21.93	14.68	22.93	15.68	1.80	0.88	3.90	6.00
5/8X9	3500	2.83	0.63	27.93	17.68	28.93	18.68	1.80	0.88	3.90	9.00
5/8X12	3500	3.42	0.63	33.93	20.68	34.93	21.68	1.80	0.88	3.90	12.00
3/4X6	5200	3.79	0.75	23.88	16.38	25.12	17.62	2.09	1.00	4.69	6.00
3/4X9	5200	4.61	0.75	29.88	19.38	31.12	20.62	2.09	1.00	4.69	9.00
3/4X12	5200	5.48	0.75	35.88	22.38	37.12	23.62	2.09	1.00	4.69	12.00
3/4X18	5200	7.19	0.75	47.88	28.38	49.12	29.62	2.09	1.00	4.69	18.00
7/8X12	7200	7.22	0.88	37.07	23.32	38.57	24.82	2.38	1.25	5.10	12.00
7/8X18	7200	9.95	0.88	49.07	29.32	50.57	30.82	2.38	1.25	5.10	18.00
1X6	10000	9.04	1.00	27.97	19.97	29.72	21.72	3.00	1.44	6.36	6.00
1X12	10000	11.50	1.00	39.97	25.97	41.97	27.72	3.00	1.44	6.36	12.00
1X18	10000	14.00	1.00	51.97	31.97	53.72	33.72	3.00	1.44	6.36	18.00
1X24	10000	17.25	1.00	63.97	37.97	65.72	39.72	3.00	1.44	6.36	24.00
X1-1/4X12	15200	19.00	1.25	42.81	28.31	45.06	30.56	3.56	1.81	7.72	12.00
1-1/4X18	15200	23.00	1.25	54.81	34.31	57.06	36.56	3.56	1.81	7.72	18.00
1-1/4X24	15200	27.00	1.25	66.81	40.31	69.06	42.56	3.56	1.81	7.72	24.00
1-1/2X12	21400	27.50	1.50	45.50	30.50	48.00	33.00	4.06	2.12	8.62	12.00
1-1/2X18	21400	31.00	1.50	57.50	36.50	60.00	39.00	4.06	2.12	8.62	18.00
1-1/2X24	21400	37.50	1.50	69.50	42.50	72.00	45.00	4.06	2.12	8.62	24.00
1-3/4X18	28000	52.50	1.75	57.38	39.38	60.38	42.38	4.62	2.38	10.00	18.00
1-3/4X24	28000	58.00	1.75	69.38	45.38	72.38	48.38	4.62	2.38	10.00	24.00
2X24	37000	85.25	2.00	75.69	51.69	79.19	55.19	5.75	2.69	13.09	24.00
2-1/2X24	60000	144.25	2.50	78.62	54.62	82.62	58.62	6.50	3.12	13.78	24.00
2-3/4X24	75000	194.00	2.75	81.00	57.00	85.50	61.50	7.00	3.25	15.22	24.00

# TURNBUCKLES

## HOT DIP GALVANIZED DROP FORGED TURNBUCKLES JAW & JAW

CONFORMS TO FEDERAL SPECIFICATION FF-T-791B, TYPE 1, FORM 1-CLASS 7



- ◆ HOT DIP GALVANIZED
- ◆ END FITTINGS ARE QUENCHED AND TEMPERED BODIES ARE NORMALIZED
- ◆ PROOF LOAD IS 2.5 TIMES WORKING LOAD LIMIT  
ULTIMATE LOAD IS 5 TIMES WORKING LOAD LIMIT

### JAW & JAW

#### DIMENSIONS(IN),APPROX

THREAD DIA & TAKE UP (IN.)	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	500	0.36	0.25	0.45	1.58	0.62	10.90	6.90	11.90	7.90	4.00
5/16X4-1/2	800	0.52	0.31	0.50	1.98	0.87	12.36	8.36	13.90	9.40	4.50
3/8X6	1200	0.81	0.38	0.54	2.12	0.87	16.14	10.14	17.38	11.38	6.00
1/2X6	2200	1.56	0.50	0.55	2.75	1.06	18.50	11.50	20.00	13.00	6.00
1/2X9	2200	1.74	0.50	0.55	2.75	1.06	24.50	14.50	26.00	16.00	9.00
1/2X12	2200	2.40	0.50	0.55	2.75	1.06	30.50	17.50	32.00	19.00	12.00
5/8X6	3500	2.72	0.63	0.82	3.50	1.31	20.05	12.80	22.13	14.88	6.00
5/8X9	3500	3.43	0.63	0.82	3.50	1.31	26.05	15.80	28.13	17.88	9.00
5/8X12	3500	3.91	0.63	0.82	3.50	1.31	32.05	18.80	34.13	20.88	12.00
3/4X6	5200	4.11	0.75	1.03	4.18	1.50	21.50	14.00	24.10	16.60	6.00
3/4X9	5200	5.46	0.75	1.03	4.18	1.50	27.50	17.00	30.10	19.60	9.00
3/4X12	5200	6.43	0.75	1.03	4.18	1.50	33.50	20.00	36.10	22.60	12.00
3/4X18	5200	8.07	0.75	1.03	4.18	1.50	45.50	26.00	48.10	28.60	18.00
7/8X12	7200	8.17	0.88	1.23	4.85	1.75	35.11	21.36	38.07	24.32	12.00
7/8X18	7200	10.78	0.88	1.23	4.85	1.75	47.11	27.36	50.07	30.32	18.00
1X6	10000	10.18	1.00	1.31	5.53	2.06	24.72	16.72	28.06	20.06	6.00
1X12	10000	12.52	1.00	1.31	5.53	2.06	36.72	22.72	40.06	26.06	12.00
1X18	10000	15.14	1.00	1.31	5.53	2.06	48.72	28.72	52.06	32.06	18.00
1X24	10000	18.08	1.00	1.31	5.53	2.06	60.72	34.72	64.06	38.06	24.00
1-1/4X12	15200	20.59	1.25	1.86	7.21	2.81	39.84	25.34	44.04	29.54	12.00
1-1/4X18	15200	24.68	1.25	1.86	7.21	2.81	51.84	31.34	56.04	35.54	18.00
1-1/4X24	15200	28.20	1.25	1.86	7.21	2.81	63.84	37.34	68.04	41.54	24.00
1-1/2X12	21400	30.69	1.50	2.25	7.88	2.81	41.50	26.50	46.50	31.50	12.00
1-1/2X18	21400	36.75	1.50	2.25	7.88	2.81	53.50	32.50	58.50	37.50	18.00
1-1/2X24	21400	40.67	1.50	2.25	7.88	2.81	65.50	38.50	70.50	43.50	24.00
1-3/4X18	28000	54.00	1.75	2.60	9.40	3.38	53.38	35.38	59.18	41.18	18.00
1-3/4X24	28000	63.36	1.75	2.60	9.40	3.38	65.38	41.38	71.18	47.18	24.00
2X24	37000	94.25	2.00	2.62	11.86	3.69	69.54	45.54	76.72	52.72	24.00
2-1/2X24	60000	165.00	2.50	3.06	13.56	4.44	72.98	48.98	82.18	58.18	24.00
2-3/4X24	75000	198.00	2.75	3.68	15.22	4.19	74.75	50.75	85.50	61.50	24.00

# TURNBUCKLES

## JIS FORGED STEEL FRAME TYPE TURNBUCKLES



(1) BODY ONLY (TB-B)



(2) EYE & EYE (TB-E/E)



(3) HOOK & EYE (TB-H/E)



(4) HOOK & HOOK (TB-H/H)



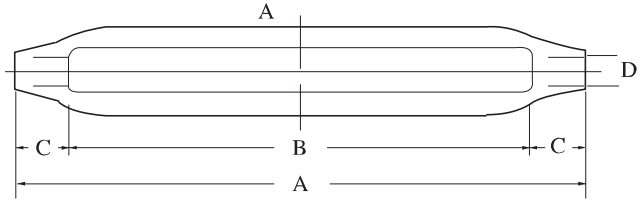
(5) OVAL EYE & OVAL EYE (TB-OE/OE)



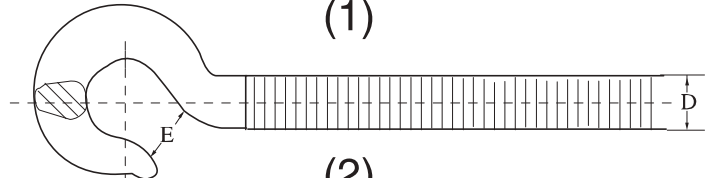
(6) WITH STUBS (TB-S/S)



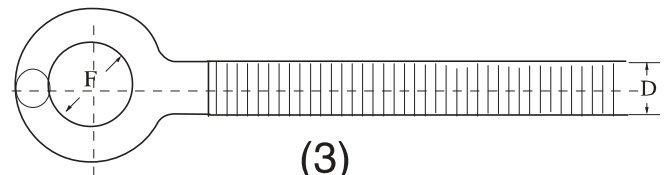
(7) LONG FRAME TURNBUCKLE WITH EYE & EYE (TB-O/O)



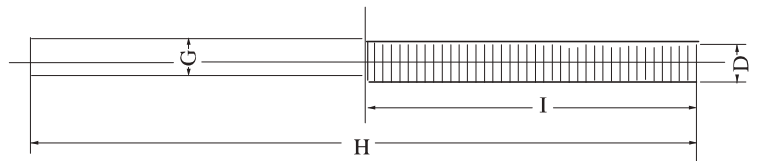
(1)



(2)



(3)



(4)

### (7) SIZES AND WEIGHTS (APPROX.)

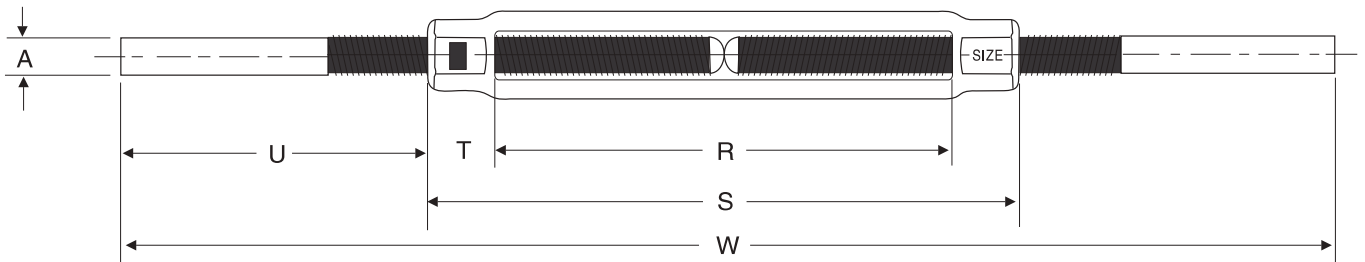
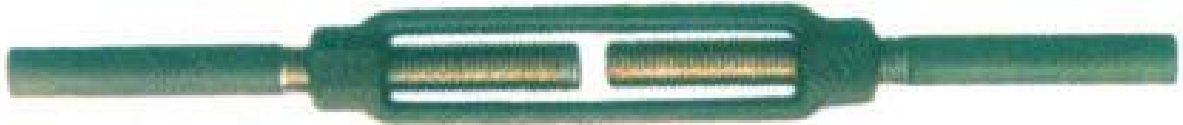
DIA. X OUTSIDE LENGTH OF FRAME (MM)	INSIDE DIA. OF EYE (MM)	WEIGHT PER PC (KG)
19 x 510	37	2.9
22 x 520	31 x 50	3.8
25 x 520	33 x 70	5.2
25 x 900	33 x 70	8.0
32 x 575	36 x 70	9.8
32 x 900	36 x 70	-
32 x 900	40 x 80	-

### (1) (2) (3) (4) (6) SIZES AND WEIGHTS (APPROX.)

NOMINAL SIZE		(1) BODY ONLY						(2) EYE & EYE			(3) HOOK & EYE		(4) HOOK & HOOK			(6) WITH STUBS															
		A		B		C		T.L		W/PC		F		T.L		W/PC		E		T.L		W/PC		H		I(A2)		G		W/PC	
mm	in	mm	in	mm	in	mm	in	Ton	kg	mm	Ton	kg	Ton	kg	mm	Ton	kg	mm	Ton	kg	mm	Ton	kg	mm	mm	mm	mm	mm	mm	mm	mm
6	1/4	100	4	78	11	1	0.08	10	0.1	0.116	0.04	0.114	9	0.04	0.112	80	50	5.3	0.112												
8	5/16	125	5	100	12.5	1.2	0.15	12	0.2	0.22	0.08	0.218	9	0.08	0.215	100	63	6.9	0.22												
9	3/8	150	6	120	12.5	1.5	0.17	16	0.5	0.30	0.15	0.293	11	0.15	0.29	130	75	8.3	0.273												
12	1/2	200	8	164	18	2	0.29	20	2	0.58	0.35	0.585	16	0.35	0.57	150	100	11.2	0.51												
16	5/8	250	10	202	21.5	3	0.52	22	3	1.07	0.7	1.05	19	0.7	1.03	180	125	14.2	0.95												
19	3/4	300	12	250	25	4	0.85	28	4	1.77	1.0	1.78	20	1.0	1.77	220	150	17.2	1.62												
22	7/8	325	13	269	28	5	1.17	33	5	2.55	1.5	2.58	21	1.5	2.60	250	165	20.3	2.34												
25	1	350	14	285	32.5	6	1.69	35	6	3.79	2.0	3.77	26	2.0	3.72	270	175	23.3	3.27												
32	1-1/4	400	16	310	45	8	3.51	36 x 70	10	7.6	3.0	7.52	34	3.0	7.44	300	200	29	6.52												
38	1-1/2	450	18	350	55	10	5.08	40 x 80	15	13.5	4.0	12.8	35	4.0	22	330	225	38	13												
44	1-3/4	500	20	386	57	-	9.0	-	-	-	-	-	-	-	22	-	250	44	-												
50	2	550	22	420	65	-	11.5	-	-	-	-	-	-	29	-	275	50	-													

# TURNBUCKLES

## STUB END TURNBUCKLES



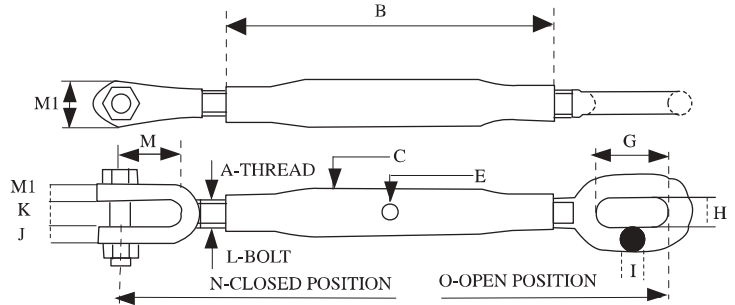
- ◆ COMPLETE ASSEMBLY IS SELF-COLORED.
- ◆ END FITTINGS ARE QUENCHED AND TEMPERED, BODIES HEAT TREATED BY NORMALIZING.
- ◆ REFERENCE AMERICAN WELDING SOCIETY SPECIFICATIONS FOR PROPER WELDING PROCEDURES.
- ◆ MEETS THE PERFORMANCE REQUIREMENTS OF FEDERAL SPECIFICATIONS FF-T-791B,TYPE 1 --- CLASS 3, EXCEPT FOR THOSE PROVISIONS REQUIRED OF CONTRACTOR.

### HS-251 STUB END TURNBUCKLE

SHANK DIAMETER & TAKE UP (IN.)	WORKING LOAD LIMIT (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)					
			A	R	S	T	U	W
3/8X6	1200	0.75	0.38	6.00	7.13	0.56	4.44	16.00
1/2X6	2200	1.25	0.50	6.00	7.50	0.75	4.25	16.00
5/8X6	3500	2.11	0.63	6.00	7.88	0.94	4.06	16.00
3/4X6	5200	3.27	0.75	6.00	8.25	1.13	4.38	17.00
7/8X6	7200	4.78	0.88	6.00	8.63	1.21	4.69	18.00
1X6	10000	6.36	1.00	6.00	9.00	1.50	5.00	19.00
1X12	10000	8.80	1.00	12.00	15.00	1.50	5.00	25.00
1 1/8X6	12400	8.88	1.13	6.00	9.13	1.56	4.94	19.00
1 1/4X6	15200	10.18	1.25	6.00	9.13	1.56	5.44	20.00
1 1/4X12	15200	13.60	1.25	12.00	15.12	1.56	5.44	26.00
1 1/2X12	21400	20.44	1.50	12.00	15.75	1.88	5.38	26.50

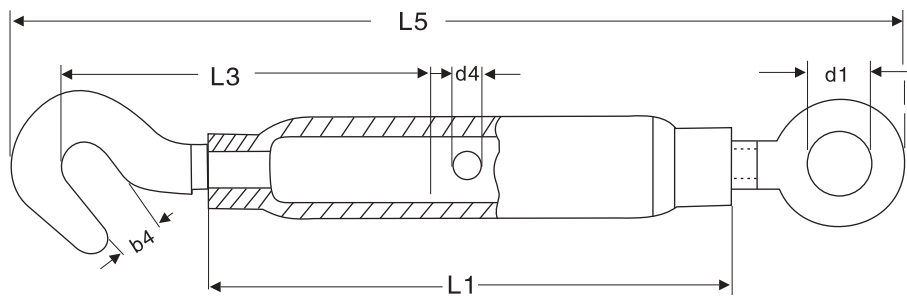
# TURNBUCKLES

## RIGGING SCREWS



ΦA THREAD	B mm	ΦC mm	ΦE mm	G mm	H mm	ΦI mm	J mm	ΦK mm	ΦL mm	M mm	M1 mm	N mm	O mm	Suitable For WLL	WT kg
M6	102	17	6	14	8	6	6	9	4	21	14	176	254	100kgs	0.1
M8	127	17	6	20	9	8	6	9	6	21	18	203	305	150kgs	0.2
M10	152	21	8	25	11	8	8	12	8	19	18	235	349	380kgs	0.4
M12	229	27	9	38	14	11	9	19	10	35	24	334	527	500kgs	1.0
M16	229	27	11	40	18	14	9	22	12	51	32	375	556	760kgs	1.4
M20	229	34	11	50	22	16	11	22	16	48	36	385	554	1.2t	2.0
M22	305	42	13	48	22	17	13	25	20	60	40	465	704	1.7t	3.4
M24	356	42	13	51	25	19	14	32	22	63	48	528	812	2.2t	4.4
M27	356	48	13	57	28	20	14	32	22	70	52	542	817	2.8t	5.5
M33	381	48	14	64	34	25	19	38	24	76	64	602	884	3.8t	8.0
M39	407	60	16	75	38	27	19	47	33	90	64	644	934	5.2t	12.0
1.3/4"	407	76	17	85	40	30	24	48	36	105	80	670	942	7.2t	17.0
2"	407	76	19	92	44	37	25	51	42	121	92	739	993	10t	24.0

## TURNBUCKLES, PIPE BODY TYPE DIN 1478 WITH HOOK AND EYE

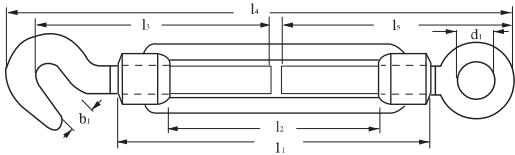


THREAD	BODY LENGTH L1	ADJUSTABLE	d4	hook		eye		total length screwed in L5	Weight PER 100PCS (KG)
				L3	b1	L3	d1		
(MM)	(MM)	(MM)	(MM)	(MM)	(MM)	(MM)	(MM)	(MM)	(KG)
M6	110	90	6	85	8.5	80	9	172	11.6
M8	110	85	8	85	11	84	10	182	19
M10	125	95	8	112	13.5	105	14	213	31
M12	125	90	10	117	15.5	115	16	238	42
M16	170	120	10	138	19	165	22	320	89
M20	200	140	12	170	20.5	167	24	367	158
M24	255	180	12	205	26	205	27	447	292
M30	255	160	16	225	33	255	31	512	430
M36	295	180	16	255	44	276	43	568	605
M42	330	200	20	340	48	260	49	683	1160
M48	355	210	20	360	58	300	58	755	1600



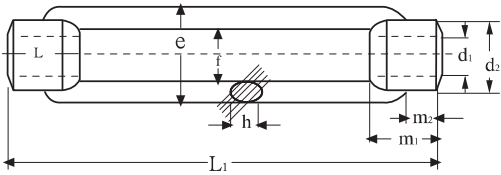
# TURNBUCKLES

## TURNBUCKLES, DIN 1480 EYE & EYE HOOK & EYE, HOOK & HOOK



THREAD (MM)	L1 (MM)	L2 (MM)	L3 (MM)	B1 (MM)	L4 (MM)	D1 (MM)	L5 (MM)	WEIGHT(KG) PER 100 PCS.
M6	110	80	85	8.5	80	9	172	9.5
M8	110	75	85	11	84	10	182	16.5
M10	125	85	112	13.5	105	14	213	29
M12	125	80	117	15.5	115	16	238	43
M14	140	90	122	18.5	122	18	263	62
M16	170	110	138	19	165	22	320	92
M20	200	130	170	20.5	167	24	367	163
M22	220	145	185	26	167	27	398	220
M24	255	170	205	26	205	27	447	300
M30	255	160	225	33	255	31	512	460
M36	295	180	255	44	276	43	568	768
M42	330	200	340	48	260	49	683	1290
M48	355	195	360	58	300	58	755	2100

## TURNBUCKLE BODY DIN 1480



THREAD (MM)	L1 (MM)	ADJUSTABLE (MM)	D2 (MM)	E (MM)	F (MM)	H (MM)	M1 (MM)	M2 (MM)	WEIGHT(KG) PER 100 PCS.
M6	110	80	12	19	9	6	12	6	5.5
M8	110	75	15	23	11	8	15	8	9.5
M10	125	85	18	30	14	9	18	9	15.5
M12	125	80	21	34	16	11	21	11	20.5
M14	140	90	25	38	18	10	24	9	31
M16	170	110	27	42	20	14	27	14	42
M20	200	130	34	52	24	17	34	17	74
M22	220	145	36	57	26	16	37	15	95
M24	255	170	39	60	28	20	39	20	130
M30	255	160	45	74	34	23	45	23	180
M36	295	180	55	86	40	28	55	28	310
M42	330	200	63	104	50	32	63	32	556
M48	355	195	80	135	65	40	78	39	975
M56	355	195	80	135	65	40	78	39	900

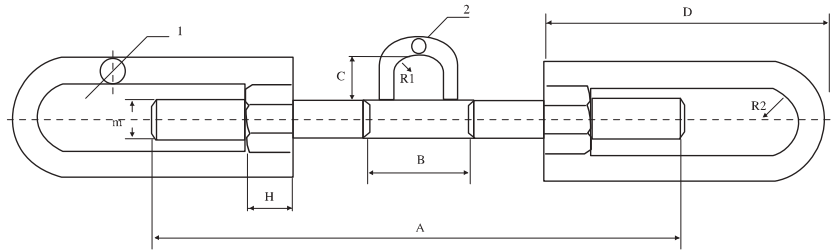
## DIE CAST TURNBUCKLE WITH HOOK AND EYE BODY MADE OF A SPECIAL ZINC ALLOY, AND STEEL BOLTS ZINC-PLATED



SIZE (IN)	APPROX. WEIGHT/100PC (KG)
3/32 X 1-1/4	1.9
3/6 X 1-5/8	3.2
7/32 X 2	4.4
1/4 X 2- 3/8	6.5
5/16 X 2 -3/4	11.9
3/8 X 3	18.0

# TURNBUCKLES

## DEE-DEE TURNBUCKLES (HAMBURG)



M	A	B	C	D	H	1	2	R1	R2	BREAKING LOAD(T)	REMARK
24	400	75	35	210	22	16	12	15	20	13	THE FIGURES IN BRACKETS ARE ADJUSTABLE
		75	35	210	36	18	12	15	20	(18)	
24	500	75	35	260	22	16	12	15	20	13	
		75	35	260	36	18	12	15	20	(18)	
27	400	75	35	210	33	20	12	17.5	21.5	20	
		75	35	210	42	20	12	17.5	21.5	(25)	
27	500	75	35	260	33	20	12	17.5	21.5	20	
		75	35	260	42	20	12	17.5	21.5	(25)	
30	400	75	35	210	-	-	12	17.5	22.5	-	
		75	35	210	45	22	12	17.5	25.5	25	
30	500	75	35	260	-	-	12	17.5	25.5	-	
		75	35	260	45	22	12	17.5	25.5	25	
38	480	80	35	255	40	25	12	20	28	30	
		80	35	-	-	-	-	-	-	-	

## DECKLASHING TURNBUCKLES

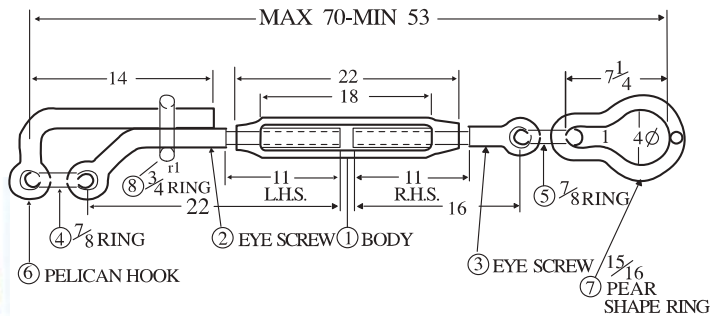
WITH PELICAN AND PEAR SHAPE LINK, SELF COLORED

1-1/4" X 18"

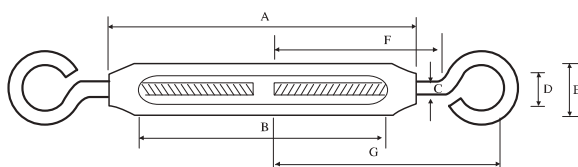
WEIGHT: 37.0 LBS(16.8KGS)

MIN. LOAD TO VISIBLE DISTORTION 18,250LBS.

MINIMUM BREAKING LOAD 56,000 LBS (25.5 TONS)



## KOREAN TYPE TURNBUCKLES



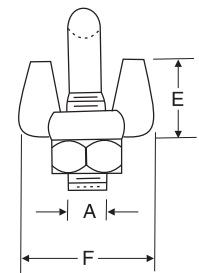
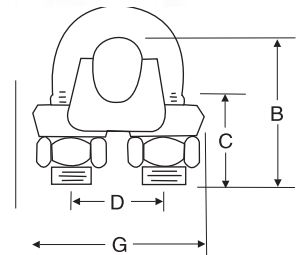
	A (MM)	B (MM)	C (MM)	D (MM)	E (MM)	F (MM)	G (MM)	WEIGHT PER 100 PCS (KG)
3/16"	57.4	41.2	41.5	18.4	15	36	54.6	30
5/16"	90	70	8	11	22	65	95	145
3/8"	160	130	9	17	30	85	130	345
1/2"	190	155	10	20	30	95	150	560
1/2" (Long)	255	215	10	30	35	140	190	790
5/8"	250	200	15	25	45	130	190	1120
5/8" (Long)	350	300	15	30	45	180	240	1540
3/4"	250	200	20	35	45	140	210	1670
3/4" (Long)	300	245	20	40	55	170	240	2050

# WIRE ROPE CLIPS

## U.S. TYPE DROP FORGED WIRE ROPE CLIPS

### G-450

SIZE (IN.)	DIMENSIONS (IN.)							APPROX. WEIGHT EACH (LBS.)	TORQUE IN. LBS X FT
	A	B	C	D	E	F	G		
1/8"	3/16	3/4	7-16	7/16	3/8	13/16	15/16	0.05	4.5
3/16"	1/4	15/16	9/16	9/16	1/2	15/16	1-3/16	0.10	7.5
1/4"	5/16	1-1/16	9/16	3/4	5/8	1-3/16	1-1/2	0.18	15
5/16"	3/8	1-7/16	3/4	7/8	3/4	1-5/16	1-11/16	0.31	30
3/8"	7/16	1-1/2	3/4	1	7/8	1-9/16	1-15/16	0.46	45
7/16"	1/2	1-7/8	1	1-3/16	1	1-13/16	2-5/16	0.73	65
1/2"	1/2	1-7/8	1	1-3/16	1-1/16	1-13/16	2-5/16	0.73	95
9/16"	9/16	2-3/8	1-1/4	1-5/16	1-1/8	2-1/16	2-1/2	0.96	95
5/8"	9/16	2-3/8	1-1/4	1-5/16	1-1/4	2-1/16	2-1/2	1.00	95
3/4"	5/8	2-3/4	1-3/8	1-1/2	1-3/8	2-5/16	2-3/4	1.50	130
7/8"	3/4	3-3/16	1-7/16	1-13/16	1-11/16	2-5/8	3-5/16	2.44	225
1"	3/4	3-5/8	1-3/4	1-7/8	1-3/4	2-5/8	3-15/32	2.70	225
1-1/8"	3/4	4	2	2	1-7/8	2-13/16	3-9/16	3.10	225
1-1/4"	7/8	4-3/8	2-1/4	2-5/16	2-1/16	3-1/4	4-1/16	4.60	360
1-3/8"	7/8	4-5/8	2-5/16	2-3/8	2-1/4	3-7/16	4-1/4	5.20	360
1-1/2"	7/8	4-15/16	2-3/8	2-5/8	2-1/2	3-1/2	4-3/8	5.90	360
1-3/4"	1-1/8	5-7/8	2-3/4	3-1/16	2-7/8	3-3/4	5-1/4	9.80	590
2"	1-1/4	6-1/2	3	3-5/16	3-3/8	4-7/16	5-13/16	13.75	750
2-1/4"	1-1/4	7-1/8	3-5/16	3-7/8	3-13/16	4-1/2	6-5/16	15.70	750
2-1/2"	1-1/4	7-3/4	3-3/8	4-1/8	4-1/4	4-1/2	6-7/16	17.90	750
2.3/4"	1-1/4	8-5/16	3-1/2	4-3/8	5	5	6-3/4	22.00	750
3"	1-1/2	9-3/16	3-7/8	4-3/4	5-1/4	5-5/16	7-9/16	32.00	1200

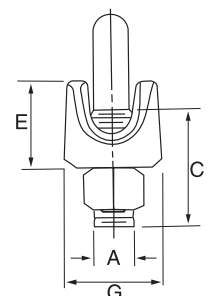
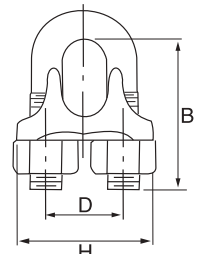


◆ AVAILABLE THE SAME SIZES OF STAINLESS STEEL SUS-304 OR SUS-316

## U.S. TYPE MALLEABLE WIRE ROPE CLIPS

ACCORDING TO U.S. FEDERAL SPECIFICATION FF - C - 450D, TYPE 1, CLASS 2.

SIZE (IN.)	DIMENSIONS (IN.)							WEIGHT PER 100 PCS (LBS.)
	A	B	C	D	E	G	H	
1/8	1/4	13/16	1/2	1/2	7/16	1/2	15/16	4.3
3/16	1/4	31/32	5/8	9/16	1/2	9/16	1-1/16	6.8
1/4	5/16	1-7/32	7/8	11/16	5/8	11/16	1-3/8	14.5
5/16	5/16	1-7/32	7/8	11/16	11/16	11/16	1-3/8	15
3/8	3/8	1-5/8	1	7/8	13/16	7/8	1-5/8	21.5
7/16	3/8	1-5/8	1	7/8	13/16	15/16	1-5/8	24
1/2	7/16	2	1-1/4	1	1-1/16	1	1-7/8	37
9/16	1/2	2-5/16	1-15/32	1-3/16	1-3/16	1-1/8	2-3/16	55
5/8	1/2	2-5/16	1-15/32	1-3/16	1-5/16	1-1/8	2-3/16	59
3/4	9/16	2-9/16	1-3/4	1-11/32	1-1/2	1-1/4	2-7/16	84
7/8	5/8	3-1/16	1-13/16	1-5/8	1-3/4	1-3/4	2-7/8	128
1	5/8	3-3/8	2-1/16	1-3/4	1-15/16	2	3	150
1-1/8	3/4	3-7/8	2-3/16	2-1/16	2-3/16	2-1/8	3-7/16	243
1-1/4	3/4	3-7/8	2-3/16	2-1/16	2-3/8	2-1/2	3-7/16	262
1-3/8	7/8	4-1/2	2	2-9/16	2-7/8	3-1/8	4-3/16	456
1-1/2	7/8	4-1/2	2	2-9/16	3	3-1/4	4-1/4	512

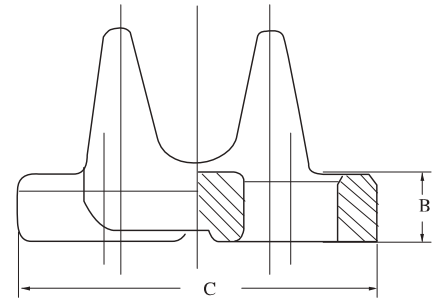
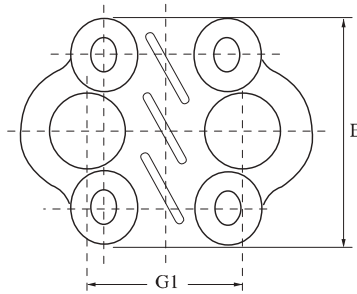
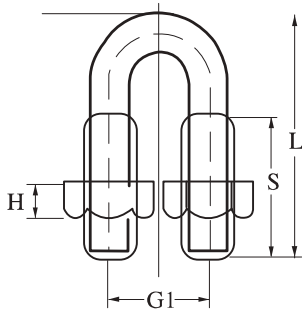


◆ AVAILABLE THE SAME SIZES OF STAINLESS STEEL SUS-304 OR SUS-316

# WIRE ROPE CLIPS

## JIS TYPE DROP FORGED WIRE ROPE CLIPS

(JIS B-2809/1966)

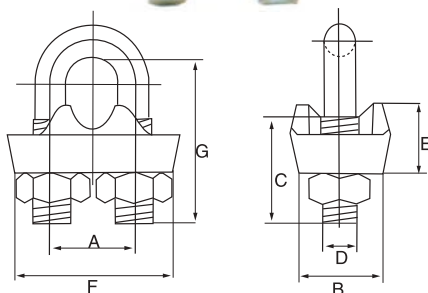


SIZE MM	WEIGHT PER PC (KG)	DIMENSIONS (MM)							
		B	C	E	G1	DIA.	H	L	S
6	0.047	6	29	24	14	6	5	35	20
8	0.08	6	36	31	18	8	6.5	40	20
10	0.15	7	45	35	22	10	8.0	50	28
12	0.25	8	51	39	26	12	10	60	35
14	0.29	9	53	45	28	12	10	65	40
16	0.35	10	60	48	32	14	11	75	45
18	0.45	11	62	53	34	14	11	80	50
20-22	0.96	12	78	62	44	18	15	100	60
24-25	1.25	13	86	68	48	20	16	110	65
26-28	1.7	14	94	75	54	22	18	120	70
30-32	1.9	15	98	79	58	22	18	130	75
33-38	3.4	16	120	93	70	27	22	150	85
40-45	5	19	136	100	80	30	24	175	95
47-50	6.8	21	150	115	89	33	26	195	100
56-60	8.9	25	170	128	101	36	29	240	115
63-70	10.9	27	190	142	115	39	31	270	130
73-80	14.6	29	212	156	127	42	34	300	150

AVAILABLE FOR THE SAME SIZES OF STAINLESS SUS304 OR SUS316 FROM 6MM TO 28MM

## BS 462 HOT DIP GALVANIZED MALLEABLE WIRE ROPE CLIPS

SIZE AND WEIGHT (APPROX.)



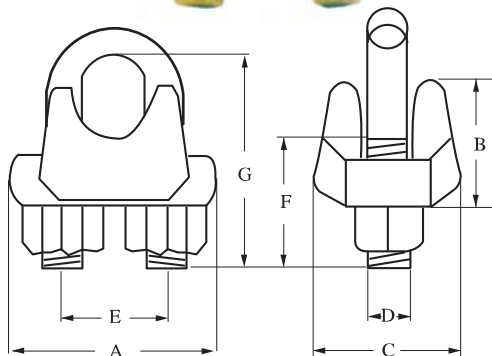
SIZE (MM)	DIMENSIONS IN MM							WT/100PCS (KGS)
	A	B	C	D	E	F	G	
6	13	14	16	6	11	25	24	3
8	17	18	21	8	14	33	32	4
9	20.5	23	25	10	18	40	38	8.5
11	24	28	31	12	22	48	46	9.5
13	28.5	32	36	14	25	56	54	28
14	30	32	36	14	25	58	56	43
16	32	32	38	14	25	60	60	49
19	37	37	43	16	29	69	70	68
21	41	41	49	18	32	77	78	117
22	43	41	49	18	32	79	81	140
26	49	46	56	20	36	89	92	213
29	52	46	57	20	36	92	98	268

# WIRE ROPE CLIPS

## MALLEABLE CAST WIRE ROPE CLIPS, TYPE A

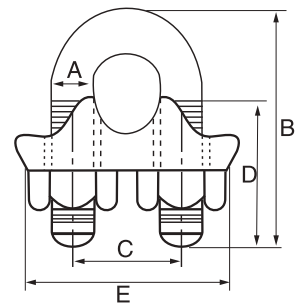
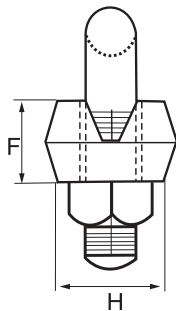


### ◆ SIZE AND WEIGHT (APPROX.)



NOMINAL SIZE (MM)	A MM	B MM	C MM	D MM	E MM	F MM	G MM	WEIGHT /100PCS
6	22.5	14	17	5	12	14	24.8	2.1
8	28	17	21	6	15	16	30.66	3.7
10	38	21	28	8	19	20	37.95	8.5
12	45	27	34	10	24	25	47.55	16
15	52	32	40	12	29	30	57.15	25
20	62	38	46.5	14	36	36	71.73	43
22	69	43	51.5	16	40	39	78.73	60
25	76	50	56	18	43	44	90.4	82
28	85	57	62	20	48	48	96.9	112
32	93	61	67	22	55	51	110.4	150
40	111	73	81	24	64	62	122.5	254
45	123	86	88	27	72	70	139.5	343
50	135	95	95	30	80	88	156	456

## WIRE ROPE GRIPS TO AS 2076



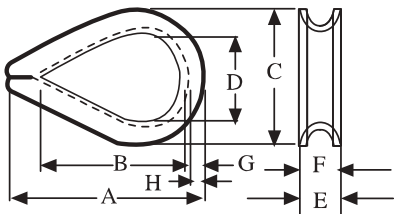
SIZE (MM)	DIMENSIONS (MM)						WT/100PCS (KGS)
	A	B	C	D	E	F	
9/10	10	50	22	28	42	23	14
11/12	12	60	26	33	50	30	28
16	16	80	34	44	66	38	42
18	16	84	36	44	68	38	45
20/22	16	92	40	44	72	38	64
24/26	20	112	50	55	90	48	105
28	20	116	52	55	92	48	110
32	20	124	56	55	96	48	118
36	24	144	64	66	112	58	210
40	24	152	68	66	116	58	265

# WIRE ROPE THIMBLES

## U.S. TYPE STANDARD LIGHT DUTY WIRE ROPE THIMBLES

- ◆ RECOMMENDED FOR LIGHT DUTY SERVICE.
- ◆ AVAILABLE FOR SAME SIZE STAINLESS STEEL SUS304 OR SUS316.
- ◆ MEET THE REQUIREMENTS OF FEDERAL SPECIFICATION FF-276b TYPE II

### G-411

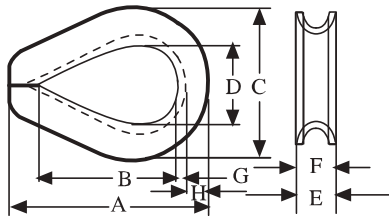


ROPE DIA (IN)	DIMENSIONS (IN.)								WEIGHT /100PCS (LBS.)
	A	B	C	D	E	F	G	H	
1/8"	1.94	1.31	1.06	0.69	0.25	0.16	0.05	0.13	2.50
3/16"	1.94	1.31	1.06	0.69	0.31	0.22	0.05	0.13	2.50
1/4"	1.94	1.31	1.06	0.69	0.38	0.28	0.05	0.13	3.75
5/16"	2.13	1.50	1.25	0.81	0.44	0.34	0.05	0.13	3.75
3/8"	2.38	1.63	1.47	0.94	0.53	0.41	0.06	0.16	6.25
1/2"	2.75	1.88	1.75	1.13	0.69	0.53	0.08	0.19	12.50
5/8"	3.50	2.50	2.38	1.38	0.91	0.66	0.13	0.34	25.00
3/4"	3.75	2.50	2.69	1.63	1.08	0.78	0.14	0.34	50.0
7/8"	5.00	3.50	3.19	1.88	1.27	0.94	0.16	0.44	85.0
1"	5.69	4.25	3.75	2.50	1.39	1.06	0.16	0.41	100.0
1-1/8"-1-1/4"	6.25	4.25	4.31	2.75	1.75	1.31	0.22	0.50	175.0

## U.S. EXTRA HEAVY DUTY WIRE ROPE THIMBLES



### G-414

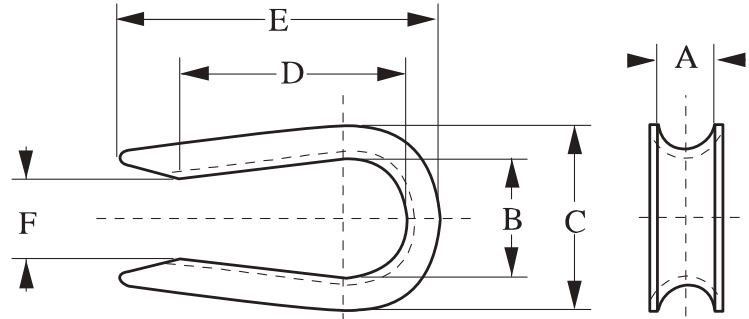


- ◆ RECOMMENDED FOR HEAVY DUTY SERVICE.
- ◆ AVAILABLE FOR SAME SIZE STAINLESS STEEL SUS304 OR SUS316.
- ◆ MEET THE REQUIREMENTS OF FEDERAL SPECIFICATION FF-T-276b TYPE III

ROPE DIA (IN)	DIMENSIONS (IN.)								WEIGHT /100PCS (LBS.)
	A	B	C	D	E	F	G	H	
1/4"	2.19	1.63	1.50	0.88	0.41	0.28	0.06	0.23	6.75
5/16"	2.50	1.88	1.81	1.06	0.50	0.34	0.08	0.28	11.25
3/8"	2.88	2.13	2.13	1.13	0.63	0.41	0.11	0.34	25.00
7/16"	3.25	2.38	2.38	1.25	0.72	0.47	0.13	0.38	30.00
1/2"	3.63	2.75	2.75	1.50	0.81	0.53	0.14	0.41	51.00
9/16"	3.63	2.75	2.69	1.50	0.88	0.59	0.14	0.41	51.00
5/8"	4.25	3.25	3.13	1.75	0.97	0.66	0.16	0.50	75.00
3/4"	5.00	3.75	3.81	2.00	1.22	0.78	0.22	0.66	147.00
7/8"	5.50	4.25	4.25	2.25	1.38	0.94	0.22	0.75	175.00
1"	6.13	4.50	4.94	2.50	1.56	1.06	0.25	0.88	275.00
1-1/8"-1-1/4"	7.00	5.13	5.88	2.88	1.81	1.31	0.25	1.13	400.00
1-1/4"-1-3/8"	9.06	6.50	6.81	3.50	2.19	1.44	0.38	1.13	817.00
1-3/8"-1-1/2"	9.00	6.25	7.13	3.50	2.56	1.56	0.50	1.13	1175.00
1-5/8"	11.25	8.00	8.13	4.00	2.72	1.72	0.50	1.38	1700.00
1-3/4"	12.19	9.00	8.50	4.50	2.84	1.84	0.50	1.31	1775.00
1-7/8"-2"	15.13	12.00	10.38	6.00	3.09	2.09	0.50	1.50	2775.00
2"-1/4"	17.13	14.00	11.38	7.00	3.63	2.38	0.63	1.63	3950.00

# WIRE ROPE CLIPS

## OPEN PATTERN THIMBLES



### G-408

- ◆ HOT DIPPED GALVANIZED STEEL.
- ◆ RECOMMENDED FOR LIGHT.

ROPE DIA (IN)	DIMENSIONS (IN.)						WEIGHT /100PCS (LBS.)
	A	B	C	D	E	F	
1/4"	0.28	0.69	1.06	1.41	2.03	0.38	3.75
5/16"	0.34	0.81	1.25	1.53	2.16	0.50	3.75
3/8"	0.44	0.94	1.47	1.72	2.47	0.62	6.25
1/2"	0.53	1.12	1.75	1.47	2.84	0.75	12.50
5/8"	0.66	1.38	2.38	2.34	3.59	1.00	25.00

## TUBE THIMBLE, WITH OR WITHOUT STUD

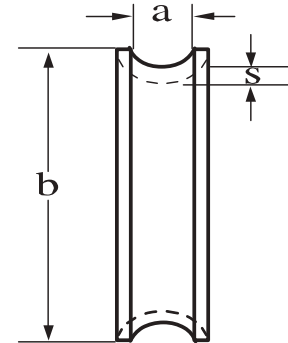
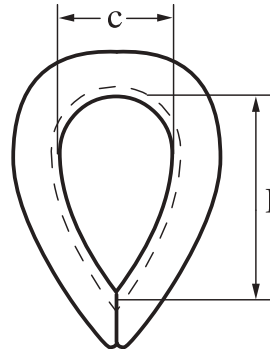


- ◆ HOT DIPPED GALVANIZED.

SIZE MM	A MM	B MM	C MM	D MM	E MM	WT/PC KG	FOR WIRE MAX MM
G212	12	90	23	4.0	8	0.25	10
G215	15	105	27	5.0	10	0.42	12
G217	17	115	27	4.0	10	0.50	14
G219	19	120	32	6.0	12	0.60	16
G222	22	140	35	6.0	15	0.75	18
G225	25	180	45	6.3	16	1.40	22
G228	28	180	45	7.0	16	1.75	24
G230	30	195	47	7.0	18	2.00	26
G235	35	215	60	7.0	22	2.40	32
G245	45	260	70	7.0	27	3.30	38
G255	55	298	85	7.0	32	5.50	51

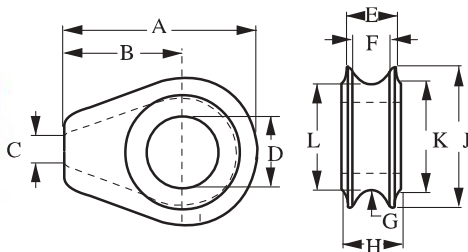
# WIRE ROPE THIMBLES

## BRITISH STANDARD WIRE ROPE THIMBLES TO BS 464



ROPE DIA MM	GROOVE WIDTH A MM	OVERALL LENGTH B MM	INSIDE LENGTH I MM	INSIDE WIDTH C MM	BACK THICKNESS S MM	WEIGHT PER 100PCS KG
8	8	52	33	23	4	6
10	10	64	38	25	4.8	7.6
12	14	80	44	32	5.6	18.9
16	16	98	59	41	7.9	34
19	21	124	73	51	9.5	62.4
22	22	133	83	57	9.5	75.6
24	25	146	92	64	10.3	105.7
26	27	162	108	70	10.3	124.7
28	29	178	111	76	12.7	151
32	33	197	133	95	12.7	204
38	41.3	254	165.1	114.3	17.5	488
42	42.9	254	165.1	114.3	17.5	499
45	50.8	285.8	177.8	127	25.4	565
48	60.3	317.5	190.5	133.4	28.6	640
51	63.5	330.2	203.2	139.7	28.6	660
56	66.7	356.6	215.9	146	30.2	-
63	69.3	412.8	241.3	158.8	31.8	-
70	85.7	501.6	273	203.2	41.3	-

## SOLID WIRE ROPE THIMBLES



- ◆ CAST DUST DUCTILE IRON.
- ◆ FITS PIN FOR OPEN WIRE ROPE SOCKET, BOOM PENDANT CLEVIS AND WEDGE SOCKET. CLEVIS AND WEDGE SOCKET.

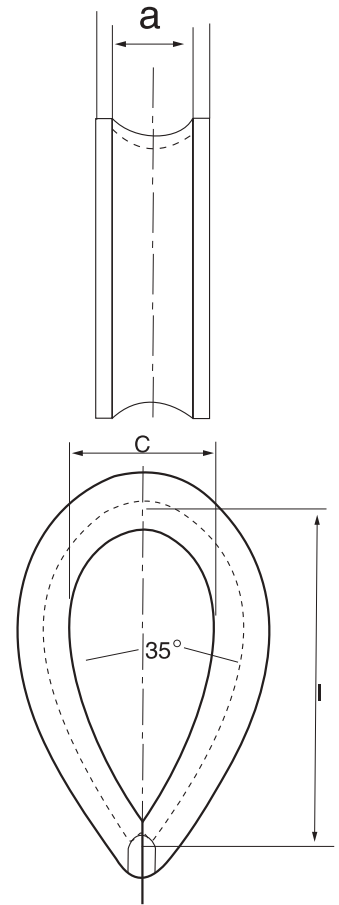
ROPE DIA (IN.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)										
		A	B	C	D	E	F	G	H	J	K	L
1/2"	0.61	2.81	1.75	0.25	1.06	0.75	0.56	0.28	0.88	2.13	1.63	1.56
5/8"	2.21	4.69	3.00	0.38	1.31	1.06	0.81	0.41	1.13	3.38	2.25	2.56
3/4"	2.32	4.69	3.00	0.38	1.5	1.06	0.81	0.41	1.38	3.38	2.25	2.56
7/8"	5.45	6.06	3.81	0.50	1.75	1.38	1.06	0.53	1.63	4.50	3.25	3.44
1"	5.25	6.06	3.81	0.50	2.13	1.38	1.06	0.53	1.81	4.50	3.25	3.44
1-1/8"	9.29	7.25	4.56	0.63	2.38	1.75	1.31	0.66	2.06	5.38	3.88	4.06
1-1/4"-1-3/8"	9.81	7.25	4.56	0.63	2.63	1.94	1.53	0.78	2.31	5.38	3.88	4.13



# WIRE ROPE CLIPS

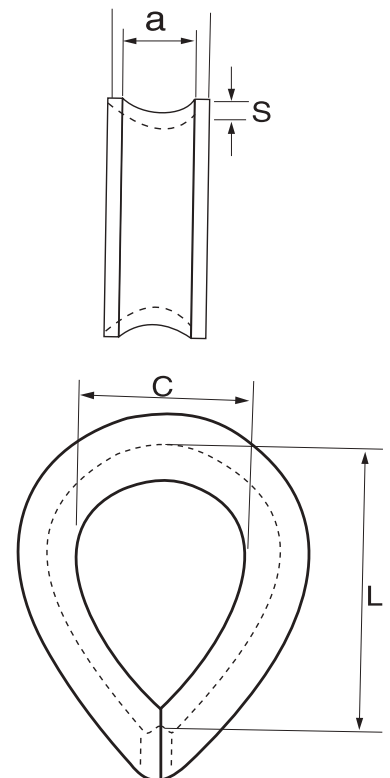
## DIN 6899 TYPE "A" WIRE ROPE THIMBLES

NG= NOMINAL SIZE (MM)	A=SWITCH OPENING (MM)	I=INSIDE LENGTH (MM)	C=INDIDE WIDTH (MM)	WEIGHT /100PCS (KG)
2.5	3	21.5	10	0.14
3	3.5	23.5	11	0.35
3.5	4	26.5	12	0.38
4	5	28.5	13	0.42
5	6	30	14	0.80
6	7	33	15	0.81
7	8	35	16	1.1
8	9	39	18	1.7
9	10	43	20	2.1
10	11	47.5	22	3.5
11	12	51.5	24	3.7
12	13	56.5	26	5.25
13	14	61	28	7.25
15	16	69.5	32	8.33
16	18	78	35	17.9
18	20	86.5	40	27
20	22	95	44	35.5
24/26	26	90	48	52



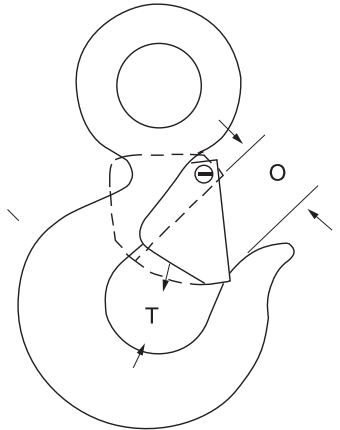
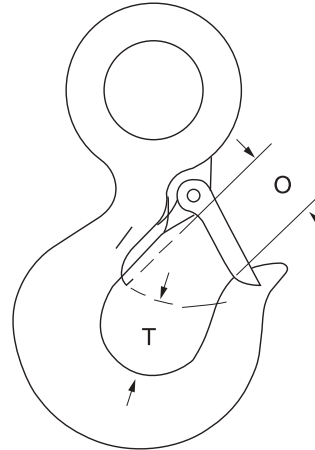
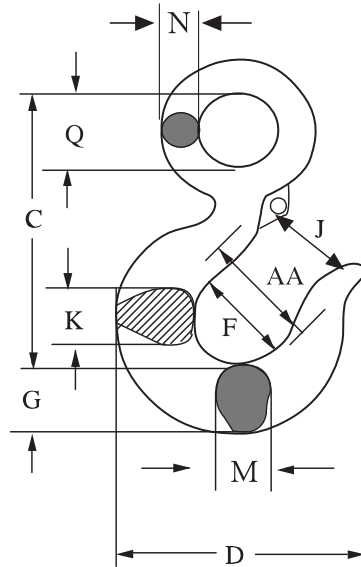
## DIN 6899 TYPE "B" WIRE ROPE THIMBLES DEEP WELDED TYPE

NG= NOMINAL SIZE(MM)	A=SWITCH OPENING (MM)	I=INSIDE LENGTH (MM)	C=INDIDE WIDTH (MM)	S=BACK STRENGTH	OVERALL LENGTH	WEIGHT /100PCS (KG)
2.5	3	19	12	1.6	3/4"	0.5
3.5	4	21	13	1.6	1"	0.8
4	5	23	14	1.9	1-1/4"	1
5	6	25	16	2.4	1-1/2"	1.6
6	7	28	18	2.4	1-3/4"	1.9
7	8	32	20	2.8	2"	3
9	10	38	24	3.1	2-1/4"	4.7
11	12	45	28	3.3	2-1/2"	6.8
13	13	48	30	3.3	2-3/4"	8
13	14	51	32	3.7	3"	10
15	16	58	36	3.8	3-1/4"	14.5
17	17	61	38	4.7	3-1/2"	18
16	18	64	40	4.7	3-3/4"	20
18	20	72	45	5.7	4"	29
20	22	80	50	5.7	4-1/2"	32
22	24	90	56	6.5	5"	47
24	26	99	62	6.8	5-1/2"	59
26	28	112	70	8	6"	80
28	30	120	75	8	6-1/2"	110
30	32	128	80	8	7"	123
32	34	152	95	8.5	8"	156
34	36	160	100	8.5	8-1/2"	176
36	38	176	110	8.5	9"	192
38	40	184	115	10.5	9-1/2"	292
40	42	192	120	10.5	10"	320
42	45	240	150	10.5	12"	364



# HOOK & SWIVELS

## EYE HOOKS FOR LIFTING



### S-320

\*\* NEW 5 TON ALLOY WAS PREVIOUSLY 4.1/2 TONS.

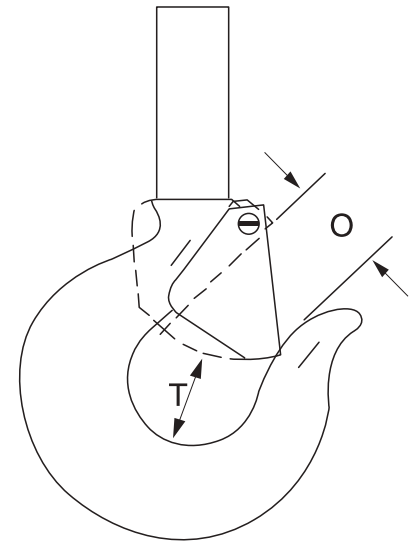
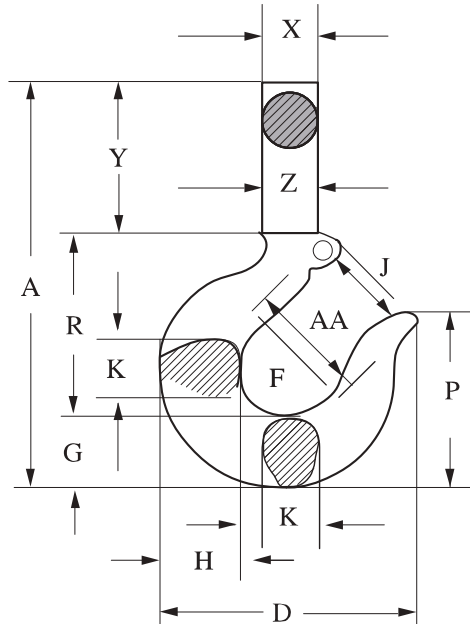
HOOK ID CODE	DIMENSIONS (MM)											
	C	D	F	G	J	K	M	N	O	Q	T	AA
D	85.0	72.0	31.8	18.5	22.9	16.0	16.0	9.14	22.6	19.1	22.1	38.1
F	97.0	79.0	35.1	21.3	23.6	18.0	18.0	10.7	23.1	23.1	24.9	50.8
G	105	89.5	38.1	25.4	25.4	22.4	22.4	14.0	25.4	28.7	26.2	76.2
H	119	101	41.4	28.7	28.7	23.9	23.9	14.7	27.7	31.8	29.5	50.8
I	147	122	51.0	36.6	37.3	33.3	33.3	18.3	34.5	39.6	38.9	63.5
J	187	159	63.5	46.0	44.5	42.2	42.2	22.9	40.9	51.0	49.8	76.2
K	230	189	76.0	57.0	58.0	47.8	41.4	28.2	53.0	62.0	62.5	102
L	256	211	82.5	66.0	63.5	55.5	49.3	32.3	57.5	72.0	66.5	102
N	318	262	108	76.0	84	68.5	60.5	39.6	76.5	89.0	72.0	127
O	357	346	127	92	102	76.0	76.2	44.5	82.5	89.0	87.5	165
P	462	357	137	116	108	102	81.0	51.0	76.0	114	98.5	178
S	511	392	152	129	121	114	82.6	55.4	86.0	125	121	203
T	602	470	178	152	146	140	99.3	64.3	105	145	145	254

NOTE: (3/4TC-22TA) PROOF LOAD IS 2.5 TIMES WLL, (20TC-60TA) PROOF LOAD IS 2 TIMES WLL.

MINIMUM BREAKING LOAD: ALL CARBON HOOKS IS 5 TIMES WLL. 1TON-22TON ALLOY HOOKS IS 5 TIMES WLL 30TON-60TON ALLOY HOOKS IS 4.5 TIMES WLL.

# HOOK & SWIVELS

## SHANK HOOKS



### S-319

WORKING LOAD LIMIT (TON)			SHANK* LENGTH TYPE	DIMENSIONS (MM)															DEFORMATION INDICATOR AA	WEIGHT EACH (LBS.)
CARBON	ALLOY	BRONZE		D	F	G	H	J	K	L	M	O	P	R	T	X**	Y	Z		
3/4	1.25	0.5	Std.	72.5	31.8	18.5	20.6	23.6	16.0	131	16.0	23.6	49.8	59.5	24.6	15.0	52.5	17.5	38.1	0.50
1	1.6	0.6	Std.	80.5	35.1	21.3	23.9	24.6	18.0	144	18.0	24.6	56.5	66.0	24.6	16.8	57.0	19.8	50.8	0.75
1.6	2.5	1	Std.	91.0	38.1	25.4	29.5	26.9	22.4	161	22.4	26.9	62.0	70.0	26.2	18.3	66.0	22.4	50.8	1.00
2	3.2	1.4	Std.	102	41.1	29.0	33.3	30.2	23.9	181	23.9	29.5	70.5	80.5	29.5	22.4	72.0	25.4	50.8	1.85
3.2	5.4	2	Std.	123	51.0	36.6	41.4	38.1	33.3	219	28.7	35.8	88.0	98.0	38.9	29.5	87.5	31.8	63.5	3.85
5	8	3.1/2	Std.	160	63.5	46.2	52.5	45.2	42.2	265	36.6	42.9	117	121	49.3	35.8	97.5	39.6	76.2	7.25
7.1/2	11.5	5	Std.	192	76.0	57.5	67.0	61.0	47.8	318	41.4	56.5	133	149	62.5	46.0	111	49.3	101	13.00
10	16	6.1/2	Std.	212	82.5	66.0	74.5	66.5	55.5	342	49.3	61.0	151	162	66.0	51.0	114	55.5	101	17.25
15	22	10	Std.	263	108	76.5	89.0	86.5	68.5	423	60.5	81.0	175	207	71.5	65.0	140	67.0	127	33.00
20	30	-	Std.	346	127	92.0	117	102	76.0	586	76.0	82.5	223	240	87.5	79.0	254	79.0	165	53.00
20	30	-	Long	346	127	92.0	117	102	76.0	790	76.0	82.5	223	240	87.5	79.0	457	79.0	165	85.50
25	37	-	Std.	357	137	116	127	108	92.0	816	76.0	76.0	287	318	98.5	102	381	102	177	134.00
25	37	-	Long	357	137	116	127	108	92	1044	76.0	76.0	287	318	98.5	102	610	102	177	172.00
30	45	-	Std.	392	152	129	140	121	94.5	867	82.5	86.0	319	356	121	106	381	106	203	182.00
30	45	-	Long	392	152	129	140	121	94.5	1095	82.5	86.0	319	356	121	106	610	106	203	214.00
40	60	-	Std.	470	178	152	165	146	113	916	99.5	105	375	395	145	114	368	114	254	268.00
40	60	-	Long	470	178	152	165	146	113	1208	99.5	105	375	395	145	114	660	114	254	312.00
50	75	-	Std.	524	197	170	184	165	133	1045	108	137	420	492	152	127	381	127	292	390.00
50	75	-	Long	524	197	170	184	165	133	1249	108	137	420	492	152	127	584	127	292	426.00
-	100	-	Std.	584	173	218	251	149	140	1070	140	114	438	468	178	178	381	178	305	610.00
-	100	-	Long	584	173	218	251	149	140	1222	140	114	438	468	178	178	533	178	305	675.00
-	150	-	Std.	619	171	232	278	152	152	1162	152	114	457	467	178	184	457	184	330	735.00
-	200	-	Std.	678	191	248	300	168	178	1283	178	127	502	521	203	203	508	203	330	1020.00
-	300	-	Std.	765	241	270	329	203	184	1389	203	159	576	597	210	241	508	241	381	1390.00

NOTE:PROOF LOAD IS 2 TIMES WLL.

ALL CARBON HOOKS DESIGNED WITH 5/1 SAFETY FACTOR

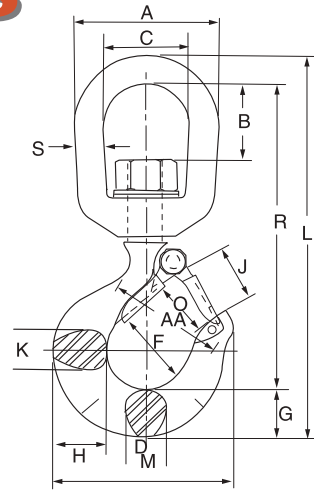
ALL ALLOY HOOKS 1-22T DESIGNED WITH 4.5 /1 SAETY FACTOR

ALL ALLOY HOOKS 30T AND LARGER DESIGNED WITH 4/1 SAFETY FACTOR

ALL BRONZE HOOKS DEASIGNED WITH 4/1 SAFETY FACTOR

# HOOK & SWIVELS

## SWIVEL HOOKS

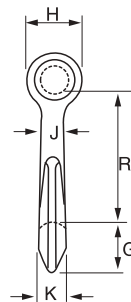
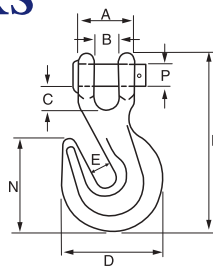


### S-322

WORKING LOAD LIMIT (TON)		WEIGHT EACH (KG)	DIMENSIONS (MM)														DEFORMATION INDICATOR AA
CARBON	ALLOY		A	B	C	D	F	G	H	J	K	L	M	O	R	S	
3/4	1	0.34	50.8	20.8	31.8	72.6	31.8	19.1	20.6	23.6	16	144	16	22.6	115	9.6	38
1	1.1/2	0.57	63.5	31.8	38.1	80	35.1	21.3	23.9	24.6	18	170	18	23.1	136	12.7	51
1.1/2	2	1.02	76.2	38.1	44.5	91.2	38.1	25.4	29.5	26.9	22.4	197	22.4	25.4	155	16	51
2	3	1.17	76.2	38.1	44.5	101	41.1	28.7	33.3	30.2	23.9	210	23.9	27.7	165	16	51
3	4.1/2	2.15	88.9	41.7	50.8	123	50.8	36.6	41.4	38.1	33.3	246	33.3	34.5	191	19.1	63.5
5	7	4.67	114	58.2	63.5	159	63.5	46	52.3	45.2	42.2	317	42.2	40.9	245	25.4	76
7.1/2	11	7.37	127	30.2	69.9	192	76.2	57.2	66.8	61.2	47.8	369	41.4	52.8	283	28.7	102
10	15	10.65	143	63	79.2	212	82.5	65.8	74.7	66.5	55.6	409	49.3	57.7	305	31.8	102
-	22	22.6	180	95.5	104	264	108	76.2	88.9	86.6	68.3	539	60.5	76.7	421	41.4	127
-	30	32	180	95.5	104	346	-	93	-	102	72.5	590	-	82.6	459	38.1	165

- ◆ NOTE: CARBON SWIVEL HOOKS 0.75T-15T: PROOF LOAD IS 2 TIMES WORKING LOAD LIMIT. DESIGNED WITH A 5 TO 1 DESIGN FACTOR.
- ◆ ALLOY SWIVEL HOOKS 1.5T-22T: PROOF LOAD IS 2.5 TIMES WORKING LOAD LIMIT. DESIGNED WITH A 4.5 TO 1 DESIGN FACTOR.
- ◆ ALLOY SWIVEL HOOKS 30T: PROOF LOAD IS 2 TIMES WORKING LOAD LIMIT. DESIGNED WITH A 4 TO 1 DESIGN FACTOR.

## CLEVIS GRAB HOOKS



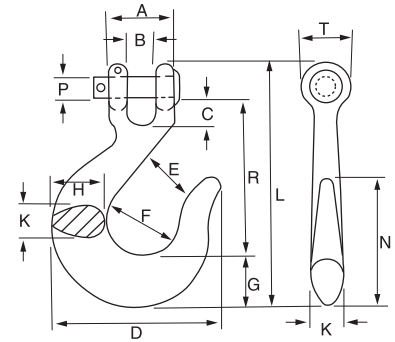
### H-330 & A-330

CHAIN SIZE (MM)	WORKING LOAD LIMIT (T)		WEIGHT EACH (KG)	DIMENSIONS (MM)											
	H-330 CARBON	A-330 ALLOY		A	B	C	D	E	G	H	K	L	N	P	R
7	1.18	1.59	0.16	25.4	8.15	7.85	46.0	8.65	22.4	18.3	11.9	77.5	44.5	7.85	41.7
8	1.77	2.04	0.29	30.2	9.90	9.15	54.0	11.2	24.6	23.1	15.0	93.0	52.5	9.65	61.5
10	2.45	3.22	0.45	35.1	11.4	11.4	64.5	12.7	29.7	25.4	18.3	109	59.5	11.2	61.0
11	3.27	4.54	0.59	42.2	16.8	15.7	78.5	14.2	33.3	28.7	17.5	125	67.5	14.2	70.0
13	4.17	5.44	0.95	47.8	14.5	17.8	90.5	16.8	38.9	31.8	19.8	145	75.5	16.0	81.0
16	5.90	7.16	1.91	58.0	23.1	21.3	112	19.8	45.2	39.6	27.7	179	109	19.1	104
19	9.16	11.2	2.95	66.5	23.9	23.9	133	23.9	54.0	47.8	33.3	207	129	22.4	118

- ◆ FORGED STEEL—QUENCHED AND TEMPERED.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

# HOOK & SWIVELS

## CLEVIS SLIP HOOKS

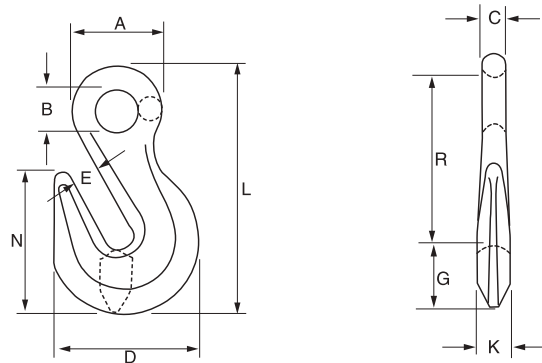


### H-331 & A-331

CHAIN SIZE (MM)	WORKING LOAD LIMIT (T)		WEIGHT EACH (KG)	DIMENSIONS (MM)													
	H-331 CARBON	A-331 ALLOY		A	B	C	D	E	F	G	H	K	L	N	P	R	T
7	0.89	1.25	0.25	26.9	8.15	7.35	70.0	23.9	30.2	20.6	22.4	12.7	100	54.0	8.65	65.5	18.3
8	1.30	1.95	0.36	31.0	10.9	8.65	77.5	26.9	31.8	23.9	25.4	14.2	115	57.0	11.2	73.0	24.6
10	1.81	2.38	0.55	35.1	11.4	11.2	92.0	33.3	38.1	28.7	30.2	16.8	131	65.0	11.9	82.5	26.9
11	2.27	3.18	0.93	43.9	15.0	15.2	110	39.6	46.0	35.1	36.6	20.6	152	77.5	14.2	94.0	30.2
13	2.95	4.08	1.25	47.8	14.5	13.5	122	42.9	49.3	39.6	41.4	23.1	166	87.5	16.0	102	33.3
16	4.20	6.12	2.15	58.5	18.0	18.0	143	51.0	60.5	46.0	49.3	27.7	200	102	19.1	125	39.6
19	-	8.73	5.12	81.0	30.0	32.8	187	63.5	76.2	60.5	63.5	36.6	255	129	25.4	155	53.0

- ◆ FORGED CARBON STEEL OR FORGED ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ ALL PINS ARE ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

## EYE GRAB HOOKS



### H-323 & A-323

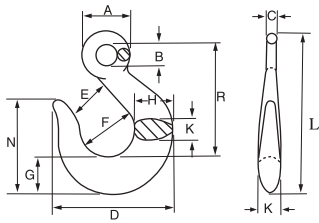
CHAIN SIZE (IN.)	WORKING LOAD LIMIT (T)		WEIGHT EACH (KG)	DIMENSIONS (MM)									
	H-323 CARBON	A-323 ALLOY		A	B	C	D	E	G	K	L	N	R
7	1.18	1.59	0.13	27.7	13.5	7.85	46.0	8.65	22.4	11.9	77.5	44.5	47.8
8	1.77	2.04	0.20	33.3	15.7	9.65	54.0	11.2	24.6	15.0	91.0	52.5	58
10	2.45	3.22	0.36	39.6	19.1	11.2	64.5	12.7	29.7	18.3	109	59.5	68.5
13	4.17	5.44	0.79	49.3	22.4	13.5	90.5	16.8	38.9	19.8	138	75.5	86.0
16	5.90	7.16	1.47	60.5	26.9	16.8	112	19.8	48.0	25.4	169	96.0	104
19	9.16	11.2	2.69	73.0	35.1	19.1	133	23.9	54.0	33.3	205	129	131

- ◆ FORGED STEEL—QUENCHED AND TEMPERED.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

# HOOK & SWIVELS

## EYE SLIP HOOKS CHAIN HOOKS

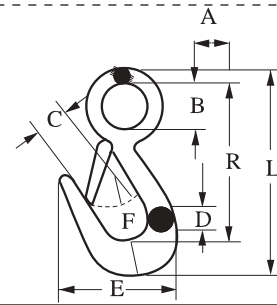
### H-324



CHAIN SIZE (IN.)	WORKING LOAD LIMIT* (LBS.)	WEIGHT EACH (KG)	DIMENSIONS (MM)											
			A	B	C	D	E	F	G	H	K	L	N	R
7	0.89	0.18	26.9	12.7	7.10	70.0	23.9	30.2	20.6	22.4	12.7	93.0	54.0	65.0
8	1.30	0.29	31.8	16.0	8.65	77.5	26.9	31.8	23.9	25.4	14.2	107	57.0	75.0
10	1.81	0.50	38.9	18.3	10.4	92.0	33.3	38.1	28.7	30.2	16.8	124	65.0	85.5
11	2.27	0.71	42.9	20.6	11.2	110.2	39.6	46.0	35.1	36.6	20.6	145	77.5	98.5
13	2.95	0.95	49.3	23.9	12.7	122.2	42.9	49.3	39.6	41.4	23.1	161	87.5	109
16	4.20	1.77	60.5	28.7	16.0	143.0	51.0	60.5	46.0	49.3	27.7	195	102	133
19	5.67	3.14	73.0	35.1	19.1	171.5	54.0	70.0	55.5	58.5	33.3	222	121	147

- ◆ FORGED CARBON STEEL—QUENCHED AND TEMPERED.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

## SNAP HOOKS

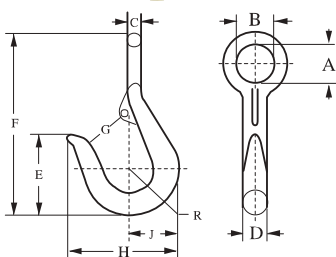


### G-3315

HOOK SIZE LOAD	WORKING LOAD	WEIGHT EACH (KG)	DIMENSIONS (MM)							
			A	B	C	D	E	F	L	R
7/16	0.34	0.11	6.35	19.1	19.1	11.2	57.0	19.1	100	82.5
9/16	0.45	0.22	8.65	28.4	20.6	14.2	68.5	22.4	120	97.5

- ◆ FORGED CARBON STEEL—QUENCHED AND TEMPERED.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

## ROUND REVERSE EYE HOOK



- ### 1210
- ◆ FORGED CARBON STEEL—GALVANIZED.
  - ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE W.L.L.

SIZE (IN.)	WLL (LBS.)	WT EACH (LBS.)	DIMENSIONS (MM)									
			A	B	C	D	E	F	G	H	J	R
1/2	300	0.4	0.81	1.38	0.28	0.50	1.62	4.00	0.75	2.25	0.97	0.47
5/8	400	0.7	0.94	1.56	0.31	0.62	2.00	4.50	0.94	2.75	1.22	0.59
3/4	700	1.1	1.12	1.88	0.38	0.75	2.25	5.25	1.06	3.00	1.44	0.69
7/8	1200	1.2	1.19	2.06	0.44	0.88	3.00	6.50	1.25	3.38	1.63	0.75
1-1-1/8	1800	2.4	1.50	2.75	0.62	1.12	3.50	8.00	1.50	4.38	2.00	0.94
1.1/4-1.3/8	2700	5.3	1.88	3.50	0.81	1.38	4.00	9.12	1.62	5.00	2.38	1.06

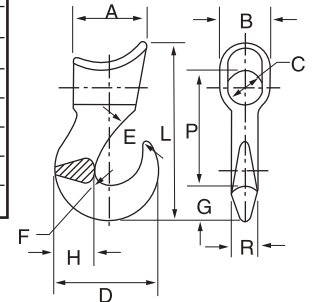
# HOOK & SWIVELS

## SLIDING CHOKER HOOK

### A-350



SINGLE PART ROPE SIZE		EIGHT PART ROPE SIZE	WORKING LOAD LIMIT (TON)	WEIGHT EACH (KG)	DIMENSIONS (MM)										
(IN.)	(MM)				A	B	C	D	E	F	G	H	L	P	R
3/8	10	-	1.13	0.35	52.5	28.7	16	61.0	16	9.65	21.3	23.1	109	66	16
1/2	13	3	1.5	0.54	57	33.3	19.1	75.5	19.8	12.7	24.6	26.9	126	78.5	19.1
5/8	16	4	2.27	1.31	77.5	41.4	19.1	90.5	23.9	14.2	28.7	33.3	162	98.5	25.4
5/8	16	4	2.27	1.22	77.5	41.4	25.4	90.5	23.9	14.2	28.7	33.3	162	102	28.7
3/4	20	6	3.63	2.35	86	54.0	25.4	108	29.5	16	36.6	41.4	195	116	28.7
3/4	20	6-7	3.63	2.27	86	54.0	36.6	108	29.5	16	36.6	41.4	195	121	28.7

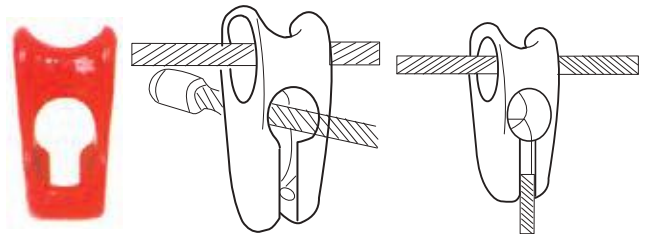


- ◆ FORGED ALLOY STEEL—QUENCHED AND TEMPERED
- ◆ MINIMUM BREAKING LOAD IS 5 TIMES THE WLL.

## LOGGING CHOKER HOOKS

- ◆ STRONGER THAN ROPE ITSELF, THESE HOOKS ARE INVESTMENT CASTING ALLOY STEEL

SIZE OF HOOK	DESIGNED FOR THE FOLLOWING SIZE OF CHOKER ROPES(IN.)	WORKING LOAD LIMIT (TON)	WEIGHT EACH (KG)
MIDGET	3/8	1/4,1/2	1-1/2
DWARF	1/2,5/8	3/8	3-1/4
BANTAM	5/8,3/4	1/2	4
LIGHT	3/4,7/8	1/2,5/8,1	9
LIGHT,JR	7/8,1	1-1/8	11-1/2



## CARGO HOOKS



### S-1021

SIZE IN.)	WORKING LOAD LIMIT (TON)	WEIGHT EACH (LBS.)
22	10	16.5

- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

## SORTING HOOK A-378



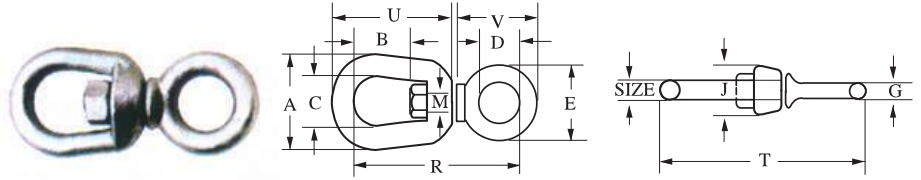
WORKING LOAD LIMIT * AT TIP OF HOOK(TON)	WORKING LOAD LIMIT* AT BOTTOM OF HOOK(TON)	STYLE	WEIGHT EACH (KG)	DIMENSIONS (MM)			
				I.D. OF EYE	OVERALL LENGTH	OPENING AT TOP OF HOOK	RADIUS AT BOTTOM OF HOOK
2	7.1/2	NO HANDLE	6.42	1.38	9.69	2.81	0.625
2	1.1/2	WITH HANDLE	6.42	1.38	9.69	2.81	0.625

- ◆ FORGED ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES WLL.

# HOOK & SWIVELS

## CHAIN SWIVELS

- ◆ HOT DIP GALVANIZED.
- ◆ QUENCHED AND TEMPERED.
- ◆ MINIMUM BREAKING LOAD IS 5 TIMES THE W.L.L.

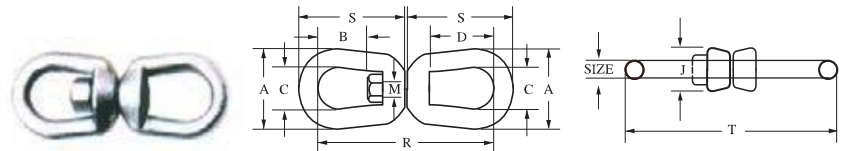


### G-401

SIZE (IN.)	WORKING LOAD LIMIT* (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)											
			A	B	C	D	E	G	J	M	R	T	U	V
1/4	850	0.13	1.25	0.69	0.75	0.62	1.12	0.25	0.69	0.31	2.25	2.75	1.69	1.25
5/16	1250	0.25	1.63	0.81	1.00	0.75	1.38	0.31	0.81	0.38	2.72	3.34	2.06	1.47
3/8	2500	0.54	2.00	0.94	1.25	1.00	1.75	0.38	1.00	0.50	3.44	4.19	2.50	1.88
1/2	3600	1.12	2.50	1.31	1.50	1.25	2.25	0.50	1.31	0.63	4.25	5.25	3.19	2.44
5/8	5200	1.75	3.00	1.56	1.75	1.50	2.75	0.62	1.50	0.75	5.13	6.31	3.88	2.94
3/4	7200	3.09	3.50	1.75	2.00	1.75	3.25	0.75	1.88	0.88	5.78	7.22	4.94	3.46

## REGULAR SWIVELS

- ◆ HOT DIP GALVANIZED.
- ◆ QUENCHED AND TEMPERED.
- ◆ MINIMUM BREAKING LOAD IS 5 TIMES THE W.L.L.
- ◆ IN ACCORDANCE WITH SPECIFICATIONS OF RR-C-271D, TYPE VII, CLASS 3 AND RR-C-271D, TYPE VII, CLASS 2.

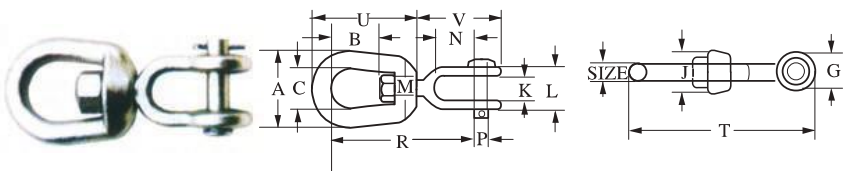


### G-402

SIZE (IN.)	WORKING LOAD LIMIT* (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)								
			A	B	C	D	J	M	R	S	T
1/4	850	0.21	1.25	0.69	0.75	1.06	0.69	0.31	2.94	1.69	3.44
5/16	1250	0.39	1.63	0.81	1.00	1.25	0.81	0.38	3.56	2.06	4.19
3/8	2250	0.75	2.00	0.94	1.25	1.50	1.00	0.50	4.31	2.50	5.06
1/2	3600	1.43	2.50	1.31	1.50	2.00	1.31	0.63	5.44	3.19	6.44
5/8	5200	2.50	3.00	1.56	1.75	2.38	1.50	0.75	6.56	3.88	7.81
3/4	7200	4.13	3.50	1.75	2.00	2.63	1.88	0.88	7.19	4.31	8.69
7/8	10000	6.25	4.00	2.06	2.25	3.06	2.13	1.00	8.38	5.00	10.13
1	12500	9.00	4.50	2.31	2.50	3.50	2.38	1.13	9.63	5.75	11.63
1 1/4	18000	16.37	5.63	2.69	3.13	3.69	3.00	1.38	11.13	6.75	13.36
1 1/2	45200	49.06	7.00	4.19	4.00	4.19	4.00	2.25	17.13	10.00	20.13

## JAW END SWIVELS

- ◆ HOT DIP GALVANIZED.
- ◆ QUENCHED AND TEMPERED.
- ◆ MINIMUM BREAKING LOAD IS 5 TIMES THE W.L.L.
- ◆ IN ACCORDANCE WITH SPECIFICATIONS OF RR-C-271D, TYPE VII, CLASS 3 AND RR-C-271D, TYPE VII, CLASS 2.



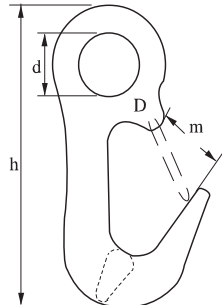
### G-403

SIZE (IN.)	WORKING LOAD LIMIT* (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)													
			A	B	C	G	J	K	L	M	N	P	R	T	U	V
1/4	850	0.25	1.25	0.69	0.75	0.69	0.69	0.47	1.03	0.31	0.88	0.25	2.63	3.38	1.69	1.69
5/16	1250	0.37	1.63	0.81	1.00	0.81	0.81	0.50	1.13	0.38	0.88	0.31	2.94	3.88	2.06	1.81
3/8	2250	0.70	2.00	0.94	1.25	1.00	1.00	0.63	1.41	0.50	1.06	0.38	3.63	4.75	2.50	2.25
1/2	3600	1.43	2.50	1.31	1.50	1.31	1.31	0.75	1.75	0.63	1.31	0.50	4.50	6.06	3.19	2.88
5/8	5200	2.48	3.00	1.56	1.75	1.63	1.50	0.94	2.06	0.75	1.50	0.63	5.31	7.31	3.88	3.44
3/4	7200	3.88	3.50	1.75	2.00	1.88	1.88	1.13	2.53	0.88	1.75	0.75	6.06	8.31	4.31	4.00
7/8	10000	5.75	4.00	2.06	2.25	2.13	2.13	1.19	2.75	1.00	2.06	0.88	7.00	9.53	5.00	4.53
1	12500	10.25	4.50	2.31	2.50	2.63	2.38	1.75	3.72	1.13	2.81	1.13	8.56	11.69	5.75	5.94
1 1/4	18000	15.75	5.69	2.69	3.13	3.13	3.00	2.06	4.31	1.50	2.81	1.38	9.44	13.13	6.75	6.38
1 1/2	45200	54.75	7.00	4.19	4.00	5.63	4.00	2.88	6.00	2.25	4.44	2.25	14.74	20.84	10.00	10.84



# HOOK & SWIVELS

## GAW TOW HOOK



◆ QUENCHED AND TEMPERED.

D (MM)	H (MM)	M (MM)	BREAKING STRENGTH (T)	WEIGHT PER 100 PCS (KG)
16	90	18	3.5	12.0
27	150	37	6.4	18.0

## GAW TOW HOOK WITH TRIANGEL

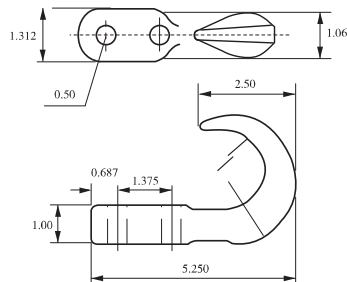


◆ QUENCHED AND TEMPERED.

D (MM)	H (MM)	M (MM)	TRIANGEL (MM)	BREAKING STRENGTH (T)	WT /100PCS (KG)
16	90	18	30*30*8	3.5	16.0

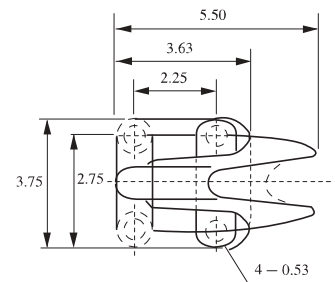
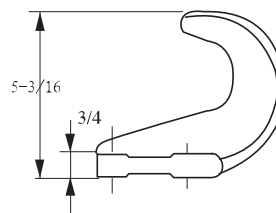
## SMALL TOW HOOK

- ◆ UNIVERSAL PATTERN DROP FORGED.
- ◆ MAX. SAFE WORKING LOAD: 10,000LBS.
- ◆ SHIPPING WEIGHT: 1.8 LBS.



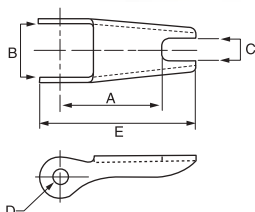
## UNIVERSAL TOWING HOOK

- ◆ UNIVERSAL TOWING DROP FORGED FROW QUALITY CONTROLLED STEEL
- ◆ SHIPPING WEIGHT: 6LBS.



## LATCH KIT

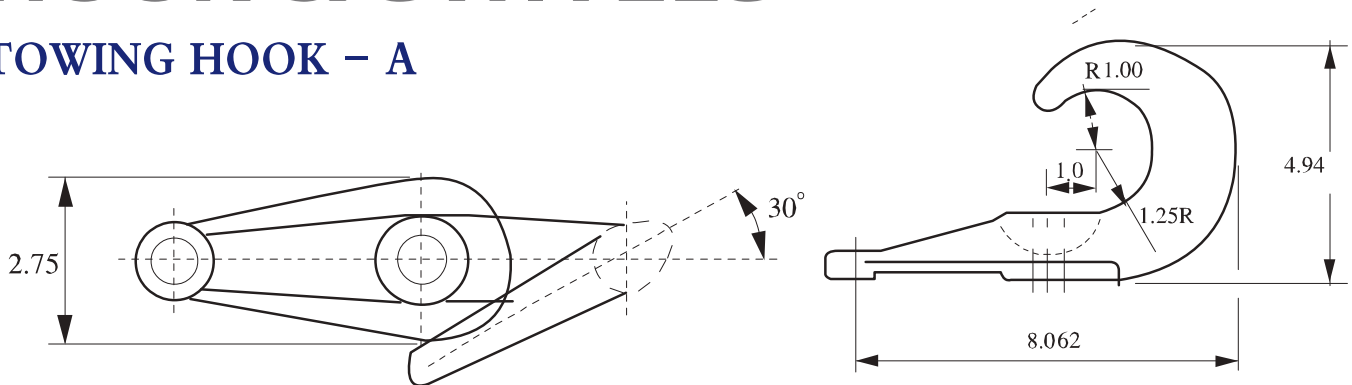
### S-4320



HOOK SIZE (TONS)		WEIGHT EACH (LBS.)	DIMENSIONS (IN.)				
CARBON	ALLOY		A	B	C	D	E
3/4	1	0.03	0.94	0.50	0.20	0.15	1.44
1	1.1/2	0.04	1.00	0.54	0.22	0.17	1.56
1.1/2	2	0.04	1.09	0.63	0.23	0.17	1.66
2	3	0.06	1.21	0.66	0.28	0.17	1.91
3	5**	0.10	1.53	0.83	0.35	0.20	2.31
5	7	0.15	1.88	1.04	0.44	0.20	2.88
7	11	0.28	2.50	1.25	0.53	0.27	3.56
10	15	0.33	2.62	1.35	0.59	0.27	3.81
15	22	0.84	3.44	1.66	0.66	0.39	5.18

# HOOK & SWIVELS

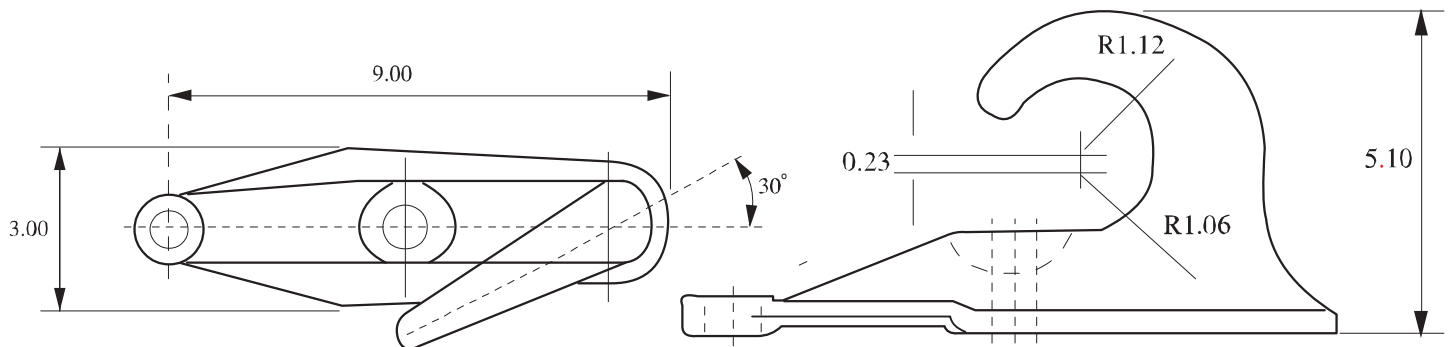
## TOWING HOOK - A



- ◆ TOWING HOOK FURNISHED IN RIGHT AND LEFT HAND PATTERNS.
- ◆ HAVING TWO MOUNTING HOLES.
- ◆ THE THICKNESS THROUGH THE CENTER BOSS IS 1-1/2 IN.
- ◆ THIS TOWING HOOK IS DROP FORGED FROM QUALITY CONTROLLED STEEL, LIGHT WEIGHT WITH EXCEPTIONAL STRENGTH.
- ◆ MAX. SAFE WORKING LOAD: 23, 400LBS.
- ◆ SHIPPING WEIGHT: 5LBS.

# HOOK & SWIVELS

## TOWING HOOK - B



- ◆ TOWING HOOK FOR HEAVY DUTY IS FURNISHED RIGHT AND LEFT PATTERN.
- ◆ HAVING THREE MOUNTING HOLES.
- ◆ HOOK IS SUPPORTED BY EXCEPTIONALLY LONG BEARING SURFACE.
- ◆ THICKNESS THROUGH CENTER BOSS IS 1-9/16 IN.
- ◆ DROP FORGED, QUALITY CONTROLLED STEELS GIVE EXCELLENT STRENGTH TO WEIGHT RATIO.
- ◆ MAX. SAFE WORKING LOAD: 44,600LBS WHEN USED WITH GRADE 8 BOLTS.
- ◆ SHIPPING WEIGHT: 8LBS.

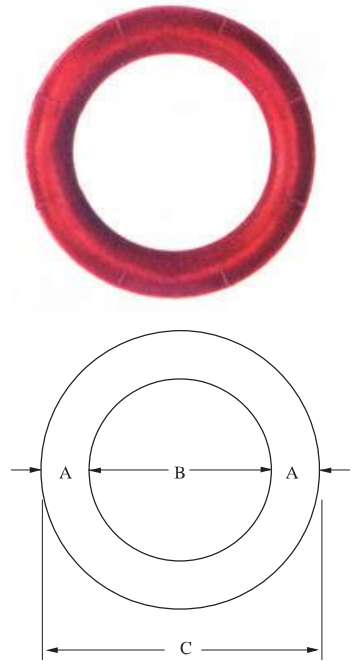
# LINKS & RINGS

## WELDLESS RINGS

- ◆ FORGED CARBON STEEL—QUENCHED AND TEMPERED.
- ◆ MEET THE PERFORMANCE REQUIREMENTS OF FEDERAL SPECIFICATION RR-C-271D TYPE VI.
- ◆ MINIMUM BREAKING LOAD IS 6 TIMES THE WLL.

### S-643

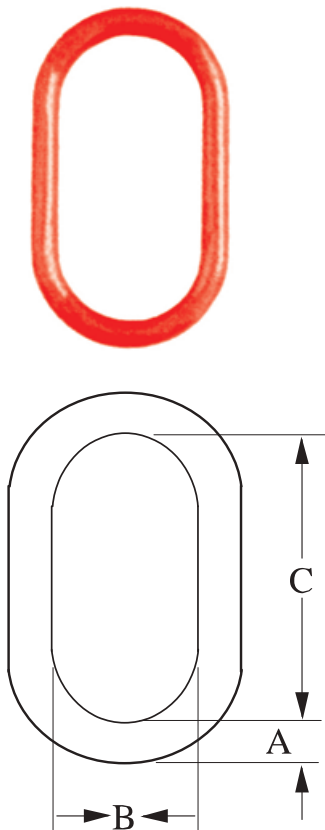
SIZE (A) (IN.)	WORKING LOAD LIMIT SINGLE PULL (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)	
			B	C
7/8 × 4	7200	2.72	4.00	5.75
7/8 × 5-1/2	5600	3.47	5.50	7.25
1 × 4	10800	3.69	4.00	6.00
1 1/8 × 6	10400	6.60	6.00	8.25
1 1/4 × 5	17000	6.82	5.00	7.50
1 3/8 × 6	19000	10.12	6.00	8.75



## ALLOY MASTER LINKS

- ◆ SIZES FROM 1/2" TO 2" ARE DROP FORGED.
- ◆ FORGED ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ INDIVIDUALLY PROOF TESTED AT 2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 5 TIMES THE WLL.

### A-342



SIZE "A" (MM)	WORKING LOAD LIMIT S.F.=4:1 FOR CHAIN(T)*	WORKING LOAD LIMIT S.F.=4:1 FOR CHAIN(T) *	PROOFLOAD (IN.) KN**	WEIGHT EACH (KG)	DIMENSIONS(MM)		
					B	C	DEFORMATION INDICATOR
13	3.17	2.54	63	0.37	63.5	127	76
16	4.08	3.26	81	0.69	76.0	152	89
19	5.58	4.46	110	0.94	70.0	140	89
22	6.44	5.15	127	1.59	95.5	162	114
25	11.05	8.83	217	2.20	89.0	178	114
32	16.42	13.13	323	4.34	111	222	140
38	25.67	20.54	504	4.36	133	267	165
44	38.51	30.81	756	11.4	152	305	191
51	46.54	37.23	913	16.8	178	356	229
57	65.6	52.47	1287	24.5	203	406	-
63	66.8	58.00	1311	30.7	203	406	-
70	98.4	78.71	1930	39.8	241	406	-
76	103	82.73	2029	52	229	457	-
83	119	95.13	2334	66	254	508	-
89	126	101	2483	91	305	610	-
95	152	122	2990	90	254	508	-
102	169	135	3319	103	254	508	-
108	160	128	3150	137	305	610	-
121	163	130	3204	156	356	711	-
121	176	141	3462	198	356	711	-
127	179	143	3515	234	381	762	-

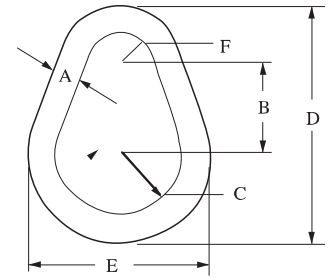
# LINKS & RINGS

## WELDLESS SLING LINKS

- ◆ SELF COLORED OR HOT DIP GALVANIZED.
- ◆ FORGED CARBON STEEL—QUENCHED AND TEMPERED
- ◆ MINIMUM BREAKING LOAD IS 6 TIMES THE WLL.

### G-341/S-341

SIZE (A) (IN.)	WORKING LOAD LIMIT SINGLE PULL (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)				
			B	C	D	E	F
3/8	1800	0.23	1.13	0.75	3.00	2.25	0.38
1/2	2900	0.55	1.50	1.00	4.00	3.00	0.50
5/8	4200	1.06	1.87	1.25	5.00	3.75	0.63
3/4	6000	1.88	2.25	1.50	6.00	4.50	0.75
7/8	8300	2.75	2.63	1.75	7.00	5.25	0.88
1	10800	4.35	3.00	2.00	8.00	6.00	1.00
1 1/4	16750	7.60	4.00	2.50	10.25	7.50	1.25
1 3/8	20500	11.30	4.13	2.75	11.00	8.25	1.38

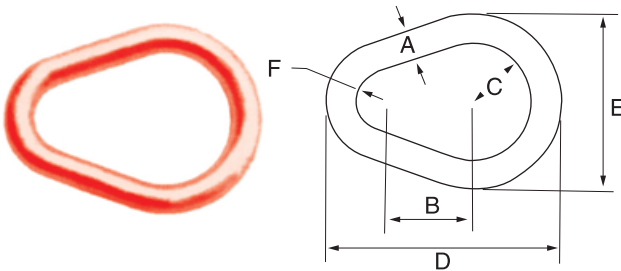


## PEAR SHAPDE LINKS

- ◆ ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ INDIVIDUALLY PROOF TESTED AT 2 TIMES WLL.
- ◆ SIZES 1/2", 5/8", 3/4", AND 1" ARE DROP FORGED.
- ◆ MINIMUM BREAKING LOAD IS 5 TIMES THE WLL.

### A-341

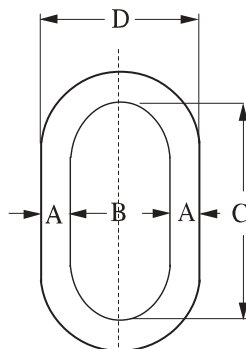
SIZE (A) (IN.)	WORKING LOAD LIMIT SINGLE PULL (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)				
			B	C	D	E	F
1/2	7000	0.55	1.50	1.00	4.00	3.00	0.50
5/8	9000	1.10	1.88	1.25	5.00	3.75	0.63
3/4	12300	1.76	2.25	1.50	6.00	4.50	0.75
**7/8	14000	2.82	2.63	1.75	7.00	5.25	0.88
1	24360	4.22	3.00	2.00	8.00	6.00	1.00
**1.1/8	30600	6.25	3.38	2.25	8.75	6.75	1.13
**1.1/4	36000	8.25	3.75	2.50	10.00	7.50	1.25
**1.3/8	43000	11.25	4.13	2.75	11.00	8.25	1.38
**1.1/2	54300	14.25	4.50	3.00	12.00	9.00	1.50
**1.5/8	62600	18.50	4.88	3.25	13.00	9.75	1.63
**1.3/4	84900	22.50	5.25	3.50	14.00	10.50	1.75
**1.7/8	95800	29.00	5.63	3.75	15.00	11.25	1.88
**2	102600	34.00	6.00	4.00	16.00	12.00	2.00
**2.1/4	143100	48.00	6.75	4.50	18.00	13.50	2.25
**2.1/2	147300	66.00	7.50	5.00	20.00	15.00	2.50
*2.3/4	216900	88.00	8.25	5.50	22.00	16.50	2.75
**3	228000	114.00	9.00	6.00	24.00	18.00	3.00
**3.1/4	262200	146.00	9.75	6.50	26.00	19.50	3.25
**3.1/2	279000	181.00	10.50	7.00	28.00	21.00	3.50
**4	373000	271.00	12.00	8.00	32.00	24.00	4.00



## WELDLESS END LINK

### G-340/S-340

- ◆ SELF COLORED OR HOT DIP GALVANIZED.
- ◆ FORGED CARBON STEEL —QUENCHED AND TEMPERED
- ◆ MINIMUM BREAKING LOAD IS 5 TIMES THE WLL.



SIZE (A) (IN.)	WORKING LOAD LIMIT SINGLE PULL (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)		
			B	C	D
5/16	2500	0.15	0.50	1.75	1.18
3/8	3800	0.22	0.56	1.88	1.38
1/2	6500	0.49	0.75	2.38	1.81
5/8	9300	0.97	1.00	3.25	2.32
3/4	14000	1.51	1.13	3.50	2.68
7/8	12000	2.59	2.00	5.13	3.75
1	15200	3.95	2.25	5.75	4.25
1.1/4	26400	7.30	2.50	7.00	5.00
1.3/8	30000	10.38	2.75	7.75	5.50

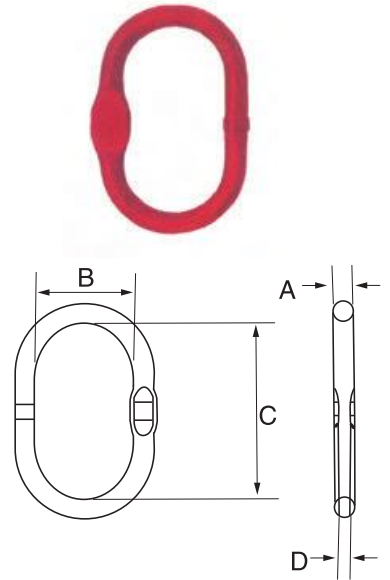
# LINKS & RINGS

## WELDED MASTER LINK

- ◆ ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ INDIVIDUALLY PROOF TESTED AT 2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

### A-344

SIZE		WORKING LOAD LIMIT (LBS.)		WELGHT EACH (LBS.)	DIMENSIONS (IN.)			
(IN.)	(MM)	4:1	5:1		A	B	C	D
7/16	12	3500	2800	0.5	0.47	2.36	3.94	0.24
1/2	14	6000	4800	0.7	0.55	2.36	3.94	0.30
1.1/16	17	8800	7100	1.6	0.67	3.54	6.30	0.33
3/4	20	14300	11500	2.6	0.79	3.54	6.30	0.41
7/8	22	18100	14500	3.6	0.87	3.94	7.09	0.53
1	25	25300	20300	7.1	0.98	3.94	7.09	0.65
1.1/8	28	26000	20800	8.4	1.10	5.51	10.63	0.65
1.1/4	32	35300	28300	13.7	1.26	5.51	10.63	0.73

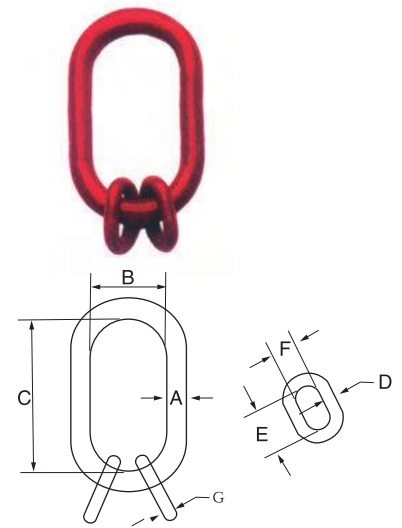


## MASTER LINK ASSEMBLY

- ◆ ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ INDIVIDUALLY PROOF TESTED AT 2 TIMES WLL
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

### A-345

"A" SIZE (MM)	WORKING LOAD LIMIT (T)*		WEIGHT EACH (KG)	DIMENSIONS (MM)						DEFORMATION INDICATOR	ENGINEERED FLAT FOR S-325A (IN.)-(MM)
	BASED ON GRADE 80 CHAIN RATING	BASED ON 4:1 DESIGN FACTOR		B	C	D	E	F	G		
19	4.13	4.77	1.18	19.1	70.0	140	14.2	85.0	39.9	89	1/4"-5/16",7-8mm
25	8.35	11.0	2.77	25.4	89.0	178	17.5	100	60.0	114	3/8",10mm
32	14.1	16.3	5.99	31.8	111	222	22.4	100	60.0	140	1/2",13mm
38	21.3	24.6	11.0	38.1	133	267	28.7	150	70.0	165	5/8",16mm
44	33.3	38.5	16.2	44.5	152	305	31.8	160	90.0	191	3/4"20mm
51	40.3	46.6	26.0	51.0	178	356	38.1	180	100	229	NO FLAT

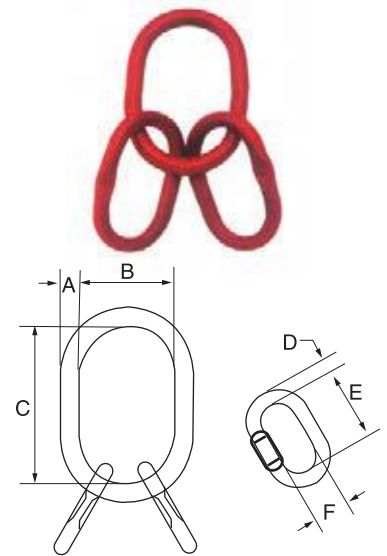


## WELDED MASTER LINK ASSEMBLY

- ◆ ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ INDIVIDUALLY PROOF TESTED AT 2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL

### A-347

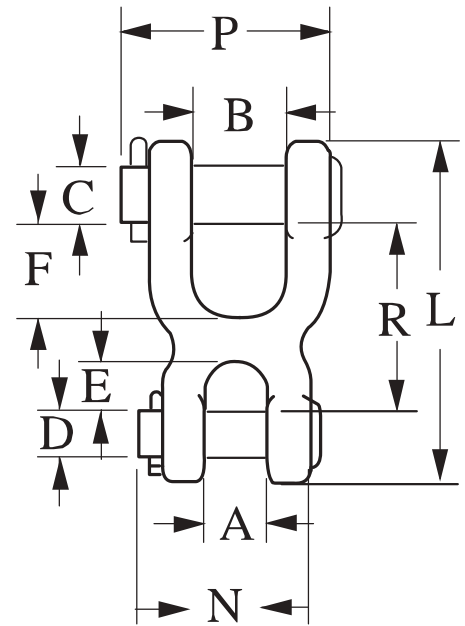
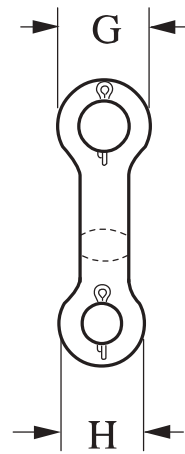
SIZE		WORKING LOAD LIMIT (LBS.)		WELGHT EACH (LBS.)	DIMENSIONS (IN.)					
(IN.)	(MM)	4:1	5:1		A	B	C	D	E	F
1/2	14	5300	4300	1.90	0.55	2.36	3.94	0.47	3.35	1.57
5/8	17	7100	5700	3.65	0.67	3.54	6.30	0.55	3.94	2.36
3/4	20	11000	8800	4.00	0.79	3.54	6.30	0.55	3.94	2.36
7/8	22	17600	14100	6.90	0.87	3.94	7.09	0.67	5.91	2.76
1.1/8	28	26500	21200	16.31	1.10	5.51	10.63	0.87	6.30	3.54
1.1/4	32	37500	30720	22.50	1.26	5.51	10.63	0.98	7.09	3.94



# LINKS & RINGS

## DOUBLE CLEVIS LINKS

- ◆ ALL PINS ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ BODY IS FORGED AND HEAT TREATED CARBON STEE.
- ◆ FEATURES QUICK AND EASY ASSEMBLY.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

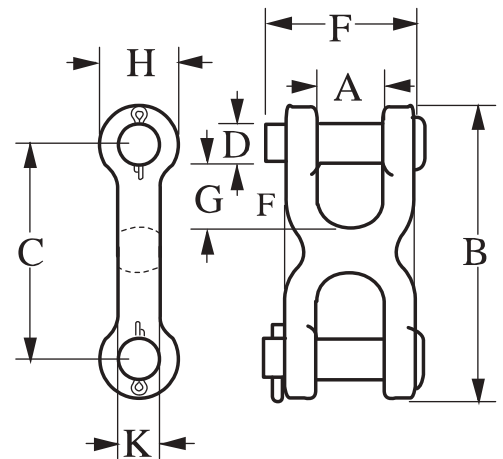


### S-247

SIZE (IN.)	WORKING LOAD LIMIT (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)											
			A	B	C	D	E	F	G	H	L	N	P	R
1/4	2600	0.44	0.50	0.75	0.50	0.31	0.38	0.75	1.00	0.81	2.81	1.38	1.66	1.50
5/16-3/8	5400	0.81	0.56	1.00	0.63	0.44	0.47	1.00	1.19	1.00	3.53	1.75	2.25	1.91
7/16	7000	1.28	0.69	1.13	0.69	0.56	0.59	1.09	1.31	1.19	4.06	2.00	2.50	2.19
1/2	9200	1.68	0.81	1.25	0.75	0.63	0.66	1.25	1.44	1.31	4.53	2.25	2.75	2.47

## TWIN CLEVIS LINK

- ◆ ALL PINS ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ BODY IS FORGED AND HEAT TREATED CARBON STEEL.



### S-249

CHAIN SIZE (IN.)	WORKING LOAD LIMIT (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)							
			A	B	C	D	F	G	H	K
1/4-5/16	4700	0.31	0.47	2.50	1.16	0.38	1.31	0.43	0.94	0.50
3/8	6600	0.44	0.53	2.81	1.81	0.44	1.53	0.50	1.00	0.56
7/16-1/2	11250	0.97	0.65	3.62	2.31	0.56	1.91	0.63	0.63	0.81

- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

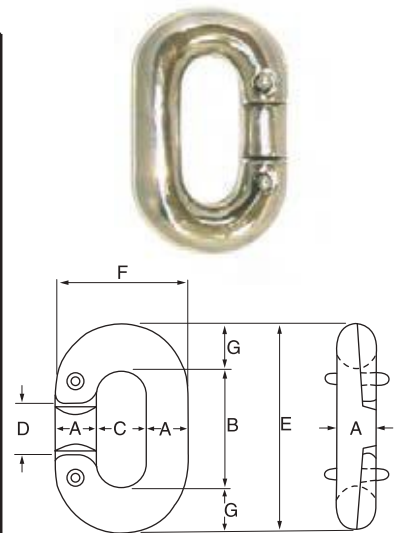
# LINKS & RINGS

## ALLOY CONNECTING LINKS, AMERICAN TYPE

- ◆ MEETS OR EXCEEDS FEDERAL SPECIFICATIONS RR-C-271D, TYPE II
- ◆ AVAILABLE FOR SUS304 OR SUS316

### G-335/S-335

CHAIN SIZE (IN.)	WORKING LOAD LIMIT (LBS.)	WEIGHT PER 100 (LBS.)	DIMENSIONS (IN.)						
			A	B	C	D	E	F	G
**3/16	800	2.50	0.25	0.69	0.34	0.34	1.19	0.78	0.28
**1/4	1400	6.25	0.28	0.88	0.44	0.44	1.50	1.00	0.31
**5/16	2000	12.50	0.34	0.94	0.47	0.47	1.69	1.16	0.38
3/8	2800	20.00	0.41	1.13	0.56	0.56	2.06	1.38	0.47
7/16	3625	27.50	0.47	1.28	0.59	0.59	2.34	1.53	0.53
1/2	4750	37.50	0.53	1.47	0.66	0.66	2.66	1.72	0.59
5/8	7250	72.50	0.66	1.81	0.78	0.78	3.31	2.09	0.75
3/4	10250	122.50	0.78	2.13	0.94	0.94	3.88	2.50	0.88
7/8	12000	175.00	0.91	2.50	1.13	1.13	4.50	2.94	1.00
*1	15500	250.00	1.03	2.75	1.25	1.25	5.00	3.31	1.13

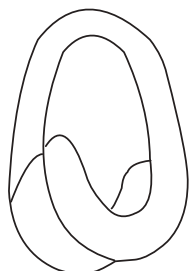


- ◆ FORGED STEEL—QUENCHED AND TEMPERED.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

## REPAIR & LAPLINKS

### SAFETY FACTOR 4:1

- ◆ TO BE USED WITH PROOF COIL CHAIN ONLY.
- ◆ NOT TO BE USED FOR LIFTING.



CHAIN SIZE (IN.)	WEIGHT /100PCS (LBS.)	W.L.L.	
		(LBS.)	(KGS.)
1/8 x 3/4	1-1/8	190	86
3/16 x 1	3-1/4	240	109
7/32 x 1-1/4	4-3/4	250	113
1/4 x 1-1/4	6-3/4	400	181
9/32 x 1-1/4	8-1/4	525	238
1/4 x 1-1/2	7-1/4	400	181
1/4 x 2	9-3/4	400	181
5/16 x 1-1/2	13	950	431
5/16 x 2	17	1000	454
3/8 x 1-5/8	23	1250	567
3/8 x 2	26	1250	567
1/2 x 2-1/2	53	2125	964
5/8 x 2-1/2	81	1000	454

## COLD SHUT

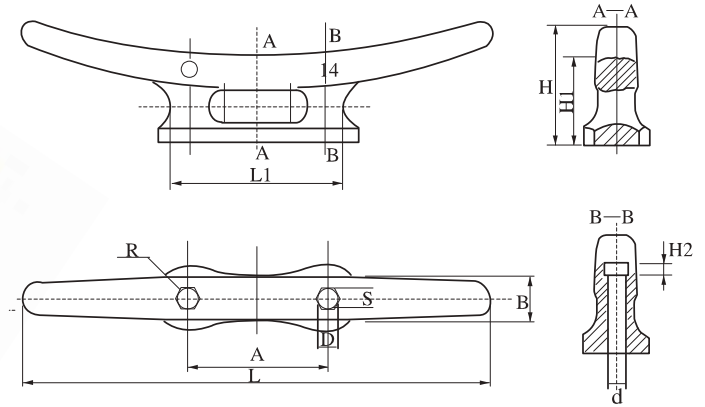
### SAFETY FACTOR 4:1



TRADE SIZE (IN.)	W.L.L.		DIMENSIONS (IN.)				WEIGHT /100PCS (LBS.)
			A	B	C	D	
1/8	220	100	1/8	3/16	3/8	1-3/8	2
3/16	660	299	3/16	1/4	1/2	1-7/8	4-1/2
1/4	880	399	1/4	9/32	9/16	2-1/4	8
5/16	1760	798	5/16	3/8	11/16	2-15/16	17
3/8	2220	998	3/8	7/16	3/4	3-1/8	23
1/2'	3300	1497	1/2	19/32	15/16	4-1/8	51

# CLEATS

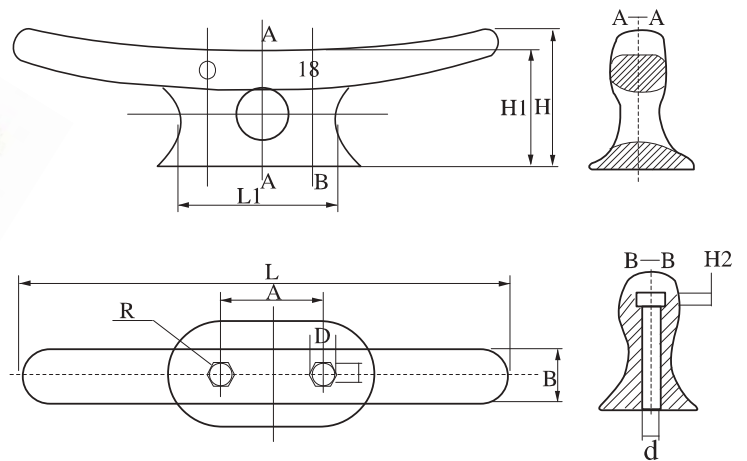
## MALLEABLE CLEATS, TYPE A



◆ FIG 92

SIZE (IN.)	DIMENSIONS(MM)											WEIGHT (KG)
	L	H	B	R	A	L1	H1	H2	D	S	D	
6	149.2	36.5	19.1	10.3	31.7	44.4	27.8	4.8	13.3	11.5	7.9	0.18
8	203.2	50	25.4	15.1	41.4	58.9	39.6	6	15.1	13.1	9.5	0.46
10	260.3	61.6	27.7	19.1	60.5	81.1	49	7.1	17	14.7	11.1	0.91
12	311.2	74.6	30.2	24.4	85.8	109.6	60.5	8.5	18.8	16.3	12.7	1.62
14	363.5	92	34.9	25.4	108	133.3	66.6	8.8	19.1	16.5	14.3	2.64
16	457	120.6	49.2	33.3	136.5	168	89	12	28.6	24.7	17.5	5

## MALLEABLE CLEATS, TYPE B



◆ FIG 92

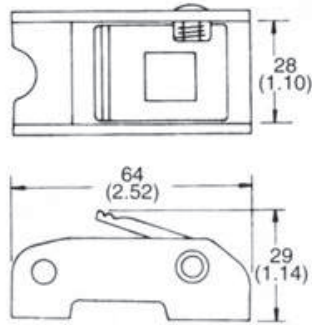
SIZE (IN.)	DIMENSIONS(MM)											WEIGHT (KG)
	L	H	B	R	A	L1	H1	H2	D	S	D	
8	219	71.4	31.7	29.4	50.8	69.8	61.9	8	18.8	16.3	12	1.48
10	254	85.8	38.1	33.3	61.9	93.9	74.7	9.1	22.5	19.6	14	2.5
12	304.8	94.5	49.3	38.1	85.8	130.3	84	11.5	28	24.2	17.4	4.6
15	384.2	114.3	50.8	41.3	90.5	130.3	95.3	11.9	28.4	24.6	19.1	6
18	460.3	134.6	57.1	52.3	98.4	146	114.3	12	28.4	24.6	19.1	9.3





# CLEATS

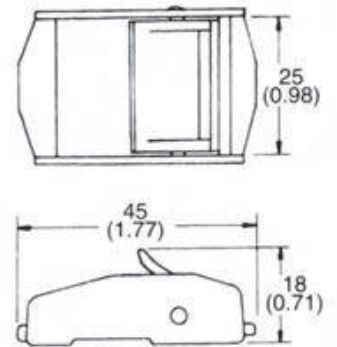
## CAM BUCKLE



Y-1823

### 1"Cam Buckle

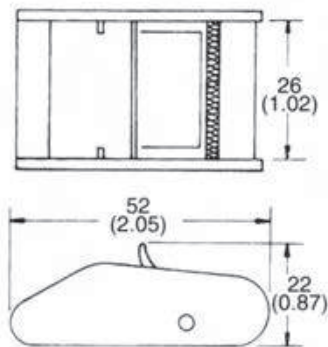
Breaking Strength:680kgs/1,500lbs



Y-1824

### 1"Cam Buckle

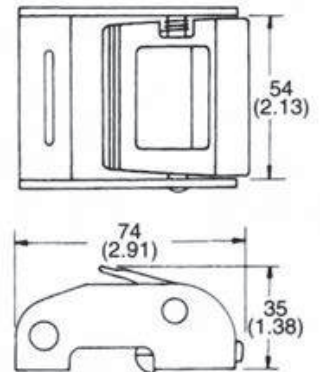
Breaking Strength:250kgs/550lbs



Y-1824C

### 1"Cam Buckle

Breaking Strength:350kgs/770lbs



Y-1825A

### 2"Cam Buckle

Breaking Strength:1,360kgs/3,000lbs

## WINCH BAR



Y-709

### Winch Bar

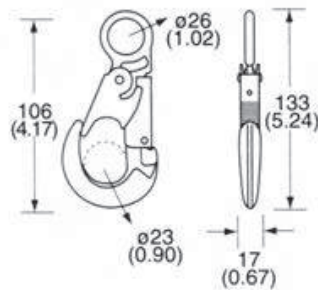


Y-709A

### Combination Bar

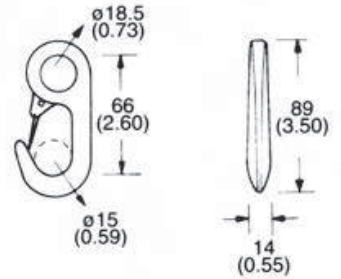
# CLEATS

## FORGED HOOK



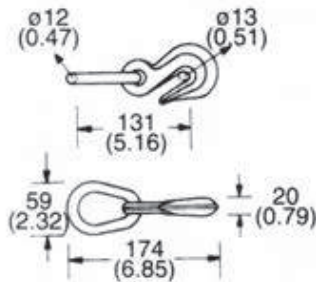
**Y-1861**  
**Double Security Lanyard Forged Hook**

Breaking Strength:2,270kgs/5,000lbs



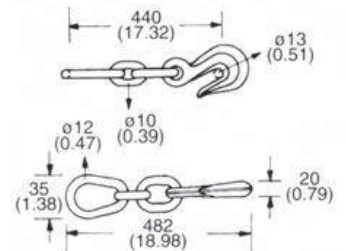
**Y-1870**  
**3/4\"/>**

Breaking Strength:2,500kgs/5,500lbs



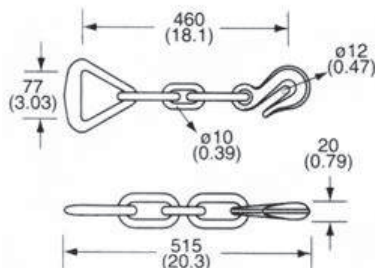
**Y-3815**  
**3/8\"/>**

Breaking Strength:7,364kgs/16,200lbs



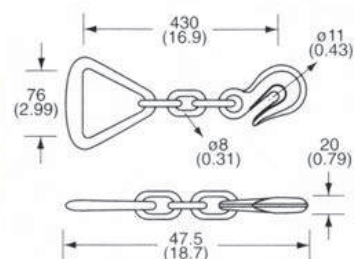
**Y-3816**  
**18\"/>**

Breaking Strength:7,364kgs/16,200lbs



**Y-3816A**  
**18\"/>**

Breaking Strength:7,364kgs/16,200lbs

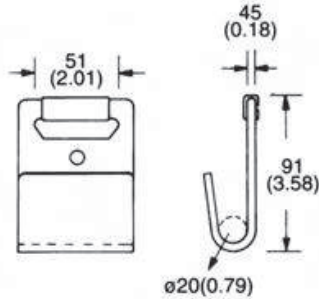


**Y-3816B**  
**18\"/>**

(Alloy Chain & Alloy Grab Hook)  
Breaking Strength:7,364kgs/16,200lbs

# CLEATS

## METAL HOOK



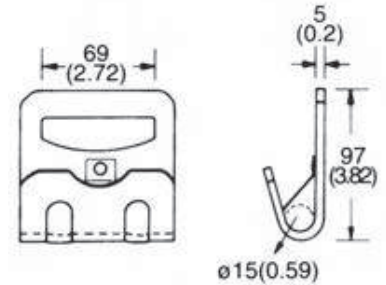
Y-1830

### 2"Flat Hook

Breaking Strength:4,540kgs/10,000lbs

Y-1830-D:With Defender;Y-1830-K:With Keeper

Y-1830-DK:With Defender+Keeper



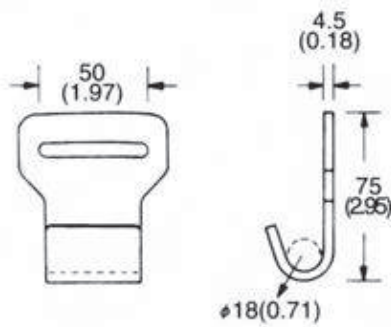
Y-1831

### 4"Flat Hook

Breaking Strength:6,800kgs/15,000lbs

Y-1831-D:With Defender;Y-1831-K:With Keeper

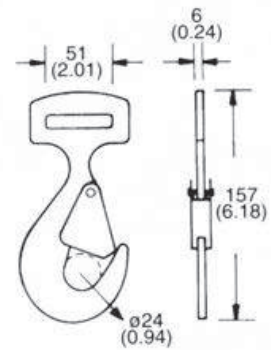
Y-1831-DK:With Defender+Keeper



Y-1832

### 2"Flat Hook

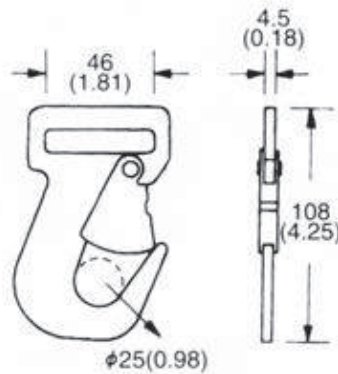
Breaking Strength:2,270kgs/5,000lbs



Y-1840

### 2"Snap Hook

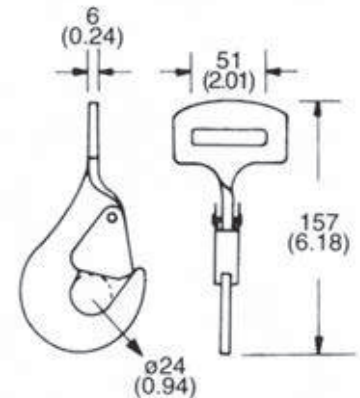
Breaking Strength:5,000kgs/11,000lbs



Y-1841

### 2"Flat Snap Hook

Breaking Strength:2,724kgs/6,000lbs



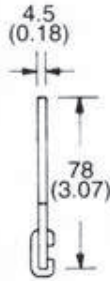
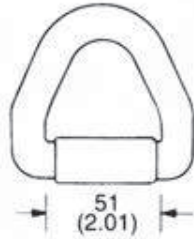
Y-1842

### 2"Twisted Snap Hook

Breaking Strength:5,000kgs/11,000lbs

# CLEATS

## METAL HOOK

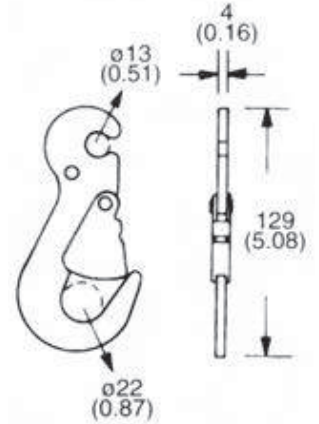


Y-1853

**2"Metal Delta Ring**

Breaking Strength:5,000kgs/11,000lbs

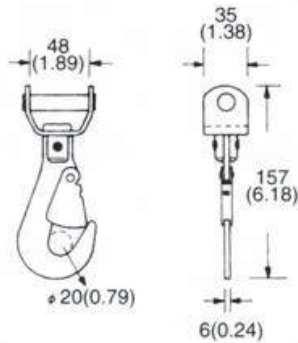
Y-1853-ND:Without Defender



Y-1856

**Conversion Snap Hook**

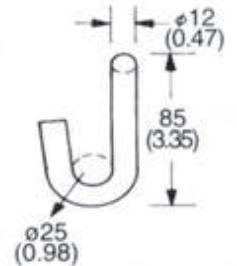
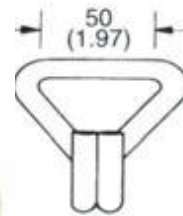
Breaking Strength:3,000kgs/6,600lbs



Y-1857

**1<sup>3</sup>/<sub>4</sub>"Swivel Snap Hook**

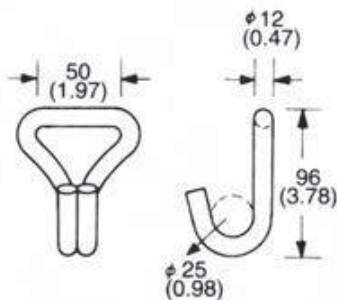
Breaking Strength:3,178kgs/7,000lbs



Y-1820A

**2"Double J Hook**

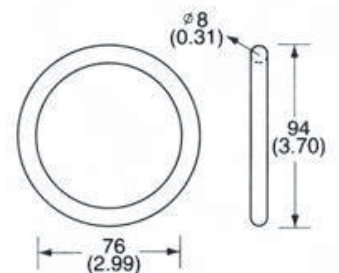
Breaking Strength:5,000kgs/11,000lbs



Y-1820B

**2"Double J Hook**

Breaking Strength:5,000kgs/11,000lbs



Y-1827A

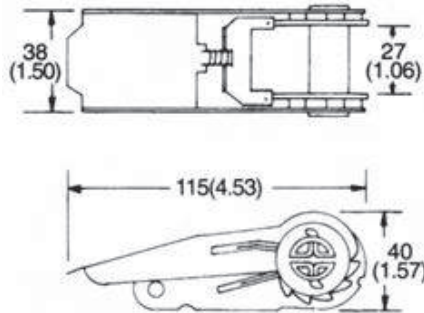
**3"O Ring**

Breaking Strength:2,270kgs/5,000lbs



# CLEATS

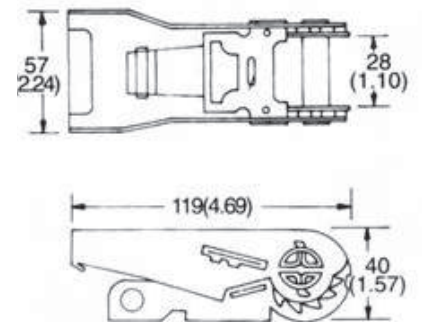
## RATCHET BUCKLE



701A

**1"Light Duty**

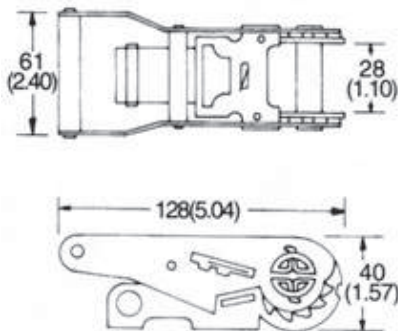
Breaking Strength:800kgs/1760lbs



701C-011

**1"One Piece Wide Handle**

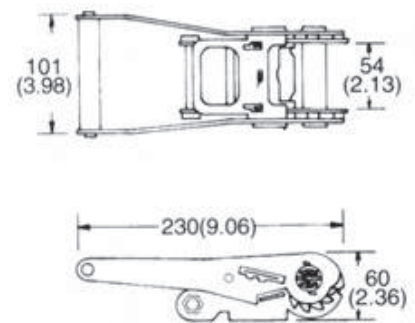
Breaking Strength:1,500kgs/3,300lbs



701E-011

**1"Wide Handle**

Breaking Strength:1,500kgs/3,300lbs

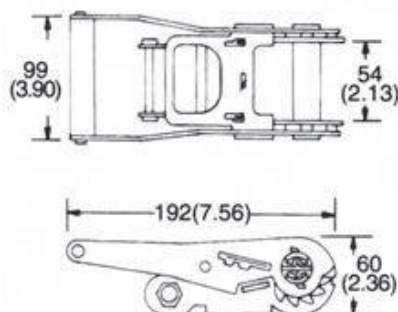


703AP-011

**2"Long Handle, Double Security Lock**

Breaking Strength:5,000kgs/11,000lbs

6,000kgs/13,200lbs

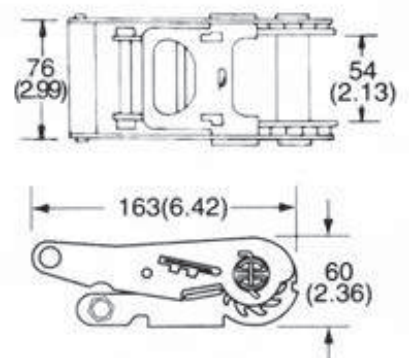


703BP-011

**2"Medium Handle, Double Security Lock**

Breaking Strength:5,000kgs/11,000lbs

6,000kgs/13,200lbs



703CP-011

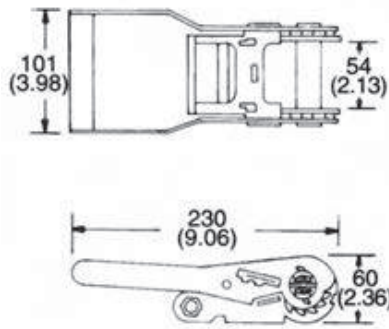
**2"Short Handle, Double Security Lock**

Breaking Strength:5,000kgs/11,000lbs

6,000kgs/13,200lbs

# CLEATS

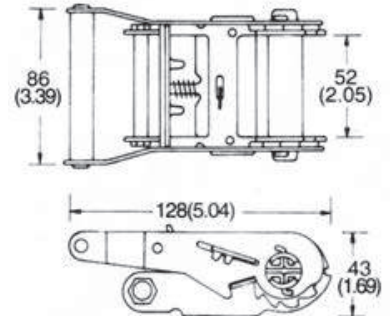
## RATCHET BUCKLE



701AP-021

**2" One Piece Long Handle, Double Security Lock**

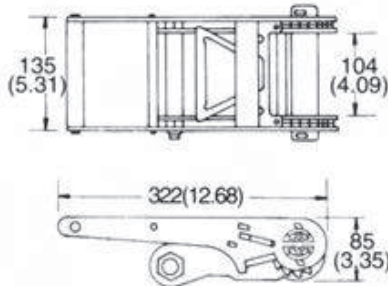
Breaking Strength: 5,000kgs/11,300lbs  
6,000kgs/13,200lbs



703EW

**2" Wide Handle, Light Duty**

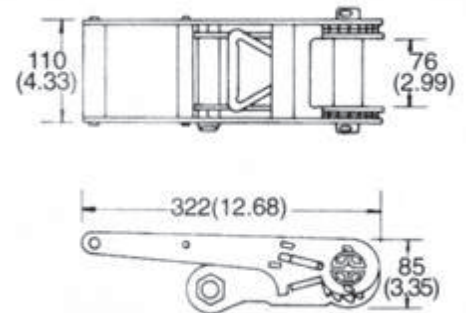
Breaking Strength: 2,000kgs/4,400lbs  
**703EW-3T:** Breaking Strength: 3,000kgs/6,600lbs



704A

**4" Long Handle**

Breaking Strength: 10,896kgs/24,000lbs

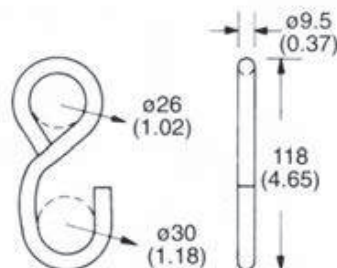


704P

**3" Long Handle**

Breaking Strength: 10,000kgs/22,300lbs

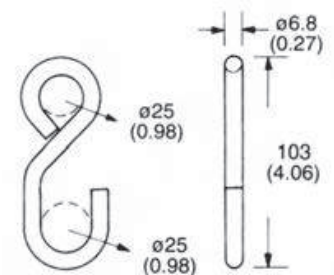
## S HOOK



Y-1816

**1" S Hook**

Breaking Strength: 1,100kgs/2,500lbs



Y-1817

**1" S Hook**

Breaking Strength: 340kgs/750lbs  
6,000kgs/13,200lbs

# CLEATS

## R-HOOK T-HOOK



LIKE THE T-HOOK, THE R-HOOK WAS DEVELOPED FOR USE BY THE AUTO TRANSPORT INDUSTRY. THIS HOOK IS DROP FORGED AND IS USED IN TOWING AND CAR CARRIER TIE DOWN SITUATIONS. THE R HOOK IS ZINC PLATED AND DESIGNED FOR USE WITH 5/16 OR 3/8 GRADE 30 AND 40 CHAIN. 3,900 LBS. W.L.L.

## GRADE 70 J-HOOK

A FORGED ALLOY J-HOOK WITH A UNIQUE I-BEAM ED SIGN FOR AN INCREASED LOAD BEARING SURFACE AND MAXIMUM STRENGTH HAS A BLUNT NOSE WHICH MAKES IT GENTLE ON CV. BOOTS AND ITS SLIP RESISTANT NOTCH HELPS TO KEEP IT FROM FALLING OFF WHEN HOOKING-UP. IT MEASURES 15" LONG, HAS A 3" THROAT DEPTH AND A 3/4" DIAMETER EYE ON THE END.



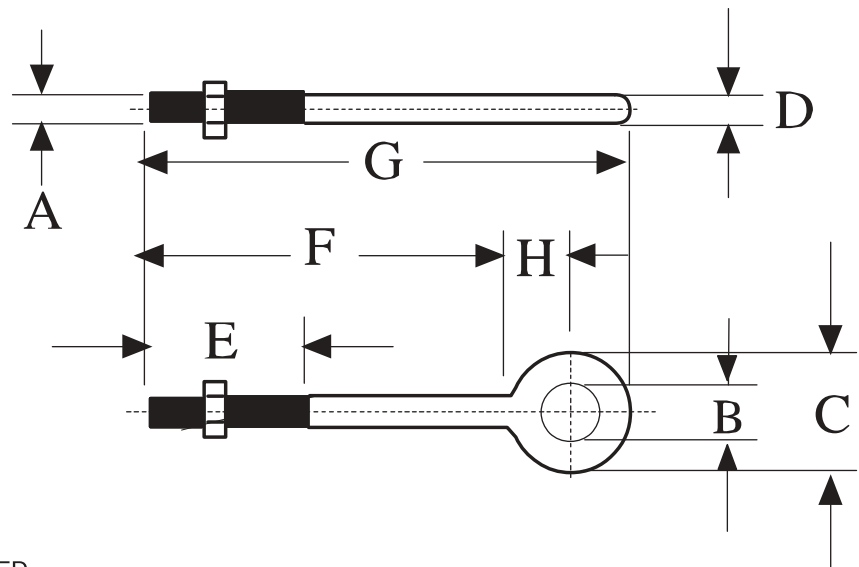
## GRADE 70 SPORTS CAR HOOK



IDENTICAL TO THE THIS HOOK BUT MADE WITH A SHORTENED SHANK FOR TIGHT SPACE APPLICATIONS. OVERALL LENGTH 8"

# BOLTS & NUTS

## REGULAR NUTEYE BOLTS



- ◆ RECOMMENDED FOR IN-LINE PULL.
- ◆ ALL BOLTS HOT DIP GALVANIZED AFTER THREADING.(UNC)
- ◆ FURNISHED WITH STANDARD HOT DIP GALVANIZED HEX NUTS.
- ◆ FORGED STEEL--QUENCHED AND TEMPERED.

### G-291

SHANK DIA. AND LENGTH (IN.)	WORKING LOAD LIMIT (LBS.)	WEIGHT PER 100RCS (LBS.)	DIMENSIONS (IN.)								
			A	B	C	D	E	F	G	H	
1/4" x 2"	650	8.20	0.25	0.50	1.00	0.25	1.50	2.00	3.06	0.56	
1/4" x 4"	650	11.70	0.25	0.50	1.00	0.25	2.50	4.00	5.06	0.56	
5/16" x 2"-1/4"	1200	13.30	0.31	0.62	1.25	0.31	1.50	2.25	3.56	0.69	
5/16" x 4"-1/4"	1200	25.00	0.31	0.62	1.25	0.31	2.50	4.25	5.56	0.69	
3/8" x 2"-1/2"	1550	23.30	0.38	0.75	1.50	0.38	1.50	2.50	4.12	0.88	
3/8" x 4"-1/2"	1550	29.50	0.38	0.75	1.50	0.38	2.50	4.50	6.12	0.88	
3/8" x 6"	1550	35.20	0.38	0.75	1.50	0.38	2.50	6.00	7.62	0.88	
1/2" x 3"-1/4"	2600	50.30	0.50	1.00	2.00	0.50	1.50	3.25	5.38	1.12	
1/2" x 6"	2600	66.10	0.50	1.00	2.00	0.50	3.00	6.00	8.12	1.12	
1/2" x 8"	2600	82.00	0.50	1.00	2.00	0.50	3.00	8.00	10.12	1.12	
1/2" x 10"	2600	88.00	0.50	1.00	2.00	0.50	3.00	10.00	12.12	1.12	
1/2" x 12"	2600	114.20	0.50	1.00	2.00	0.50	3.00	12.00	14.12	1.12	
5/8" x 4"	5200	103.10	0.62	1.25	2.50	0.62	2.00	4.00	6.69	1.44	
5/8" x 6"	5200	118.20	0.62	1.25	2.50	0.62	3.00	6.00	8.69	1.44	
5/8" x 8"	5200	135.10	0.62	1.25	2.50	0.62	3.00	8.00	10.69	1.44	
5/8" x 10"	5200	153.60	0.62	1.25	2.50	0.62	3.00	10.00	12.69	1.44	
5/8" x 12"	5200	167.10	0.62	1.25	2.50	0.62	4.00	12.00	14.69	1.44	
3/4" x 4"-1/2"	7200	168.60	0.75	1.50	3.00	0.75	2.00	4.50	7.69	1.69	
3/4" x 6"	7200	184.50	0.75	1.50	3.00	0.75	3.00	6.00	9.19	1.69	
3/4" x 8"	7200	207.90	0.75	1.50	3.00	0.75	3.00	8.00	11.19	1.69	
3/4" x 10"	7200	235.00	0.75	1.50	3.00	0.75	3.00	10.00	13.19	1.69	
3/4" x 12"	7200	257.50	0.75	1.50	3.00	0.75	4.00	12.00	15.19	1.69	
3/4" x 15"	7200	298.00	0.75	1.50	3.00	0.75	5.00	15.00	18.19	1.69	
7/8" x 5"	10600	270.00	0.88	1.75	3.50	0.88	2.50	5.00	8.75	2.00	
7/8" x 8"	10600	308.00	0.88	1.75	3.50	0.88	4.00	8.00	11.75	2.00	
7/8" x 12"	10600	400.00	0.88	1.75	3.50	0.88	4.00	12.00	15.75	2.00	
1" x 6"	13300	421.00	1.00	2.00	4.00	1.00	3.00	6.00	10.31	2.31	
1" x 9"	13300	468.50	1.00	2.00	4.00	1.00	4.00	9.00	13.31	2.31	
1" x 12"	13300	540.00	1.00	2.00	4.00	1.00	4.00	12.00	16.31	2.31	
1" x 18"	13300	650.00	1.00	2.00	4.00	1.00	7.00	18.00	22.31	2.31	
1-1/4" x 8"	21000	750.00	1.25	2.50	5.00	1.25	4.00	8.00	13.38	2.88	
1-1/4" x 12"	21000	900.00	1.25	2.50	5.00	1.25	4.00	12.00	17.38	2.88	
1-1/4" x 20"	21000	1210.00	1.25	2.50	5.00	1.25	6.00	20.00	25.38	2.88	

- ◆ MAXIMUM PROOF LOAD IS 2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 5 TIMES THE WLL.



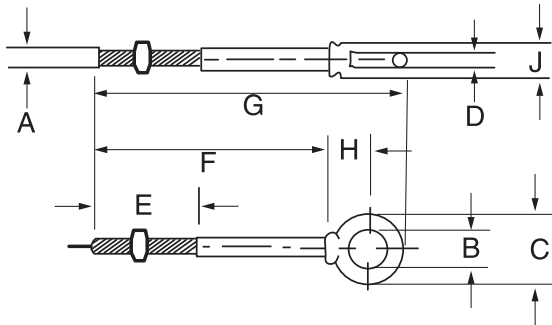
# BOLTS & NUTS

## SHOULDER NUT EYE BOLTS

### G-277



SHANK DIA & LENGTH (IN.)	W.L.L. (LBS.)	WEIGHT PER 100PCS (LBS.)	DIMENSIONS (IN.)									
			A	B	C	D	E	F	G	H	J	
1/4" x 2"	650	6.60	0.25	0.50	0.88	0.19	1.50	2.00	2.94	0.50	0.47	
1/4" x 4"	650	9.10	0.25	0.50	0.88	0.19	2.50	4.00	4.94	0.50	0.47	
5/16" x 2-1/4"	1200	12.50	0.31	0.62	1.12	0.25	1.50	2.25	3.50	0.69	0.56	
5/16" x 4-1/4"	1200	18.80	0.31	0.62	1.12	0.25	2.50	4.25	5.50	0.69	0.56	
3/8" x 2-1/2"	1550	21.40	0.38	0.75	1.38	0.31	1.50	2.50	3.97	0.78	0.66	
3/8" x 4-1/2"	1550	25.30	0.38	0.75	1.38	0.31	2.50	4.50	5.97	0.78	0.66	
1/2" x 3-1/4"	2600	42.60	0.50	1.00	1.75	0.38	1.50	3.25	5.12	1.00	0.91	
1/2" x 6"	2600	56.80	0.50	1.00	1.75	0.38	3.00	6.00	7.88	1.00	0.91	
5/8" x 4"	5200	68.60	0.62	1.25	2.25	0.50	2.00	4.00	6.44	1.31	1.12	
5/8" x 6"	5200	102.40	0.62	1.25	2.25	0.50	3.00	6.00	8.44	1.31	1.12	
3/4" x 4-1/2"	7200	144.50	0.75	1.50	2.75	0.62	2.00	4.50	7.44	1.56	1.38	
3/4" x 6"	7200	167.50	0.75	1.50	2.75	0.62	3.00	6.00	8.94	1.56	1.38	
7/8" x 5"	10600	225.00	0.88	1.75	3.25	0.75	2.50	5.00	8.46	1.84	1.56	
1" x 6"	13300	366.30	1.00	2.00	3.75	0.88	3.00	6.00	9.97	2.09	1.81	
1" x 9"	13300	422.50	1.00	2.00	3.75	0.88	4.00	9.00	12.97	2.09	1.81	
1-1/4" x 8"	21000	650.00	1.25	2.50	4.50	1.00	4.00	8.00	12.72	2.47	2.28	
1-1/4" x 12"	21000	795.00	1.25	2.50	4.50	1.00	4.00	12.00	16.72	2.47	2.28	
1-1/2" x 15"	24000	1425.00	1.50	3.00	5.50	1.25	6.00	15.00	20.75	3.00	2.75	



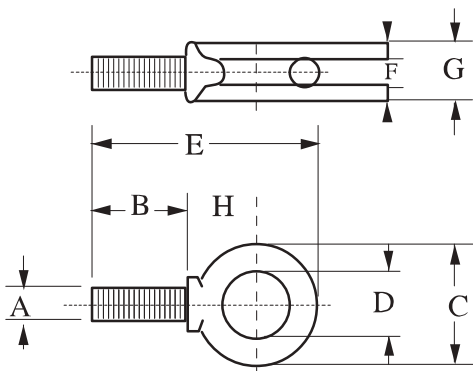
- ◆ MAXIMUM PROOF LOAD IS 2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 5 TIMES THE WLL.
- ◆ DROP FORGED STEEL.
- ◆ HOT DIP GALVANIZED
- ◆ SUPPLIED WITH STANDARD HOT DIP GALVANIZED HEAVY HEX NUTS.
- ◆ ALL BOLTS HOT DIP GALVANIZED AFTER THREADING.

## SHOULDER TYRE MACHINERY EYE BOLTS



### S-279

SIZE	WORKING LOAD LIMIT (T)*	WEIGHT EACH (KG)	DIMENSIONS (MM)						
			A** THREAD	B	C	D	E	F	G
6.35 x 25.4	0.29	0.02	1/4-20	25.9	28.7	19.1	58.0	4.85	13.5
7.94 x 28.6	0.54	0.04	5/16-18	29.2	35.1	22.4	69.5	6.35	15.0
9.53 x 31.8	0.70	0.06	3/8-16	32.3	41.1	25.4	78.0	7.85	17.5
12.7 x 38.1	1.18	0.12	1/2-13	38.9	49.5	30.2	94.0	9.65	23.1
15.9 x 44.5	2.35	0.24	5/8-11	45.5	60.5	35.1	113	12.7	28.7
19.1 x 51.0	3.26	0.43	3/4-10	52.0	70.0	38.1	129	16.0	35.1
22.2 x 57.0	4.08	0.70	7/8-9	58.5	82.5	44.5	149	19.1	39.6
25.4 x 63.5	6.03	1.1	1-8	65.5	95.5	51.0	169	22.4	46.0
31.8 x 76.0	9.52	1.8	1-1/4-7	78.5	114	63.5	202	25.4	58.0
38.1 x 89.0	10.8	3.2	1-1/2-6	91.5	140	76.0	241	31.8	70.0

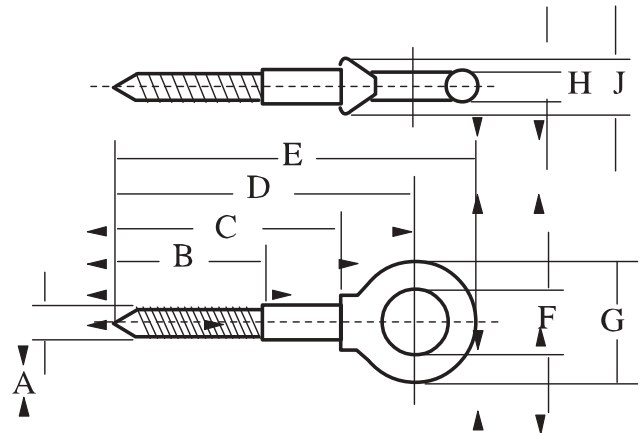


- ◆ FORGED STEEL—QUENCHED AND TEMPERED.
- ◆ RECOMMENDED FOR STRAIGHT LINE PULL.
- ◆ MAXIMUM PROOF LOAD IS 2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 5 TIMES THE WLL.

# BOLTS & NUTS

## SCREW EYE BOLTS

- ◆ FORGED STEEL—QUENCHED AND TEMPERED.
- ◆ HOT DIP GALVANIZED.

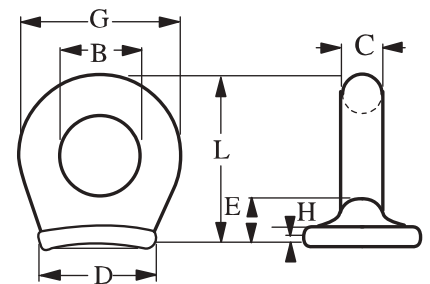


### G-275

SHANK DIA. & LEGTH (IN.)	WEIGHT PER 100RCS (LBS.)	DIMENSIONS (IN.)								
		A	B	C	D	E	F	G	H	J
1/4 × 2	4.30	0.25	1.50	2.00	2.50	2.94	0.50	0.88	0.19	0.47
5/16 × 2-1/4	9.90	0.31	1.69	2.25	2.94	3.50	0.63	1.13	0.25	0.56
3/8 × 2-1/2	18.88	0.38	1.88	2.50	3.28	3.97	0.75	1.38	0.31	0.66
1/2 × 3-1/4	37.50	0.50	2.44	3.25	4.25	5.12	1.00	1.75	0.38	0.91
5/8 × 4	85.50	0.63	3.00	4.00	5.31	6.44	1.25	2.25	0.50	1.12

## PAD EYES

- ◆ FORGED STEEL—QUENCHED AND TEMPERED.
- ◆ FORGED FROM 1035 CARBON STEEL.
- ◆ EXCELLENT WELDING QUALITIES.
- ◆ MEETS THE REQUIREMENTS OF MILITARY SPECIFICATION MS-51930A.



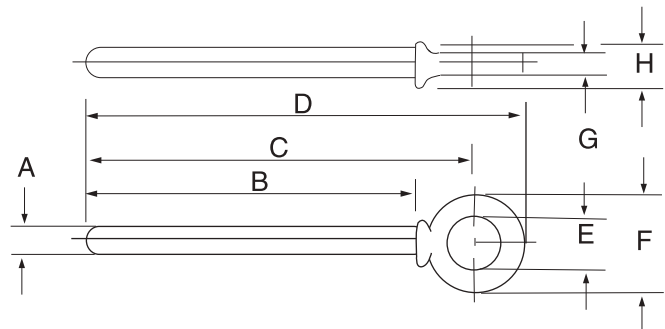
### S-264

SIZE NO.	WEIGHT PER 100RCS (LBS.)	DIMENSIONS (IN.)						
		B	C	D	E	G	H	L
0	2.80	0.25	0.19	0.63	0.31	0.63	0.09	0.75
1	6.50	0.38	0.25	0.88	0.41	0.88	0.13	1.03
1-1/2	10.40	0.63	0.25	1.00	0.44	1.13	0.16	1.31
2	21.10	0.75	0.38	1.06	1.50	1.50	0.19	1.63
4	52.20	1.00	0.56	1.44	0.78	2.13	0.22	2.34
5	82.50	1.25	0.69	1.75	0.81	2.63	0.25	2.75

# BOLTS & NUTS

◆ DROP FORGED STEEL--QUENCHED AND TEMPERED.

## RIVET EYE BOLTS

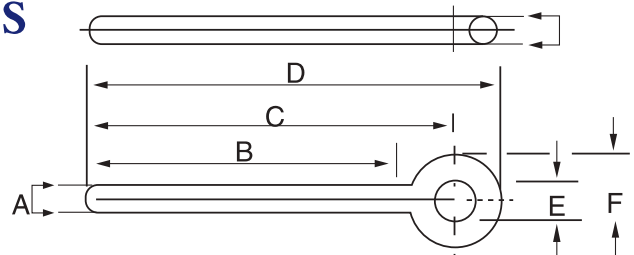


### S-293

SHANK DIA & LENGTH (IN.)	WEIGHT PER 100RCS (LBS.)	DIMENSIONS (IN.)						
		A	B	C	D	E	F	G
1/4" x 2"	6.30	0.25	2.00	2.63	3.13	0.50	1.00	0.25
1/4" x 4"	11.30	0.25	4.00	4.63	5.13	0.50	1.00	0.25
5/16" x 2-1/4"	12.00	0.31	2.25	3.00	3.63	0.63	1.25	0.31
5/16" x 4-1/4"	18.30	0.31	4.25	5.00	5.63	0.63	1.25	0.31
3/8" x 2-1/2"	25.00	0.38	2.50	3.38	4.13	0.75	1.50	0.38
3/8" x 4-1/2"	27.60	0.38	4.50	5.38	6.13	0.75	1.50	0.38
3/8" x 6"	31.50	0.38	6.00	6.88	7.62	0.75	1.50	0.38
1/2" x 3-1/4"	43.80	0.50	3.25	4.38	5.38	1.00	2.00	0.50
1/2" x 6"	62.50	0.50	6.00	7.13	8.13	1.00	2.00	0.50
5/8" x 4"	93.80	0.62	4.00	5.50	6.75	1.25	2.50	0.62
5/8" x 6"	113.00	0.62	6.00	7.50	8.75	1.25	2.50	0.62
3/4" x 4-1/2"	143.80	0.75	4.50	6.25	7.75	1.50	3.00	0.75
3/4" x 6"	162.50	0.75	6.00	7.75	9.25	1.50	3.00	0.75
7/8" x 5"	238.00	0.88	5.00	7.00	8.75	1.75	3.50	0.88
7/8" x 8"	291.00	0.88	8.00	10.00	11.75	1.75	3.50	0.88
1" x 6"	375.00	1.00	6.00	8.38	10.38	2.00	4.00	1.00
1" x 9"	450.00	1.00	9.00	11.38	13.38	2.00	4.00	1.00
1-1/4" x 8"	720.00	1.25	8.00	10.88	13.38	2.50	5.00	1.25
1-1/4" x 12"	855.00	1.25	12.00	14.88	17.38	2.50	5.00	1.25

## SHOULDER RIVET EYE BOLTS

◆ DROP FORGED STEEL--QUENCHED AND TEMPERED.



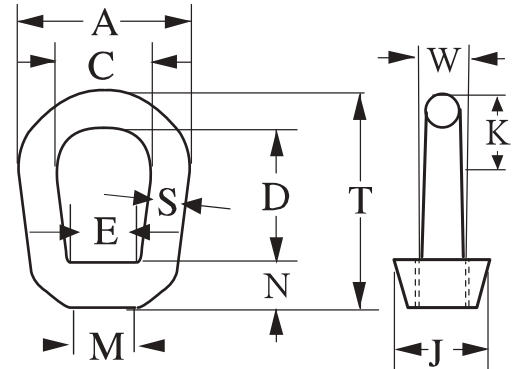
### S-276

SHANK DIA & LENGTH (IN.)	WEIGHT PER 100RCS (LBS.)	DIMENSIONS (IN.)							
		A	B	C	D	E	F	G	H
1/4" x 2"	5.50	0.25	2.00	2.50	2.94	0.50	0.88	0.19	0.47
1/4" x 4"	7.00	0.25	4.00	4.50	4.94	0.50	0.88	0.19	0.47
5/16" x 2-1/4"	6.30	0.31	2.25	2.94	3.50	0.63	1.13	0.25	0.56
5/16" x 4-1/4"	14.80	0.31	4.25	4.94	5.50	0.63	1.13	0.25	0.56
3/8" x 2-1/2"	18.80	0.38	2.50	3.28	3.97	0.75	1.38	0.31	0.66
3/8" x 4-1/2"	25.00	0.38	4.50	5.28	5.97	0.75	1.38	0.31	0.66
1/2" x 3-1/4"	33.00	0.50	3.25	4.25	5.12	1.00	1.75	0.38	0.91
1/2" x 6"	50.00	0.50	6.00	7.00	7.88	1.00	1.75	0.38	0.91
5/8" x 4"	68.80	0.63	4.00	5.31	6.44	1.25	2.25	0.50	1.12
5/8" x 6"	75.00	0.63	6.00	7.31	8.44	1.25	2.25	0.50	1.12
3/4" x 4-1/2"	125.00	0.75	4.50	6.06	7.44	1.50	2.75	0.62	1.38
3/4" x 6"	150.00	0.75	6.00	7.56	8.94	1.50	2.75	0.62	1.38
7/8" x 5"	200.00	0.88	5.00	6.84	8.46	1.75	3.25	0.75	1.56
1" x 6"	298.00	1.00	6.00	8.09	9.97	2.00	3.75	0.88	1.81
1" x 9"	425.00	1.00	9.00	11.09	12.97	2.00	3.75	0.88	1.81
1-1/4" x 8"	654.00	1.25	8.00	10.47	12.72	2.50	4.50	1.00	2.28
1-1/4" x 12"	712.00	1.25	12.00	14.47	16.72	2.50	4.50	1.00	2.28
1-1/2" x 15"	1425.00	1.50	15.00	18.00	20.75	3.00	5.50	1.25	2.75

# BOLTS & NUTS

## EYE NUTS

- ◆ FORGED STEEL—QUENCHED AND TEMPERED.
- ◆ HOT DIP GALVANIZED.
- ◆ TAPPED WITH STANDARD UNC CLASS 2 THREAD AFTER GALVANIZED.



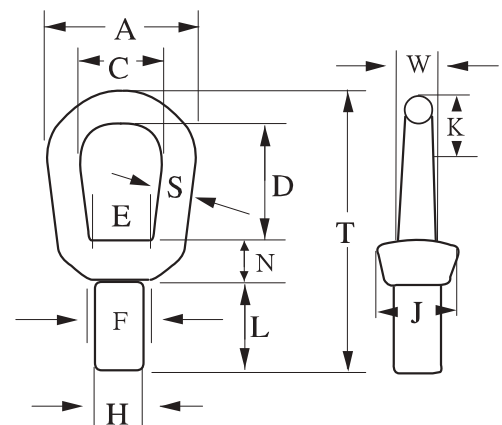
### G-400

SIZE NO.	"S" STOCK SIZE (MM)	STD. TAP SIZE (IN)	WORKING LOAD LIMIT (T)*	WEIGHT EACH (KG)	DIMENSIONS (MM)									
					A	C	D	E	F	J	K	N	T	W
1	6.35	1/4	0.24	0.04	31.8	19.1	25.4	19.1	12.7	17.5	16.0	11.7	43.7	7.85
2	7.85	3/8	0.57	0.08	41.1	25.4	30.5	21.1	14.2	20.6	22.6	14.7	53	10.4
3A	9.65	1/2	1.02	0.13	51.0	31.8	36.6	27.4	20.6	25.4	27.7	18.5	63.5	12.7
4	12.7	5/8	1.63	0.27	63.5	38.1	48.8	34.3	25.4	33.3	33.3	21.1	82.5	17.5
5	16	3/4	2.36	0.45	76.0	44.5	58.0	40.4	28.4	38.1	39.9	26.7	100	21.3
6	19.1	7/8	3.27	0.75	89.0	51.0	63.5	49.8	35.1	47.8	45.0	29.0	111	25.4
7	22.4	1	4.54	1.22	102	57.0	74.0	56.0	39.6	54.0	51.5	33.0	129	30.2
8	25.4	1-1/4	7.03	1.76	114	63.5	85.0	62.5	47.8	60.5	57.5	38.6	149	35.1
9	28.7	1-3/8	8.39	2.27	127	70.0	102	68.5	51.0	65.0	64.5	42.4	165	38.1
10	31.8	1-1/2	10.21	3.08	143	79.0	109	78.5	57.0	76.0	71.5	46.5	179	42.2
11	38.1	2	18.14	6.62	181	104	152	104	79.5	95.5	93.5	63.0	257	49.3

★ MINIMUM BREAKING LOAD IS 5 TIMES THE WLL. RATING BASED ON STANDARD TAP SIZE.

## LIFTING EYES

- ◆ FORGED STEEL—QUENCHED AND TEMPERED.



### S-405

SIZE NO.	WORKING LOAD LIMIT THREADED (T)*	WEIGHT EACH (KG)	DIMENSIONS (MM)											
			A	C	D	E	F	H	J	K	L	N	T	W
1	0.39	0.05	31.8	19.1	25.9	16.8	12.7	8.65	17.5	17.0	17.5	10.7	62.5	7.85
2	0.57	0.09	41.1	25.4	30.5	19.1	14.2	10.4	20.6	23.4	23.9	14.0	76	10.4
3	1.02	0.23	51.0	31.8	36.6	25.4	20.6	13.5	28.7	28.7	31.8	17.3	93.5	12.7
4	1.63	0.36	63.5	38.1	48.8	30.2	25.4	16.8	33.3	35.1	38.1	20.3	116	17.5
5	2.36	0.57	76.0	44.5	58.0	35.1	28.4	19.8	38.1	42.2	44.5	24.9	140	21.3
6	3.27	1.02	89.0	51.0	63.5	41.4	35.1	23.1	47.8	48.5	47.8	26.9	156	25.4
7	4.54	1.47	102	57.0	74.0	47.8	39.6	26.2	54.0	55.0	52.5	30.5	179	30.2
8	5.67	2.13	114	63.5	85.0	49.3	47.8	29.5	60.5	62.5	63.5	35.6	207	35.1
10	8.16	4.23	143	79.0	97.0	70.0	57.0	42.2	76.0	75.5	81.5	42.9	252	42.2

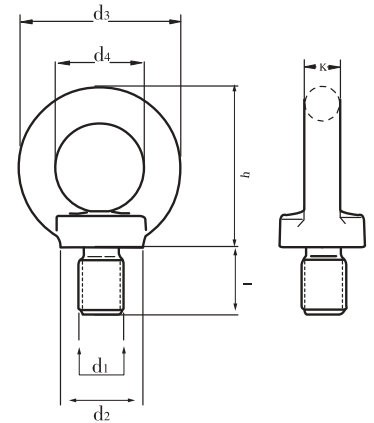
◆ MINIMUM BREAKING LOAD IS 5 TIMES THE WLL. RATING BASED ON STANDARD TAP SIZE.

# BOLTS & NUTS

## RIVET EYE BOLTS

◆ FINISH: BRIGHT OR GALVANIZED

MEASUREMENTS ACCORDING TO FIGURE (MM)							WLL2*	WLL1*	WEIGHT PER 100PCS (KG)
D1	D2	D3	D4	H	K	I	T	T	
M6	17	28	16	31.0	6	13.0	0.095	0.140	5.00
M8	20	36	20	36.0	8	13.0	0.095	0.140	6.00
M10	25	45	25	45.0	10	17.0	0.170	0.230	11.00
M12	30	54	30	53.0	12	20.5	0.240	0.360	18.00
M14	35	63	35	62.0	14	27.0	---	---	28.00
M16	35	63	35	62.0	14	27.0	0.500	0.700	28.00
M18	40	72	40	71.0	16	30.0	---	---	45.00
M20	40	72	40	71.0	16	30.0	0.830	1.200	45.00
M22	45	81	45	80.5	18	35.0	---	---	67.00
M24	50	90	50	90.0	20	36.0	1.270	1.800	87.00
M27	50	90	50	90.0	20	38.0	---	---	88.00
M30	65	108	60	109.0	24	45.0	2.600	3.600	166.00
M33	65	108	60	109.0	24	45.0	---	---	166.00
M36	75	126	70	128.0	28	54.0	3.700	5.100	265.00
M39	85	144	80	147.0	32	63.0	---	---	403.00
M42	85	144	80	147.0	32	63.0	5.000	7.000	403.00
M45	100	166	90	168.0	38	68.0	---	---	638.00
M48	100	166	90	168.0	38	68.0	6.100	8.600	638.00
M52	110	184	100	187.0	42	78.0	---	---	880.00
M56	110	184	100	187.0	42	78.0	8.300	11.500	880.00
M64	120	206	110	208.0	48	90.0	11.000	16.000	1240.00
M72	150	260	140	260.0	60	100.0	15.000	21.000	2330.00
M80	170	296	160	298.0	68	112.0	20.000	28.000	3420.00
100	190	330	180	330.0	75	130.0	27.000	38.000	4910.00

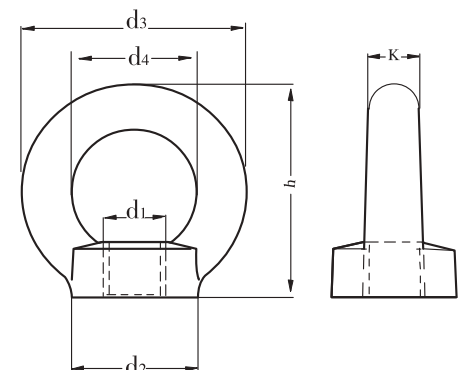


◆ WLL1\*/WLL2\*: APPROX. WLL FOR A PIECE TO HANG ON IN THE DIRECTION OF 1 AND 2 SCREWS (T).

## RING NUT DIN 582

◆ FINISH: BRIGHT OR GALVANIZED

MEASUREMENTS ACCORDING TO FIGURE (MM)						WLL2*	WLL1*	WEIGHT PER 100PCS (KG)
D1	D2	D3	D4	H	K	T	T	
M6	17	28	16	31.0	6	0.095	0.140	4.80
M8	20	36	20	36.0	8	0.095	0.140	5.00
M10	25	45	25	45.0	10	0.170	0.230	9.00
M12	30	54	30	53.0	12	0.240	0.360	16.00
M14	35	63	35	62.0	14	---	---	24.00
M16	35	63	35	62.0	14	0.500	0.700	24.00
M18	40	72	40	71.0	16	---	---	36.00
M20	40	72	40	71.0	16	0.830	1.200	36.00
M22	45	81	45	80.5	18	---	---	58.00
M24	50	90	50	90.0	20	1.270	1.800	72.00
M27	50	90	50	90.0	20	---	---	70.00
M30	65	108	60	109.0	24	2.600	3.600	132.00
M33	65	108	60	109.0	24	---	---	130.00
M36	75	126	70	128.0	28	3.700	5.100	208.00
M39	85	144	80	147.0	32	---	---	202.00
M42	85	144	80	147.0	32	5.000	7.000	311.00
M45	100	166	90	168.0	38	---	---	304.00
M48	100	166	90	168.0	38	6.100	8.600	502.00
M52	110	184	100	187.0	42	---	---	495.00
M56	110	184	100	187.0	42	8.300	11.500	669.00
M64	120	206	110	208.0	48	11.000	16.000	930.00
M72 x 6	150	260	140	260.0	60	15.000	21.000	1850.00
M80 x 6	170	296	160	298.0	68	20.000	28.000	2730.00
100 x 6	190	330	180	330.0	75	27.000	38.000	3640.00

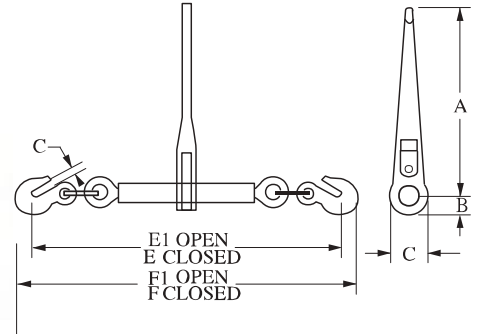


◆ WLL1\*/WLL2\*: APPROX. WLL FOR A PIECE TO HANG ON IN THE DIRECTION OF 1 AND 2 SCREWS (T).

# LOAD BINDERS

## STANDARD RATCHET TYPE LOAD BINDERS

- ◆ "ONE PIECE" FORGED HANDLE
- ◆ ALL LOAD BEARING OR HOLDING PARTS FORGED

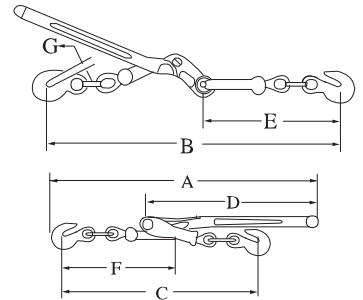


### L-140

MODEL	MIN-MAX CHAIN SIZE (IN.)	WORKING LOAD LIMIT (T)*	PROOT LOAD (KN)	WEIGHT EACH (KG)	HANDLE LENGTH (MM)	BARRREL LENGTH (MM)	TAKE UP (MM)	DIMENSIONS(MM)							
								A	B	C	E	E1	F	F1	G
R-7	8-10	3.00	59	5.09	356	254	203	356	35.1	70.0	583	786	638	842	12.7
R-A	10-13	4.17	82	5.82	356	254	203	356	35.1	70.0	641	845	702	905	16.0
R-C	13-16	5.90	116	6.60	356	254	203	356	35.1	70.0	670	873	748	951	18.3

## STANDARD LEVER TYPE LOAD BINDERS

- ◆ FORGED STEEL—QUENCHED AND TEMPERED.
- ◆ BINDER TOGGLES AWAY FROM THE LOAD.

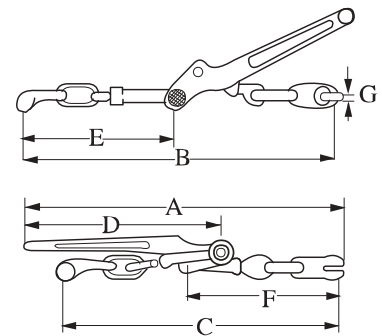
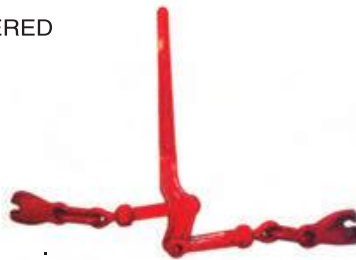


### L-150

MODEL	STD. PKG.	MIN-MAX CHAIN SIZE (MM)	WORKING LOAD LIMIT (T)	PROOF LOAD (KN)*	ULTIMATE LOAD (T)	WEIGHT EACH (KG)	HANDLE LENGTH (MM)	TAKE UP (MM)	DIMENSIONS(MM)							
									A	B	C	D	E	F	G	
7-1	4	8-10	2.45	48	8.63	3.18	406	114	613	562	454	406	264	264	12.7	
A-1	4	10-13	4.17	82	15.0	5.66	475	114	730	654	540	475	313	314	16.0	
C-1	4	13-16	5.90	116	20.9	8.93	533	121	794	756	635	533	372	349	18.3	

## LEVER TYPE LOAD BINDER(CLAW)

- ◆ FORGED STEEL—QUENCHED AND TEMPERED

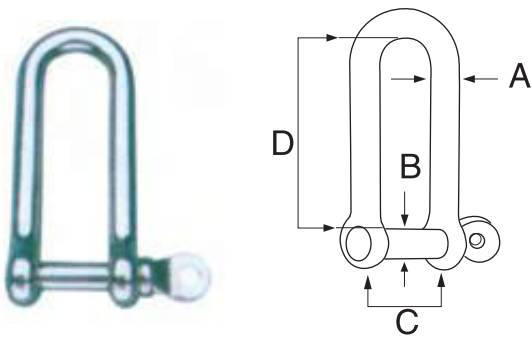


MIN-MAX CHAIN SIZE (IN.)	WORKING LOAD LIMIT (LBS.)	PROOF LOAD (LBS.)	MINIMUM BREAKING STRENGTH (LBS.)	WEIGHT EACH (LBS.)	HANDLE LENGTH (IN.)	DIMENSIONS(IN.)							
						A	B	C	D	E	F	G	
1/4-5/16	2200	4400	7800	3.60	11.42	18.43	19.10	15.74	11.42	9.13	8.82	0.31	
5/16-3/8	5400	10800	19000	8.56	15.43	25.67	25.66	24.36	15.43	12.28	12.82	0.47	
3/8-1/2	9200	18400	33000	12.38	17.24	30.47	31.53	27.71	17.24	15.44	15.44	0.59	

# STAINLESS STEEL RIGGING HARDWARE

## LONG DEE SHACKLE

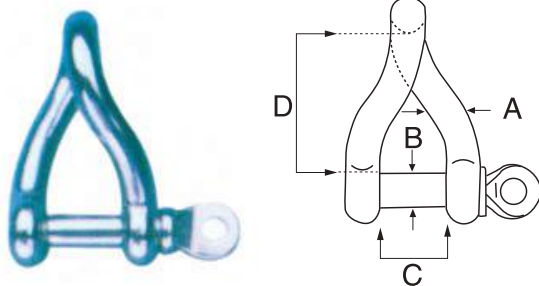
AISI316 & AISI304 STAINLESS STEEL WITH SCREW PIN



A SIZE	B PIN DIA.	C INSIDE WIDTH	D INSIDE LENGTH	WLL (TONS)	WT (KGS)
5/32"	5/32"	0.31"	1.20"	0.09	0.010
3/16"	3/16"	0.43"	1.51"	0.10	0.020
1/4"	1/4"	0.50"	1.75"	0.15	0.036
5/16"	5/16"	0.63"	2.37"	0.25	0.083
3/8"	3/8"	0.75"	3.00"	0.50	0.164
1/2"	1/2"	0.91"	3.57"	0.60	0.280

## TWISTED SHACKLE

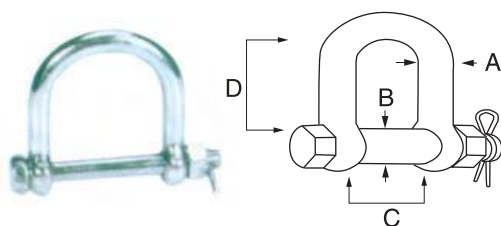
AISI316 & AISI304 STAINLESS STEEL WITH SCREW PIN



A SIZE	B PIN DIA.	C INSIDE WIDTH	D INSIDE LENGTH	WLL (TONS)	WT (KGS)
5/32"	5/32"	0.29"	1.03"	0.09	0.017
3/16"	3/16"	0.44"	1.25"	0.10	0.020
1/4"	1/4"	0.48"	1.56"	0.15	0.034
5/16"	5/16"	0.66"	1.88"	0.25	0.080
3/8"	3/8"	0.77"	2.43"	0.50	0.150
1/2"	1/2"	0.96"	2.88"	0.60	0.240

## WIDE D SHACKLE

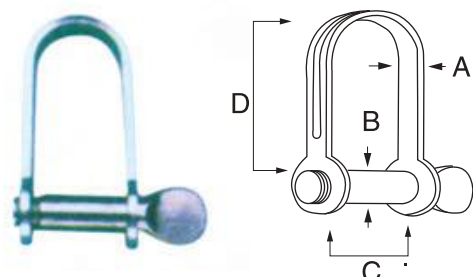
AISI316 & AISI304 STAINLESS STEEL WITH BOLT & NUT PIN



A SIZE	B PIN DIA.	C INSIDE WIDTH	D INSIDE LENGTH	WLL (TONS)	WT (KGS)
8	8	30	38	0.25	0.110
9	9	36	45	0.45	0.300
12	12	55	54	0.60	0.600

## STAMPED D SHACKLE

AISI316 & AISI304 STAINLESS STEEL WITHOUT COLLAR PIN

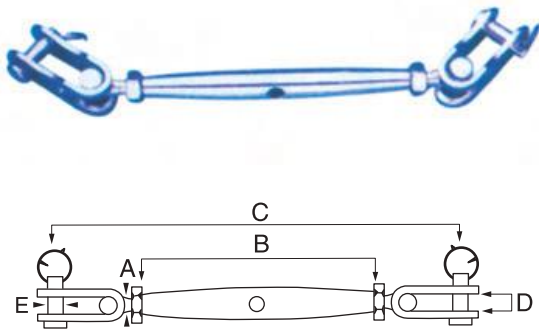


B SIZE	A BODY THICKNESS	C INSIDE WIDTH	D INSIDE LENGTH	WLL (TONS)	WT (KGS)
5/32"	0.20"	0.45"	0.59"	0.03	0.005
3/16"	0.23"	0.45"	0.77"	0.06	0.011
1/4"	0.26"	0.50"	0.96"	0.10	0.020
5/16"	0.26"	0.77"	1.54"	0.25	0.050

# STAINLESS STEEL RIGGING HARDWARE

## RIGGING SCREWS

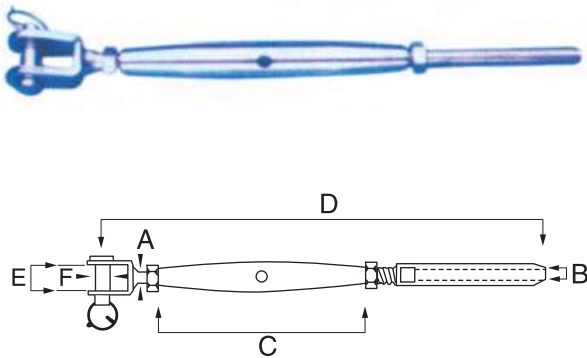
AISI316 & AISI304 STAINLESS STEEL  
TOGGLE & TOGGLE U.S. TYPE FORMED & MACHINED



A SIZE	B BODY LENGTH	C CLOSED LENGTH	D JAW WIDTH	E PIN DIA.	WLL (TONS)
3/16"	3.16"	5.20"	0.25"	0.20"	0.11
1/4"	3.72"	6.50"	0.32"	0.24"	0.15
5/16"	4.20"	8.00"	0.47"	0.31"	0.28
3/8"	4.87"	9.50"	0.51"	0.35"	0.42
1/2"	5.75"	10.50"	0.53"	0.47"	0.55

## RIGGING SCREWS

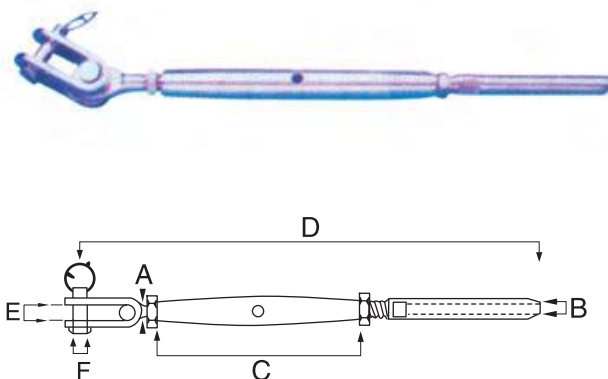
AISI316 & AISI304 STAINLESS STEEL  
JAW & SWAGE STUD U.S. TYPE FORMED & MACHINED



A SIZE	B WIRE	C BODY LENGTH	D CLOSED LENGTH	E JAW WIDTH	F PIN DIA.
1/4"	1/8"	3.62"	7.00"	0.40"	0.23"
1/4"	5/32"	3.62"	7.00"	0.40"	0.23"
5/16"	5/32"	4.62"	8.50"	0.45"	0.31"
5/16"	3/16"	4.62"	8.50"	0.45"	0.31"
3/8"	3/16"	4.90"	9.25"	0.51"	0.36"
3/8"	7/32"	4.90"	9.50"	0.51"	0.36"
3/8"	1/4"	4.90"	9.75"	0.51"	0.36"
1/2"	1/4"	5.80"	11.50"	0.60"	0.47"
1/2"	9/32"	5.80"	11.75"	0.60"	0.47"
1/2"	5/16"	5.80"	12.00"	0.60"	0.47"
5/8"	3/8"	7.50"	15.00"	0.76"	0.55"

## RIGGING SCREWS

AISI316 & AISI304 STAINLESS STEEL  
TOGGLE & SWAGE STUD U.S. TYPE FORMED & MACHINED

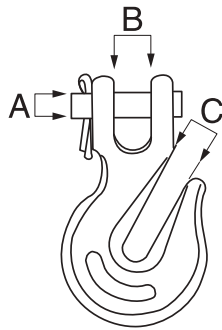


A SIZE	B WIRE	C BODY LENGTH	D CLOSED LENGTH	E JAW WIDTH	F PIN DIA.
1/4"	1/8"	3.62"	7.75"	0.40"	0.23"
1/4"	5/32"	3.62"	7.75"	0.40"	0.23"
5/16"	5/32"	4.62"	9.25"	0.45"	0.31"
5/16"	3/16"	4.62"	9.25"	0.45"	0.31"
3/8"	3/16"	4.90"	10.00"	0.51"	0.36"
3/8"	7/32"	4.90"	10.20"	0.51"	0.36"
3/8"	1/4"	4.90"	11.00"	0.51"	0.36"
1/2"	1/4"	5.80"	12.25"	0.60"	0.47"
1/2"	9/32"	5.80"	12.50"	0.60"	0.47"
1/2"	5/16"	5.80"	13.00"	0.60"	0.47"
5/8"	3/8"	7.50"	16.75"	0.76"	0.55"



# STAINLESS STEEL RIGGING HARDWARE

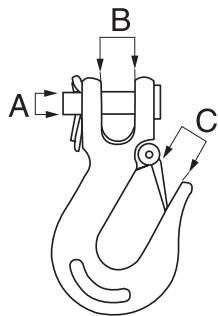
## CLEVIS GRAB HOOK



AISI316 & AISI304 STAINLESS STEEL

SIZE	A PIN DIA.	B CLEVIS WIDTH	C OPEN WIDTH	WLL (LBS.)	WT (KGS)
1/4"	0.31"	0.32"	0.34"	1250	0.168
5/16"	0.38"	0.43"	0.44"	1800	0.290
3/8"	0.44"	0.48"	0.50"	2500	0.410
1/2"	0.56"	0.66"	0.56"	3600	0.880

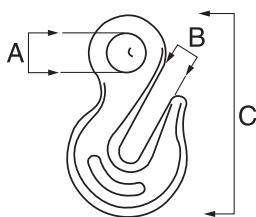
## CLEVIS SLIP HOOK



AISI316 & AISI304 STAINLESS STEEL

SIZE	A PIN DIA.	B CLEVIS WIDTH	C OPEN WIDTH	WLL (LBS.)	WT (KGS)
1/4"	0.28"	0.40"	0.60"	950	0.190
5/16"	0.37"	0.46"	0.63"	1250	0.350
3/8"	0.49"	0.56"	0.87"	2000	0.530
1/2"	0.62"	0.70"	1.00"	3000	1.060

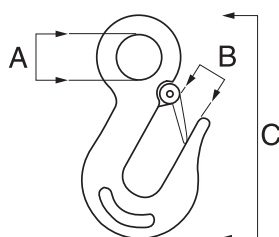
## EYE GRAB HOOK



AISI316 & AISI304 STAINLESS STEEL

SIZE	A EYE DIA.	B OPEN WIDTH	C LENGTH	WLL (LBS.)	WT (KGS)
1/4"	0.53"	0.34"	3.05"	1250	0.127
5/16"	0.62"	0.44"	3.59"	1800	0.230
3/8"	0.75"	0.50"	4.28"	2500	0.345
1/2"	0.88"	0.66"	5.44"	3600	0.730

## EYE SLIP HOOK



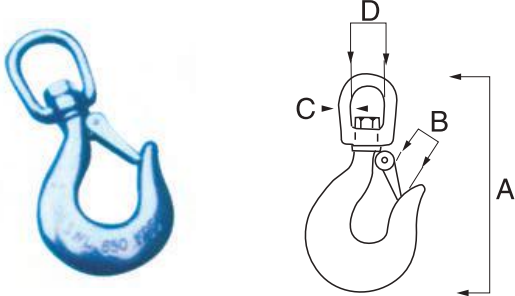
AISI316 & AISI304 STAINLESS STEEL

SIZE	A EYE DIA.	B OPEN WIDTH	C LENGTH	WLL (LBS.)	WT (KGS)
1/4"	0.52"	0.62"	3.05"	950	0.160
5/16"	0.64"	0.70"	4.05"	1250	0.250
3/8"	0.72"	0.79"	4.75"	2000	0.420
1/2"	0.93"	1.06"	6.00"	3000	0.860

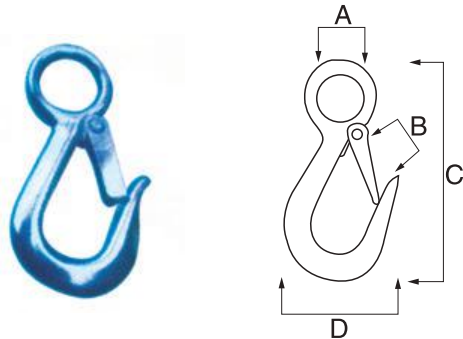
# STAINLESS STEEL RIGGING HARDWARE

## SWIVEL EYE HOOK

AISI316 & AISI304 STAINLESS STEEL



A SIZE	B OPEN WIDTH	C	D	WLL (LBS.)	WT (KGS)
4"	0.67"	0.26"	0.87"	770	0.190
5"	0.78"	0.32"	1.10"	1430	0.330
6"	0.77"	0.38"	1.10"	2200	0.530
8"	1.18"	0.50"	1.42"	3300	1.060



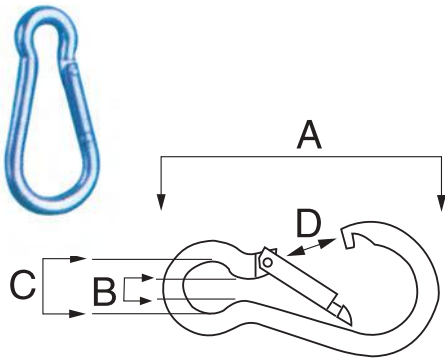
## LARGE EYE HOOK

AISI316 & AISI304 STAINLESS STEEL

A SIZE	B OPEN WIDTH	C LENGTH	D WIDTH	WLL (LBS.)	WT (KGS)
7/16"	0.75"	3.94"	2.25"	650	0.118
9/16"	0.81"	4.75"	2.69"	1100	0.173

## SPRING SNAP

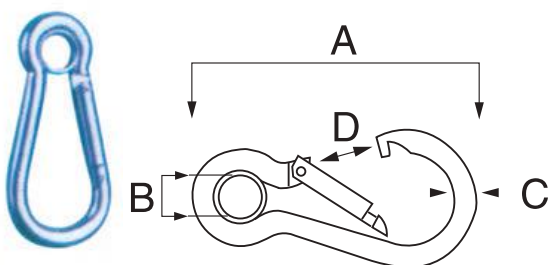
AISI316 & AISI304 STAINLESS STEEL



SIZE (MM)	A LENGTH	B	C	D	WLL (LBS.)	WT (KGS)
5 × 50	2"	0.18"	0.31"	0.25"	100	0.018
6 × 60	2.3/8"	0.28"	0.31"	0.31"	140	0.028
7 × 70	2.3/4"	0.31"	0.37"	0.37"	200	0.046
8 × 80	3.1/4"	0.37"	0.43"	0.37"	250	0.071
9 × 90	3.5/8"	0.40"	0.52"	0.46"	280	0.091
10 × 100	4"	0.43"	0.62"	0.56"	400	0.146
11 × 120	4.3/4"	0.56"	0.75"	0.68"	500	0.195
12 × 140	5.1/2"	0.62"	0.87"	0.75"	600	0.274
13 × 160	6.3/8"	0.75"	0.93"	1.00"	700	0.363

## SPRING SNAP WITH EYELET

AISI316 & AISI304 STAINLESS STEEL

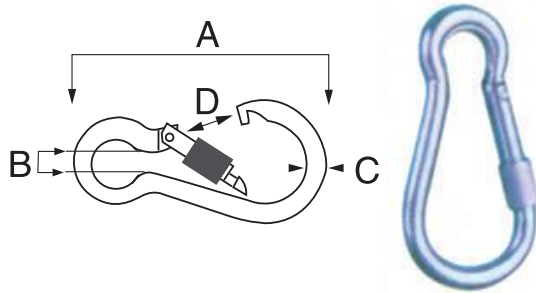


SIZE (MM)	A LENGTH	B	C	D	WLL (LBS.)	WT (KGS)
5 × 50	2"	0.31"	0.18"	0.25"	100	0.019
6 × 60	2.3/8"	0.31"	0.25"	0.31"	140	0.029
7 × 70	2.3/4"	0.37"	0.28"	0.37"	200	0.047
8 × 80	3.1/4"	0.43"	0.31"	0.37"	250	0.073
9 × 90	3.5/8"	0.52"	0.34"	0.46"	280	0.094
10 × 100	4"	0.62"	0.37"	0.56"	400	0.149
11 × 120	4.3/4"	0.75"	0.43"	0.68"	500	0.199
12 × 140	5.1/2"	0.87"	0.46"	0.75"	600	0.279
13 × 160	6.3/8"	0.93"	0.50"	1.00"	700	0.370

# STAINLESS STEEL RIGGING HARDWARE

## SPRING SNAP WITH HOOP

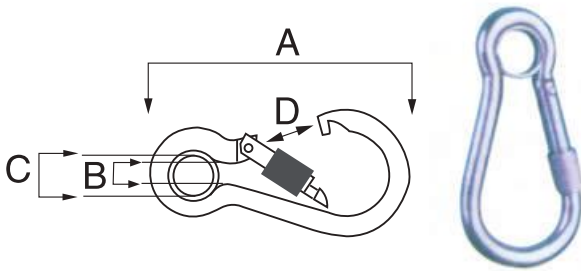
AISI316 & AISI304 STAINLESS STEEL



SIZE (MM)	A LENGTH	B	C	D	WLL (LBS.)	WT (KGS)
5 × 50	2"	0.18"	0.18"	0.25"	100	0.019
6 × 60	2.3/8"	0.28"	0.25"	0.31"	140	0.031
7 × 70	2.3/4"	0.31"	0.28"	0.37"	200	0.049
8 × 80	3.1/4"	0.37"	0.31"	0.37"	250	0.076
9 × 90	3.5/8"	0.40"	0.34"	0.46"	280	0.097
10 × 100	4"	0.43"	0.37"	0.56"	400	0.153
11 × 120	4.3/4"	0.56"	0.43"	0.68"	500	0.203
12 × 140	5.1/2"	0.62"	0.46"	0.75"	600	0.284
13 × 160	6.3/8"	0.75"	0.50"	1.00"	700	0.380

## SPRING SNAP WITH HOOP & EYELET

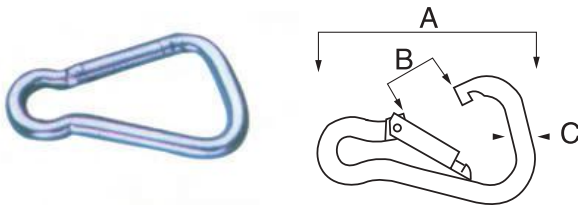
AISI316 & AISI304 STAINLESS STEEL



SIZE (MM)	A LENGTH	B	C	D	WLL (LBS.)	WT (KGS)
5 × 50	2"	0.18"	0.31"	0.25"	100	0.020
6 × 60	2.3/8"	0.28"	0.31"	0.31"	140	0.032
7 × 70	2.3/4"	0.31"	0.37"	0.37"	200	0.050
8 × 80	3.1/4"	0.37"	0.43"	0.37"	250	0.078
9 × 90	3.5/8"	0.40"	0.52"	0.46"	280	0.099
10 × 100	4"	0.43"	0.62"	0.56"	400	0.155
11 × 120	4.3/4"	0.56"	0.75"	0.68"	500	0.207
12 × 140	5.1/2"	0.62"	0.87"	0.75"	600	0.289
13 × 160	6.3/8"	0.75"	0.93"	1.00"	700	0.385

## WIDE SPRING SNAP

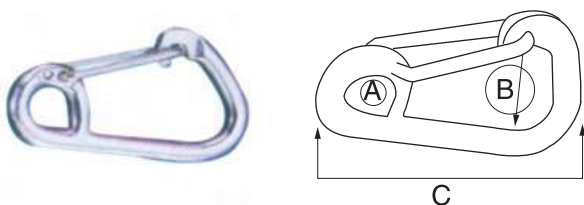
AISI316 & AISI304 STAINLESS STEEL



SIZE (MM)	A LENGTH	B	C	WLL (LBS.)	WT (KGS)
100	4"	0.75"	0.31"	400	0.136
120	5"	1.00"	0.43"	500	0.200

## SPRING SNAP

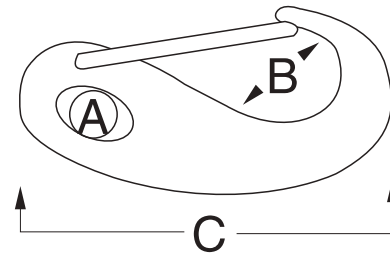
S-2430 AISI316 & AISI304 STAINLESS STEEL



SIZE (MM)	A	B	C LENGTH	WLL (LBS.)	WT (KGS)
6	0.28"	0.39"	2.38"	50	0.029
8	0.43"	0.50"	3.19"	140	0.075
10	0.50"	0.59"	4.00"	200	0.140
12	0.63"	0.83"	4.80"	300	0.234

# STAINLESS STEEL RIGGING HARDWARE

## SPRING SNAP

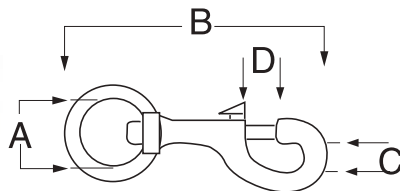


SIZE (MM)	A	B	C LENGTH	WLL (LBS.)	WT (KGS)
50	0.25"	0.31"	2.00"	400	0.020
70	0.37"	0.50"	2.75"	600	0.050
100	0.50"	0.63"	4.00"	1000	0.150

S-2470 AISI316 & AISI304 STAINLESS STEEL

## SWIVEL EYE BOLT SNAP

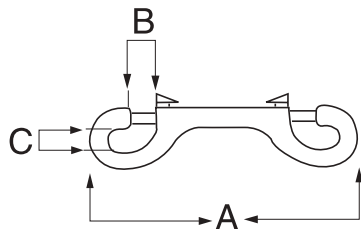
S-225 AISI316 & AISI304 STAINLESS STEEL



SIZE	A	B	C	D	WLL (LBS)	WT (KGS)
3/8"	0.48"	2.73"	0.32"	0.28"	50	0.020
1/2"	0.55"	3.16"	0.38"	0.36"	100	0.030
5/8"	0.70"	3.68"	0.45"	0.41"	200	0.060
3/4"	0.79"	3.60"	0.37"	0.34"	250	0.062
1.1/4"	0.85"	3.80"	0.37"	0.34"	300	0.115

## DOUBLE END BOLT SNAP

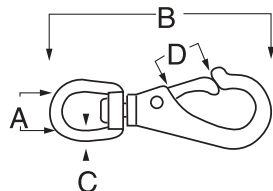
S-162 AISI316 & AISI304 STAINLESS STEEL



SIZE	A LENGTH	B	C	WLL (LBS.)	WT (KGS)
4"	4.00"	0.37"	0.31"	200	0.060

## SWIVEL EYE SNAP

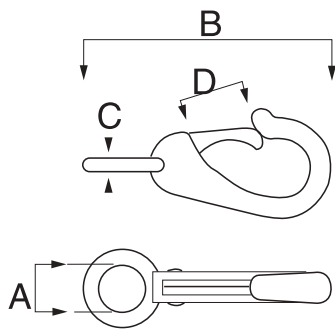
S-251 AISI316 & AISI304 STAINLESS STEEL



SIZE	A	B	C	D	WLL (LBS.)	WT (KGS)
5/8"	0.63"	3.37"	0.18"	0.43"	100	0.058
3/4"	0.75"	4.00"	0.25"	0.43"	200	0.096
7/8"	0.88"	4.62"	0.28"	0.50"	300	0.148

# STAINLESS STEEL RIGGING HARDWARE

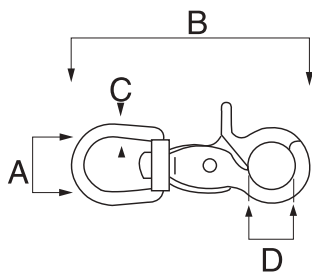
## FIXED EYE SNAP



S-249 AISI316 & AISI304 STAINLESS STEEL

SIZE	A	B	C	D	WLL (LBS.)	WT (KGS)
3/8"	0.38"	2.12"	0.15"	0.21"	100	0.024
5/8"	0.63"	2.87"	0.18"	0.43"	150	0.042
3/4"	0.75"	3.25"	0.21"	0.50"	250	0.064
7/8"	0.88"	3.87"	0.28"	0.56"	300	0.120

## TRIGGER SNAP

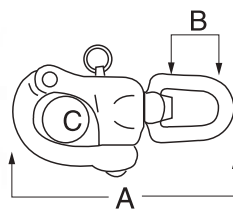


AISI316 & AISI304 STAINLESS STEEL

SIZE	A	B	C	D	WLL (LBS.)	WT (KGS)
1/2"	0.50"	2.62"	0.12"	0.43"	200	0.050
5/8"	0.63"	2.62"	0.15"	0.43"	200	0.060

## EYE SWIVEL SNAP SHACKLE

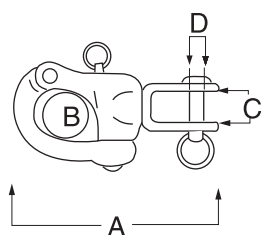
AISI316 & AISI304 STAINLESS STEEL



SIZE (MM)	A	B	C	WLL (LBS.)	WT (KGS)
2.3/4"	2.75"	0.50"	0.50"	1000	0.064
3.1/2"	3.50"	0.62"	0.75"	1500	0.122
4.3/4"	4.75"	1.00"	1.00"	2100	0.340

## JAW SWIVEL SNAP SHACKLE WITH STAMPED BAIL

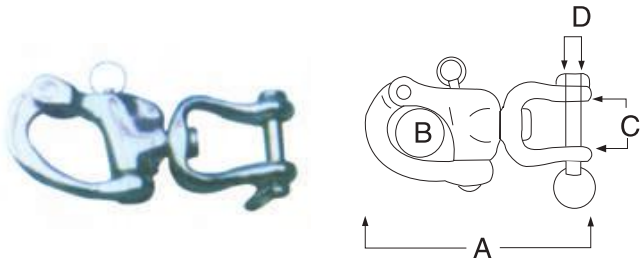
AISI316 & AISI304 STAINLESS STEEL



SIZE	A	B	C	D	WLL (LBS.)	WT (KGS)
2.3/4"	2.75"	0.50"	0.43"	0.25"	800	0.064
3.1/2"	3.50"	0.62"	0.50"	0.25"	1200	0.122
5"	5.00"	1.00"	0.87"	0.50"	1800	0.400

# STAINLESS STEEL RIGGING HARDWARE

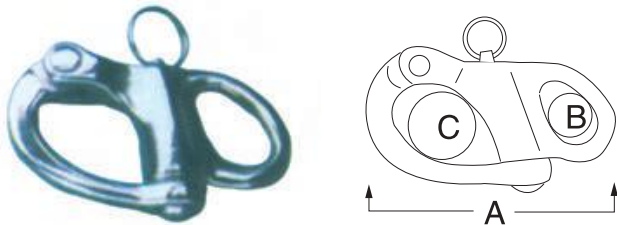
## JAW SWIVEL SNAP SHACKLE



AISI316 & AISI304 STAINLESS STEEL

SIZE	A	B	C	D	WLL (LBS.)	WT (KGS)
2.3/4"	2.75"	0.50"	0.43"	0.25"	1000	0.064
3.1/2"	3.50"	0.62"	0.50"	0.25"	1500	0.122
5"	5.00"	1.00"	0.87"	0.50"	2100	0.400

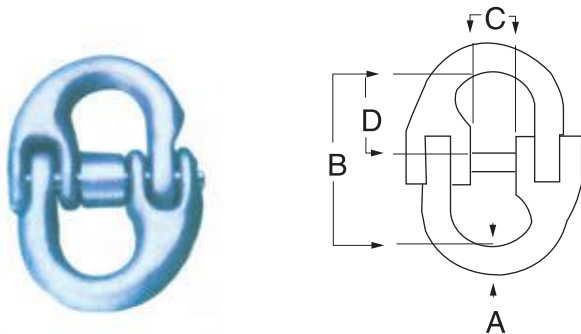
## FIXED SNAP SHACKLE



AISI316 & AISI304 STAINLESS STEEL

SIZE	A	B	C	WLL (LBS.)	WT (KGS)
2"	2"	0.37"	0.50"	1000	0.045
2.5/8"	2.62"	0.50"	0.75"	1500	0.090
3.3/4"	3.75"	0.62"	1.00"	2100	0.230

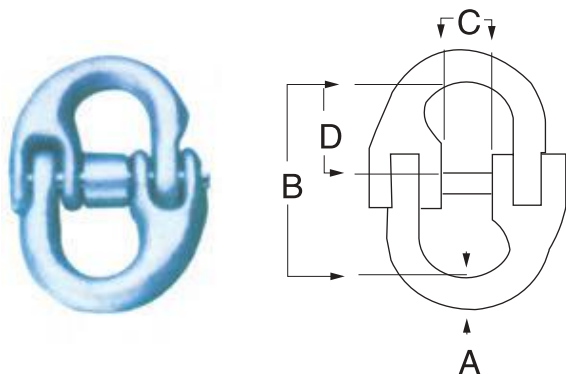
## CONNECTING LINK



AISI316 & AISI304 STAINLESS STEEL  
EUROPEAN TYPE FORGED

CHAIN SIZE (MM)	A (MM)	B (MM)	C (MM)	D (MM)	WLL (LBS.)	WT (KGS)
6	7	44	15	17	2200	0.140
7-8	9	56	18	22	2800	0.200
10	12	68	25	26	4400	0.380
13	16	91	30	35	7400	0.760
16	20	106	36	41	11000	1.100

## HAMMERLOCK CONNECTING LINK

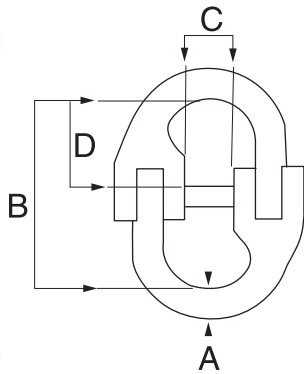


AISI316 & AISI304 STAINLESS STEEL  
U.S. TYPE FORGED

CHAIN SIZE	A	B	C	D	WLL (LBS.)	WT (KGS)
1/4"	0.31"	2.06"	0.78"	0.78"	2200	0.110
5/16"	0.33"	2.42"	0.93"	0.92"	2800	0.180
3/8"	0.45"	2.72"	1.09"	1.06"	4400	0.270
1/2"	0.58"	3.34"	1.41"	1.28"	7400	0.570
5/8"	0.78"	3.91"	1.69"	1.56"	11000	1.040

# STAINLESS STEEL RIGGING HARDWARE

## HAMMERLOCK CONNECTING LINK

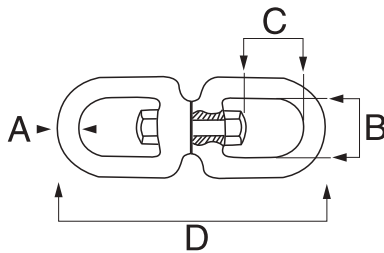


AISI316 & AISI304 STAINLESS STEEL  
U.S. TYPE FORGED

CHAIN SIZE	A	B	C	D	WLL (LBS.)	WT (KGS)
1/4"	0.36"	1.88"	0.66"	0.78"	2200	0.130
5/16"	0.39"	2.13"	0.69"	0.88"	2800	0.180
3/8"	0.52"	2.50"	0.88"	1.03"	4400	0.250
1/2"	0.64"	3.44"	1.13"	1.44"	7400	0.480
5/8"	0.75"	4.13"	1.41"	1.73"	11000	1.100

## SWIVEL

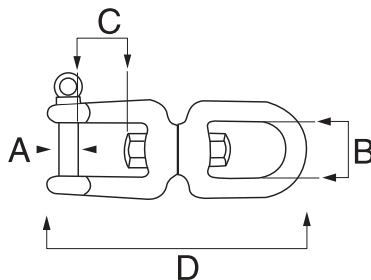
AISI316 & AISI304 STAINLESS STEEL  
EYE & EYE PRECISION CAST



A SIZE	B	C	D	WLL (LBS.)	WT (KGS)
5/32"	0.43"	0.50"	2.00"	150	0.020
3/16"	0.50"	0.50"	2.31"	300	0.034
1/4"	0.56"	0.56"	2.56"	600	0.051
5/16"	0.75"	0.75"	3.62"	1100	0.120
3/8"	0.87"	1.00"	4.62"	1540	0.250
1/2"	1.25"	1.31"	6.00"	2640	0.620
5/8"	1.50"	1.62"	7.37"	4750	0.950
3/4"	1.62"	2.00"	8.50"	7000	1.930
7/8"	1.87"	2.00"	9.25"	8000	2.250
1"	2.50"	2.56"	11.00"	10000	4.450

## SWIVEL

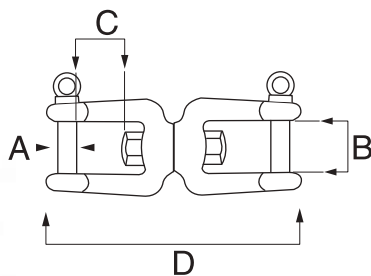
AISI316 & AISI304 STAINLESS STEEL  
JAW & EYE PRECISION CAST



A SIZE	B	C	D	WLL (LBS.)	WT (KGS)
1/4"	0.50"	0.43"	2.62"	600	0.060
1/16"	0.62"	0.62"	3.62"	1100	0.150
3/8"	0.75"	0.87"	4.62"	1540	0.290
1/2"	1.00"	1.12"	6.00"	2640	0.630
5/8"	1.25"	1.37"	7.37"	4750	1.120
3/4"	1.50"	1.62"	8.62"	7000	2.000

## SWIVEL

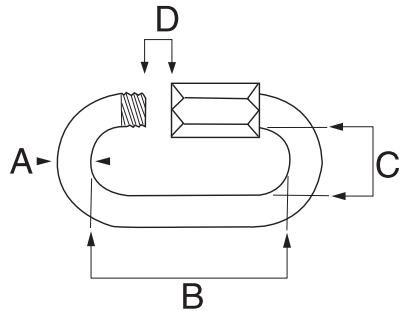
AISI316 & AISI304 STAINLESS STEEL JAW & JAW PRECISION CAST



A SIZE	B	C	D	WLL (LBS.)	WT (KGS)
1/4"	0.50"	0.43"	2.62"	600	0.070
5/16"	0.62"	0.62"	3.62"	1100	0.160
3/8"	0.75"	0.87"	4.62"	1540	0.330
1/2"	1.00"	1.12"	6.00"	2640	0.740
5/8"	1.25"	1.37"	7.37"	4750	1.280
3/4"	1.50"	1.62"	8.58"	7000	2.150

# STAINLESS STEEL RIGGING HARDWARE

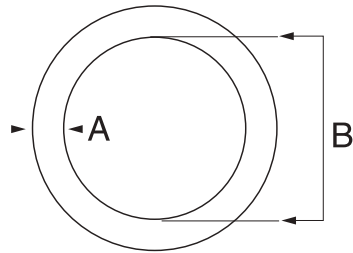
## QUICK LINK



AISI316 & AISI304 STAINLESS STEEL FORMED

A SIZE	B	C	D	WLL (LBS.)	WT (KGS)
1/8"	1.12"	0.37"	0.18"	375	0.008
5/32"	1.18"	0.46"	0.21"	500	0.012
3/16"	1.50"	0.50"	0.25"	650	0.020
1/4"	1.75"	0.56"	0.31"	900	0.036
9/32"	2.06"	0.62"	0.34"	1200	0.066
5/16"	2.25"	0.75"	0.37"	1500	0.076
3/8"	2.43"	0.81"	0.43"	2000	0.110
7/16"	2.75"	0.87"	0.50"	2300	0.137
1/2"	3.25"	0.93"	0.56"	2500	0.254

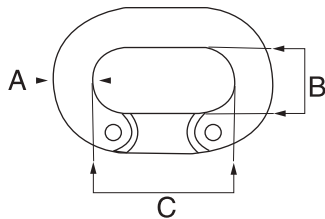
## ROUND RING



AISI316 & AISI304 STAINLESS STEEL

A SIZE	B	WT (KGS)	A SIZE	B	WT (KGS)
1/8"	3/4"	0.004	1/4"	1.1/2"	0.033
1/8"	1"	0.005	1/4"	2"	0.040
5/32"	1"	0.009	5/16"	1.1/2"	0.061
5/32"	1.1/4"	0.010	5/16"	1.3/4"	0.067
5/32"	1.1/2"	0.014	5/16"	2"	0.073
3/16"	1"	0.015	5/16"	2.1/2"	0.092
3/16"	1.1/4"	0.017	3/8"	2.1/2"	0.146
3/16"	1.1/2"	0.022	3/8"	3.1/4"	0.178
3/16"	2"	0.026	1/2"	4"	0.318
1/4"	1"	0.022	1/2"	2.3/8"	0.205
1/4"	1.1/4"	0.027	1/2"	3.1/4"	0.262

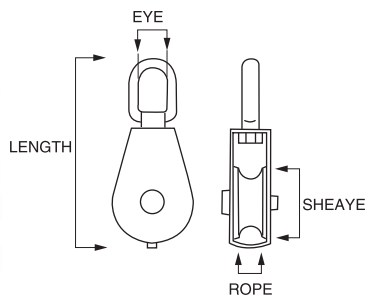
## CONNECTING LINK



AISI316 & AISI304 STAINLESS STEEL PRECISION CAST

SIZE	B	C	D	WLL (LBS.)	WT (KGS)
3/6"	0.20"	0.35"	0.70"	400	0.014
1/4"	0.24"	0.43"	0.84"	1000	0.018
5/16"	0.32"	0.48"	0.95"	1600	0.041
3/8"	0.40"	0.60"	1.15"	2400	0.064
1/2"	0.50"	0.75"	1.45"	3800	0.127
5/8"	0.60"	0.95"	1.90"	5500	0.260

## SWIVEL EYE PULLEY



AISI316 & AISI304 STAINLESS STEEL SINGLE SHEAVE STAMPED & WELDED

SHEAVE	ROPE	EYE	LENGTH	WLL (LBS.)	WT (KGS)
1"	1/4"	0.61"	3.28"	400	0.155
1.1/4"	5/16"	0.63"	3.85"	600	0.190
2"	3/8"	0.82"	5.00"	1000	0.400

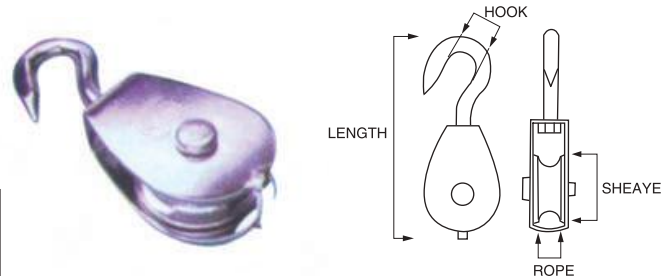


# STAINLESS STEEL RIGGING HARDWARE

## SWIVEL HOOK PULLEY

AISI316 & AISI304 STAINLESS STEEL  
SINGLE SHEAVE STAMPED & WELDED

SHEAVE	ROPE	HOOK	LENGTH	WLL (LBS.)	WT (KGS)
2"	9/16"	0.62"	5.61"	750	0.400



## SWIVEL EYE PULLEY

AISI316 & AISI304 STAINLESS STEEL  
DOUBLE SHEAVES STAMPED & WELDED

SHEAVE	ROPE	EYE	LENGTH	WLL (LBS.)	WT (KGS)
1"	1/4"	0.61"	3.28"	400	0.204
1.1/4"	5/16"	0.63"	3.85"	600	0.295
2"	3/8"	0.82"	5.00"	1000	0.636



## FLAT SWIVEL EYE PULLEY

AISI316 & AISI304 STAINLESS STEEL  
SINGLE SHEAVE STAMPED & WELDED

SHEAVE	ROPE	EYE	LENGTH	WLL (LBS.)	WT (KGS)
2"	3/8"	0.82"	5.00"	1000	0.030
3"	1/2"	0.97"	6.75"	1400	0.820
4"	5/8"	0.97"	8.00"	2000	2.270



## HERRESHOFF CLEAT

AISI316 & AISI304 STAINLESS STEEL  
PRECISION CAST

SIZE	LENGTH	FASTENER	WT (KGS)
6"	6.00"	1/4"	0.210
8"	8.00"	1/4"	0.360
10"	10.00"	5/16"	0.620
12"	12.00"	3/8"	1.040





**DANGER** : OVERHEAD LIFTING PRESENTS A VERY REAL DANGER OF SEVERE INJURY OR LOSS OF LIFE IF LIFTING EQUIPMENT IS NOT USED PROPERLY.PLEASE READ AND UNDERSTAND ALL OF THESE INSTRUCTIONS PRIOR TO USING ANY LIFTING SLING OR SLING ASSEMBLY.SLING SHOULD ONLY BE USED BY QUALIFIED PERSONS WHO ARE RESPONSIBLE FOR THE SLING SELECTION, INSPECTION AND USE.

WORKING LOAD LIMITS IN TONNES acc.to EN1677						
90°		$\alpha$		$\beta$		Choke endless sling
FOR CHAIN SIZE MM	TONNES	$\beta$ 0-45° $\alpha$ 0-90°	45-60° 90-120°	$\beta$ 0-45° $\alpha$ 0-90°	45-60° 90-120°	
6	1.12	1.6	1.12	2.36	1.7	1.8
7	1.5	2.12	1.5	3.15	2.24	2.5
8	2.0	2.8	2.0	4.25	3.0	3.15
10	3.15	4.25	3.15	6.7	4.75	5.0
13	5.3	7.5	5.3	11.2	8.0	8.5
16	8.0	11.2	8.0	17.0	11.5	12.5
19	11.2	16.0	11.2	23.6	17.0	18.0
20	12.5	17.0	12.5	26.5	19.0	20.0
22	15.0	21.2	15.0	31.5	22.4	23.6
26	21.2	30.0	21.2	45.0	31.5	33.5
32	31.5	45.0	31.5	67.0	47.5	50.0

\*\*SAFETY FACTOR 4:1 ABOVE LIMITS ARE VALID FOR STANDARD USE AND EQUALLY LOADED SLINGS. PROPERLY USED AND MAINTAINED YOUR HENGDA CHAIN SLINGS WILL GIVE LONG LIFE AND WILL ENABLE YOU TO CARRY OUT YOUR LIFTING OPERATIONS EFFICIENTLY AND SAFETY.

**WARNING:NEVER EXCEED A SLING ANGLE OF 30°**

## SAFE USE

- NEVER LOAD IN EXCESS OF THE RATED CAPACITY FOR THE APPLICATION.
- KEEP A RECORDS OF ALL SLINGS IN USE.
- USER SHOULD REMOVE ALL TWISTS FROM A CHAIN LEG BEFORE LIFTING AND ,SHOULD NEVER KNOT A CHAIN.
- ALWAYS USE HENGDA SHORTENIG HOOK OR CLUTCH WHEN CHAIN SLINGS SHOULD BE SHORTENED.
- ALWAYS INSPECT TO INSURE THAT CHAIN IS FREE FROM DAMAGE OR WEAR BEFORE USE.
- ALWAYS INSPECT ALL SLING COMPONENTS PRIOR TO EACH USE.
- ENSURE THAT CHAIN IS PROTECTED FROM ANY SHARP CORNERS ON THE LOAD.
- ENSURE THAT THE MASTER LINK ARTICULATES FREELY ON THE HOOK OF THE CRANE OR OTHER LIFTING APPLIANCE.
- NEVER TIP LOAD HOOKS.THE LOAD SHOULD ALWAYS BE SUPPORTED CORRECTLY IN THE BOWL OF THE HOOK.
- ALWAYS USE THE CORRECT SIZE SLING FOR THE LOAD,ALLOWING FOR THE INCLUDED ANGLE AND THE POSSIBILITY OF UNEQUAL LOADING.
- PERSONNEL MUST KEEP ALL BODY HOOK FROM BETWEEN THE SLING AND THE LOAD,AND FROM BETWEEN THE SLING AND THE CRANE/HOIST HOOK.PERSONS SHALL NEVER RIDE THE CHAIN SLING/ROPE SLING OR WEB SLING OR THE LOAD DURING LIFTING OR WHILE SUSPENDED.PERSONS MUST STAND CLEAR OF ALL LOADS WHILE LIFTING OR WHILE SUSPENDED.DURING LIFTING,WITH OR WITHOUT THE LOAD,PERSONNEL MUST BE ALERT FOR POSSIBLE SNAGGING OF THE LOAD OR THE CHAIN SLING.

## MAINTENANCE

- ◆ A THOROUGH EXAMINATION SHOULD BE CARRIED OUT BY A COMPETENT PERSON AT INTERVALS AT INTERVALS AT LEAST EVERY YEAR OR MORE FREQUENTLY ACCORDING TO STATUTORY REGULATIONS TYPE OF USE AND PAST RECORDS
- ◆ CHAINS WITH BENT LINKS OR WITH CRACKS OR GOUGES IN THE LINK SHOULD BE REPLACED,AS SHOULD DEFORMED COMPONENTS SUCH AS BENT MASTER LINKS,DEFORMED HOOKS AND ANY FITTINGS SHOWING SIGNS OF DAMAGE.
- ◆ CHAIN AND COMPONENTS WEAR SHOULD NEVER EXCEED 10% OF THE ORIGINAL DIMENSIONS.
- ◆ ONCE A CHAIN SLING HAS BEEN OVERLOADED IT MUST BE TAKEN OUT OF SERVICE.
- ◆ STORE CHAIN SLINGS ON A PROPERLY DESIGNED RACK. THEY SHOULD NOT BE LEFT LYING ON THE FLOOR WHERE THEY MAY SUFFER MECHANICAL OR CORROSION DAMAGE OR MAY BE LOST.

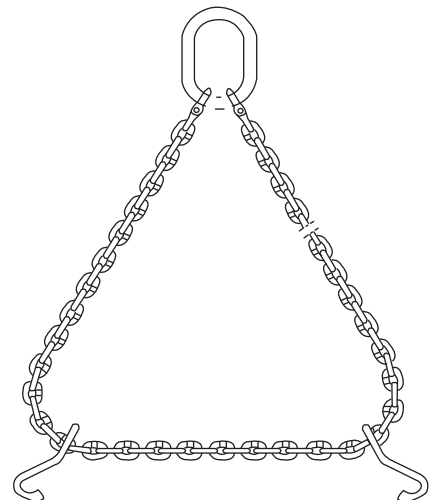
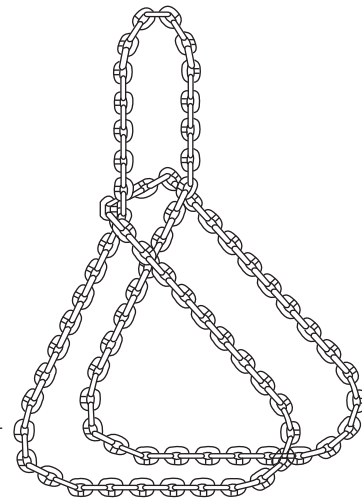
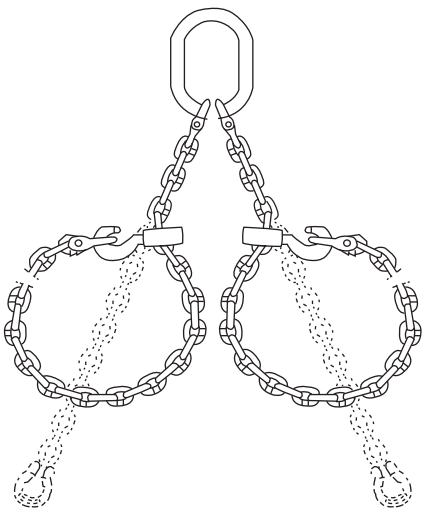
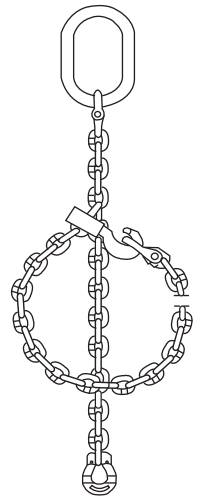
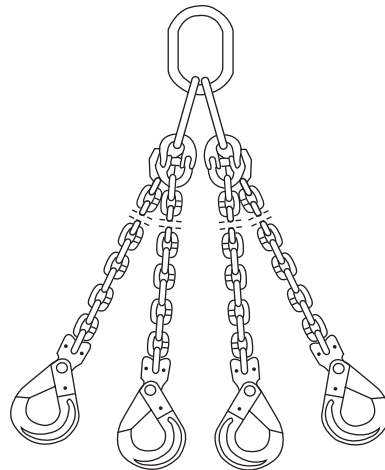
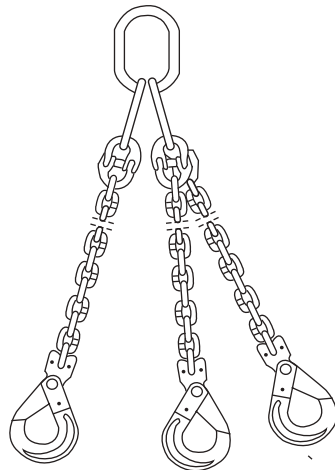
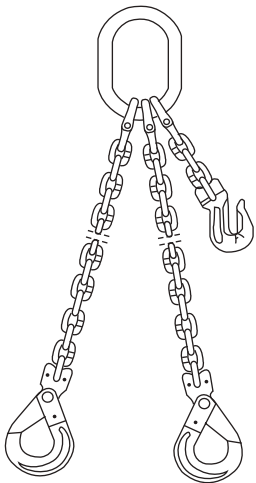
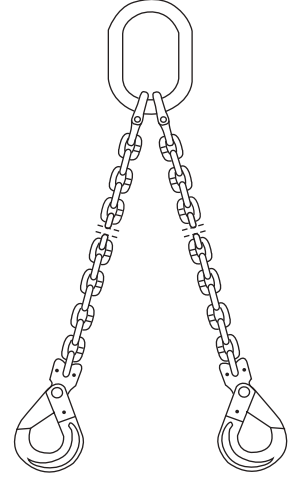
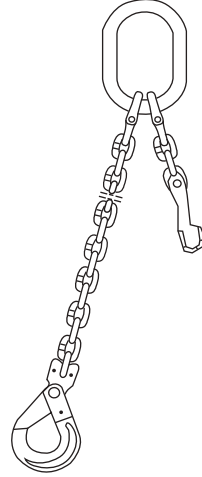
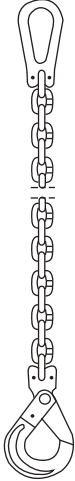
## LIMITATION ON USE

- ◆ **HENGDA** ALLOY CHAIN OR CHAIN SLINGS SHOULD NOT BE USED IN ACID OR CAUSTIC SOLUTIONS NOR IN HEAVILY ACIDIC OR CAUSTIC LADEN ATMOSPHERES. THE HIGH TENSILE STRENGTH OF THE HEAT TREATED ALLOY MATERIAL IN ALLOY STEEL CHAINS AND COMPONENTS IS SUSCEPTIBLE TO HYDROGEN EMBRITTLEMENT WHEN EXPOSED TO ACIDS.
- ◆ **HENGDA** SLINGS MUST NOT BE HEAT-TREATED, GALVANIZED, PLATED, COATED OR SUBJECT TO ANY PROCESS INVOLVING HEATING OR PICKING. EACH OF THESE PROCESSES CAN HAVE DANGEROUS EFFECTS AND WILL INVALIDATE THE MANUFACTURERS CERTIFICATE.
- ◆ **HENGDA** SLINGS MAY BE USED AT TEMPERATURES BETWEEN  $-40^{\circ}\text{C}$  TO  $200^{\circ}\text{C}$  WITH NO REDUCTION IN THE WORKING LOAD LIMIT. THE USE OF **HENGDA** CHAIN SLINGS WITHIN THE PERMISSIBLE TEMPERATURE RANGE IN THE TABLE BELOW DOES NOT REQUIRE ANY PERMANENT REDUCTION IN WORKING LOAD LIMIT WHEN THE CHAIN SLING IS RETURNED TO NORMAL TEMPERATURES. A SLING ACCIDENTALLY EXPOSED TO TEMPERATURES IN EXCESS OF THE MAXIMUM PERMISSIBLE SHOULD BE WITHDRAWN FROM SERVICE IMMEDIATELY AND RETURNED TO THE DISTRIBUTOR FOR THOROUGH EXAMINATION.

Sling temperature	Reduction in working Load Limit
$-40^{\circ}\text{C}$ to $200^{\circ}\text{C}$	None
$200^{\circ}\text{C}$ to $300^{\circ}\text{C}$	10%
$300^{\circ}\text{C}$ to $400^{\circ}\text{C}$	25%
Above $400^{\circ}\text{C}$	Do not use.

WHEN USING **HENGDA** SLINGS IN EXCEPTIONALLY HAZARDOUS CONDITIONS, THE DEGREE OF HAZARD SHOULD BE ASSESSED BY A COMPETENT PERSON AND THE WORKING LOAD LIMIT ADJUSTED ACCORDINGLY. EXAMPLES ARE LIFTING OF POTENTIALLY DANGEROUS LOADS SUCH AS MOLTEN METALS, CORROSIVE MATERIALS OR FISSILE MATERIAL AND INCLUDING CERTAIN OFFSHORE ACTIVITIES.

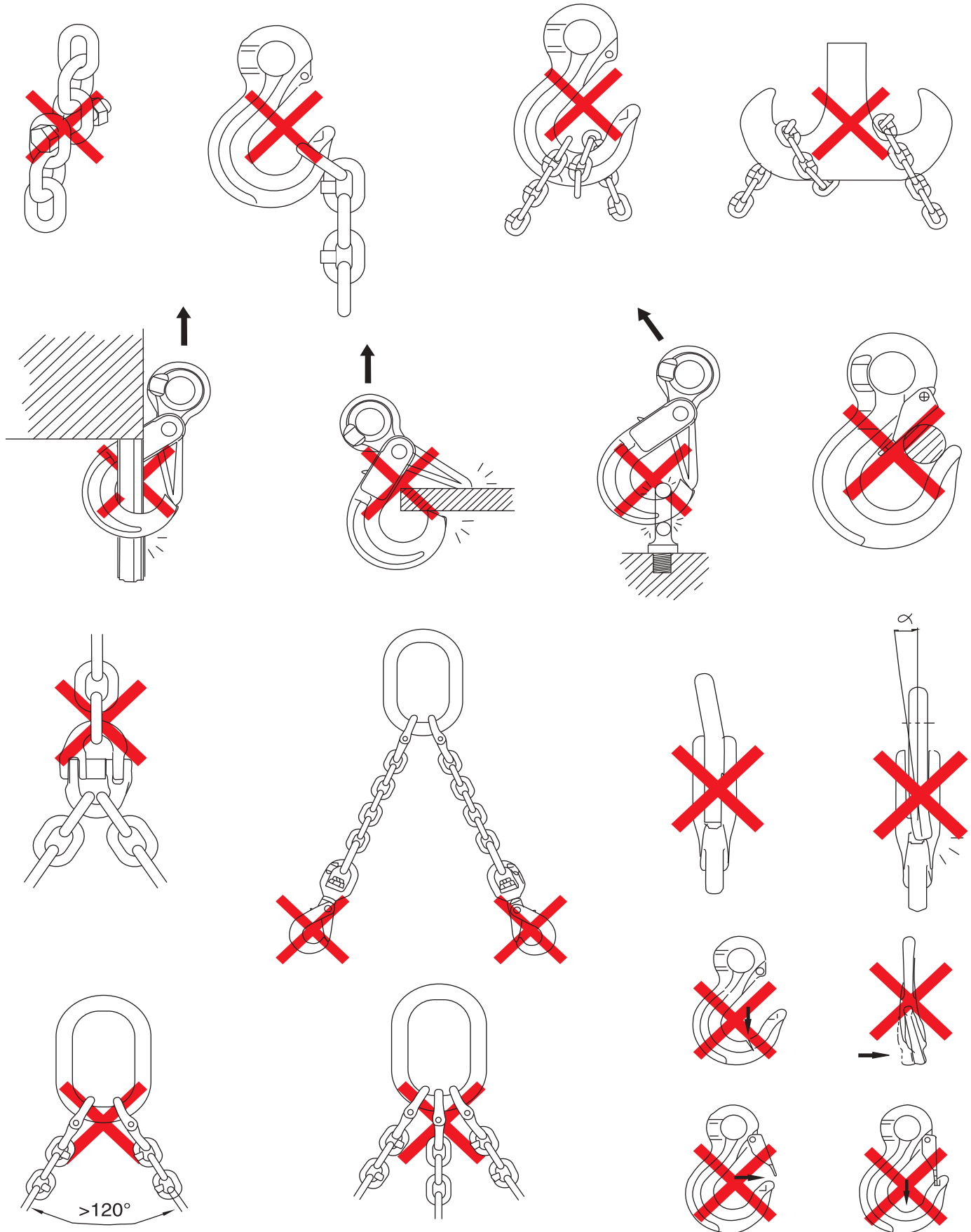
# Examples Of Chain Slings



## Examples Of Wire Rope Sling & Sling

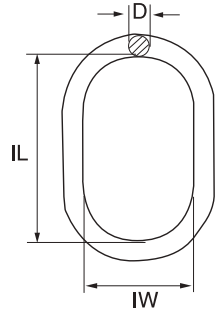


# Incorrect Use



## FORGED OBLONG MASTER LINK.

CONNECTED TO CHAIN WITH "YA" CONNECTING LINK.



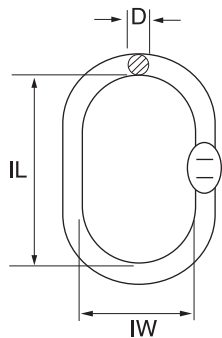
Extra width inside allows better works on large crane hooks

WLL β 0-45° TONNES*	FOR GRADE 80 CHAIN(MM)		DIMENSIONS(MM)			N.W. Kg
	1 LEG	2 LEG	IL	IW	D	
1.5	6	---	100	60	11	0.2
3.2	7,8	6	120	70	14	0.4
4.0	10	7,8	140	80	17	0.7
6.3	10	---	150	90	19	1.0
8.0	13	10	160	95	22	1.5
11.5	16	---	190	110	25	2.2
15.0	16	13	180	105	28	2.7
17.0	19,20	---	200	120	30	3.5
20.0	22	16	240	140	34	5.1
25.0	---	19,20	250	150	38	7.0
30.0	26	22	250	150	40	8.0
37.0	32	26	300	180	45	12.0
46.5	32	26	350	195	50	16.6
65.7	---	32	410	220	58	26.0
87.5	---	---	490	265	70	45.4

- ※ FORGED OBLONG MASTER LINKS.
- ※※ WELDED OBLONG MASTER LINKS.
- ◆ DESIGN FACTOR 5:1 PROOF TESTED AND CERTIFIED
- WLL=WORKING LOAD LIMIT
- TESTED ACC. TO EN 1677, 2000.

## FORGED OBLONG MASTER LINK WITH FLAT.

CONNECTED TO CHAIN WITH "YA" CONNECTING LINK.



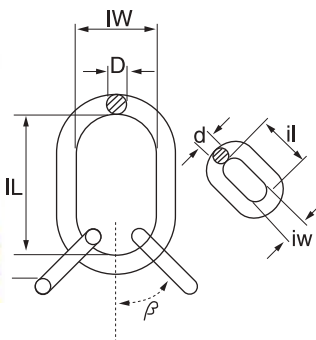
Extra width inside allows better works on large crane hooks

WLL β 0-45° TONNES*	FOR GRADE 80 CHAIN(MM)		DIMENSIONS(MM)			N.W. Kg
	1 LEG	2 LEG	IL	IW	D	
2.0	6	---	100	60	11	0.2
3.2	7,8	6	120	70	14	0.4
4.1	10	7,8	141	80	17	0.7
8.0	13	10	163	95	23	1.5
15.0	16	13	183	105	29	2.7
20.0	20	16	245	140	34	5.1
30.0	---	19,20	257	150	40	8.0

- ※ FORGED OBLONG MASTER LINKS.
- ◆ DESIGN FACTOR 5:1 PROOF TESTED AND CERTIFIED
- WLL=WORKING LOAD LIMIT
- TESTED ACC TO EN 1677 2000

## OBLONG MASTER LINK ASSEMBLY.

DESIGNED FOR USE WITH CHAIN ONLY.



- ◆ DESIGN FACTOR 5:1 PROOF TESTED AND CERTIFIED
- WLL=WORKING LOAD LIMIT
- TESTED ACC. TO EN 1677, 2000.

WLL(TONNES) β 0-45°		WLL(TONNES) β 45° -60°		FOR GRADE 80 CHAIN(MM)	DIMENSIONS(MM)						N.W. Kg
4:1	5:1	4:1	5:1		3 OR 4 LEGS	D	IW	IL	d	iw	
3.1	2.5	3.1	2.5	6	14	65	130	10	16	30	0.6
4.6	3.7	3.6	2.9	7,8	20	70	140	13	35	60	1.6
7.8	6.2	5.7	4.6	10	25.5	90	185	16	40	80	3.2
14.0	11.2	12.1	9.7	13	32	140	270	22	50	90	6.5
24.8	19.8	21.0	16.8	16	40	155	280	28	60	100	11.8
33.3	26.6	25.4	20.3	19,20	45	175	320	32	75	125	17.0
37.1	29.7	37.1	29.7	22	50	195	350	40	80	140	26.4
50.0	40.0	50.0	40.0	26	60	220	410	45	90	165	42.3
74.8	59.8	66.3	53.0	32	70	265	490	50	100	195	61.0

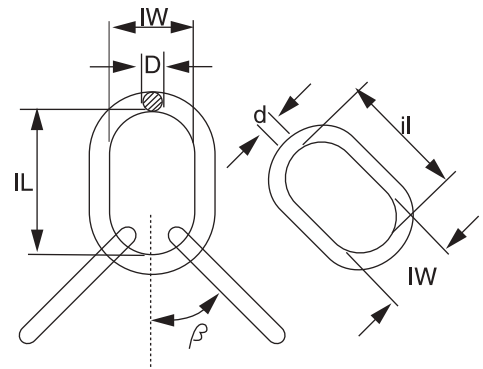
- ※※ WELDED OBLONG MASTER LINKS.
- ※ FORGED OBLONG MASTER LINKS.

## ENLARGE OBLONG MASTER LINK ASSEMBLY.

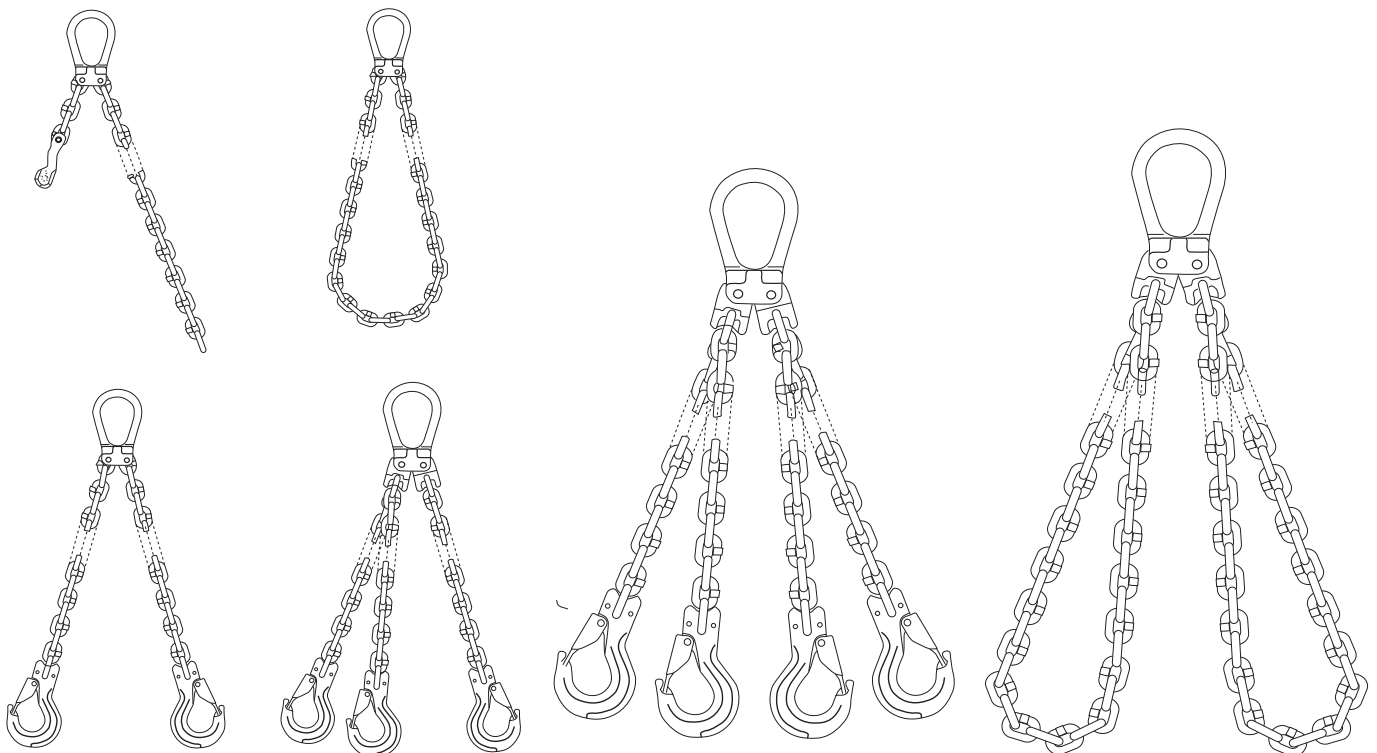
DESIGNED FOR USE WITH CHAIN & WIRE ROPE.

◆ PROOF TESTED AND CERTIFIED  
WLL=WORKING LOAD LIMIT

TESTED ACC. TO EN 1677, 2000.



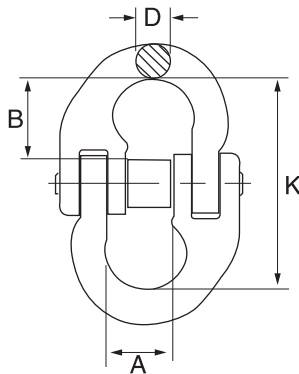
WLL(TONNES) β 0-45°		WLL(TONNES) β 45° -60°		FOR GRADE 80 CHAIN(MM)	DIMENSIONS(MM)						N.W.
4:1	5:1	4:1	5:1	3 OR 4 LEGS	D	IW	IL	d	iw	il	Kg
4.6	3.7	3.2	2.6	6	16	61	120	13	50	90	1.4
8.6	6.9	8.0	6.4	7,8	18	75	150	13	50	90	1.5
14.5	11.6	10.6	8.5	10	22	90	162	20	70	140	3.6
23.1	18.5	16.9	13.5	13	28	110	200	22	70	140	5.5
29.0	23.2	21.4	17.1	16	6	140	270	25.5	90	185	11.9
36.5	29.2	26.1	20.9	19,20	45	175	320	38	125	270	23.5
45.2	36.2	3.4	26.7	22	50	195	350	40	130	280	32.3
59.9	47.9	45.2	36.2	26	60	220	410	50	195	350	61
84.7	70.0	59.9	47.9	32	70	265	490	60	220	410	101.3





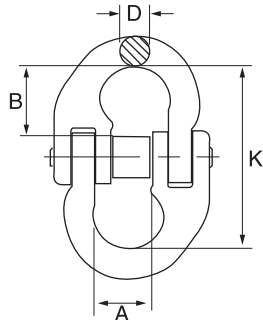
## CONNECTING LINK.

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED TESTED ACC. TO EN 1677, 2000.



WORKING LODA LIMIT TONNES*	FOR GRADE 80 CHAIN MM	DIMENSIONS(MM)				N.W. Kg
		K	A	D	B	
1.12	6	44	15	7	17	0.1
2.0	7,8	59	18	9	22	0.2
3.15	10	68	25	13	26	0.3
5.3	13	91	30	16	35	0.7
8.0	16	100	36	19	38	1.1
12.5	18,20	122	42	22	46	1.7
15.0	22	152	49	24	60	3.0
21.2	26	162	55	31	62	4.6
31.5	32	202	69	38	79	8.6

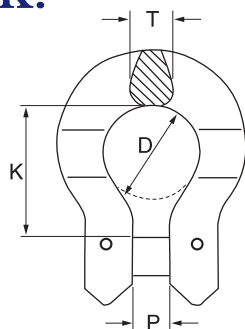
## STAINLESS STEEL CONNECTING LINK. AISI 316L FORGED.



WORKING LODA LIMIT TONNES*	FOR GRADE 50 CHAIN MM	DIMENSIONS(MM)				N.W. Kg
		K	A	D	B	
1.1	7,8	57	18	9	22	0.2
2.0	10	68	25	13	27	0.3
3.2	13	91	30	16	36	0.7
5.3	16	101	36	19	39	1.1

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED

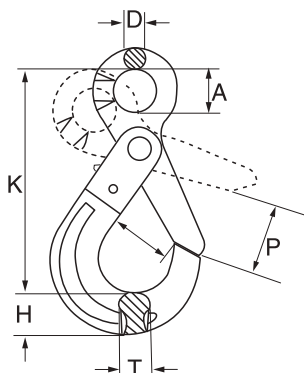
## OMEGA LINK.



WORKING LODA LIMIT TONNES*	FOR GRADE 80 CHAIN MM	DIMENSIONS(MM)				N.W. Kg
		K	D	T	P	
1.12	6	30	21	9	8	0.1
2.0	7,8	36	27	11	9	0.2
3.15	10	44	32	15	12	0.4
5.3	13	55	42	17	16	1.0
8.0	16	69	50	22	18	1.4
12.5	18,20	71	58	28	20	2.3

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED TESTED ACC. TO EN 1677, 2000.

## EYE SELF LOCKING HOOK.

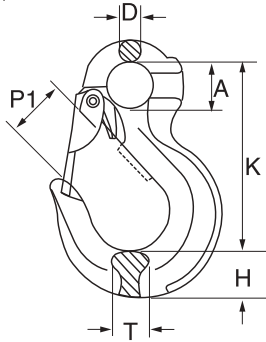


WORKING LOAD LIMIT TONNES*	FOR GRADE 80 CHAIN MM	DIMENSIONS(MM)						N.W. Kg
		K	P	A	D	T	H	
1.12	6	110	29	21	10	15	20	0.5
2.0	7,8	136	34	25	11	20	24	0.8
3.15	10	167	44	32	13	26	30	1.4
5.3	13	207	52	40	16	30	38	2.7
8.0	16	252	60	52	21	40	48	5.6
12.5	18,20	282	90	64	23	48	57	8.5
15.0	22	319	80	70	24	49	63	11.2
21.2	26	343	99	80	25	56	69	14.5

◆ DESIGN FACTOR 5:1 PROOF TESTED AND CERTIFIED TESTED ACC. TO EN 1677, 2000.

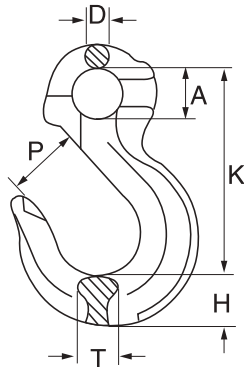
## EYE SLING HOOK, WITH LATCH.

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED  
TESTED ACC. TO EN 1677, 2000.



WORKING LODA LIMIT	FOR GRADE 80 CHAIN	DIMENSIONS(MM)						N.W.
		K	P1	A	D	T	H	
TONNES*	MM							Kg
1.12	6	80	23	20	9	16	20	0.3
2.0	7,8	78	28	25	11	20	23	0.4
3.15	10	121	36	32	14	23	31	0.9
5.3	13	152	40	40	18	28	38	1.7
8.0	16	184	44	50	22	32	47	3.2
12.5	19	218	45	60	26	43	48	5.2
15.0	22	244	73	50	31	50	71	8.5
21.2	26	279	77	64	35	60	80	12.7
31.5	32	352	114	88	40	60	86	16.5

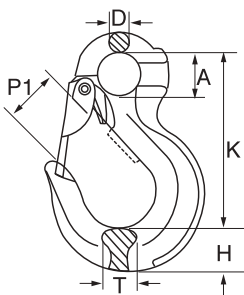
## EYE SLING HOOK, WITHOUT LATCH.



WORKING LOAD LIMIT	FOR GRADE 80 CHAIN	DIMENSIONS(MM)						N.W.
		K	P	A	D	T	H	
TONNES*	MM							Kg
1.12	6	80	28	20	9	16	20	0.2
2.0	7,8	98	34	25	11	19	23	0.4
3.15	10	121	42	32	15	23	31	0.8
5.3	13	152	48	40	18	28	38	1.6
8.0	16	183	56	50	22	32	47	3.0
12.5	19	217	65	60	27	43	48	4.8
15.0	22	240	90	50	32	50	74	8.2
21.2	26	270	94	66	34	60	80	12.4
31.5	32	320	103	75	37	65	91	16.1

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED  
TESTED ACC TO EN 1677 2000

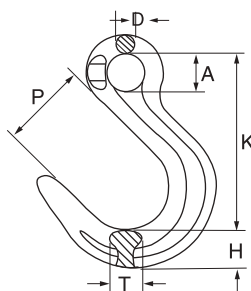
## STAINLESS STEEL EYE SLING HOOK, ALSI 316L FORGED.



WORKING LOAD LIMIT	FOR GRADE 80 CHAIN	DIMENSIONS(MM)						N.W.
		K	P1	A	D	T	H	
TONNES*	MM							Kg
1.12	7,8	98	30	25	11	19	23	0.4
2.0	10	121	36	32	15	23	31	0.9
3.2	13	152	43	40	18	28	38	1.7
5.3	16	183	47	50	22	32	47	3.2

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED

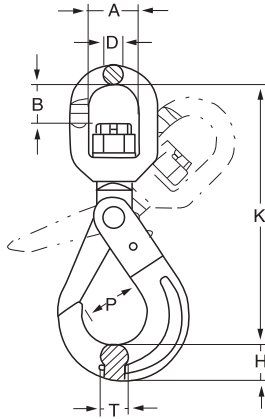
## EYE FOUNDRY HOOK.



WORKING LOAD LIMIT	FOR GRADE 80 CHAIN	DIMENSIONS(MM)						N.W.
		K	P	A	D	T	H	
TONNES*	MM							Kg
2.0	7,8	122	61	24	12	20	30	0.7
3.15	10	150	74	31	15	24	34	1.2
5.3	13	180	88	40	20	34	42	2.3
8.0	16	215	98	49	24	43	50	4.0
12.5	19	248	112	60	28	46	57	6.0

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED  
TESTED ACC. TO EN 1677, 2000.

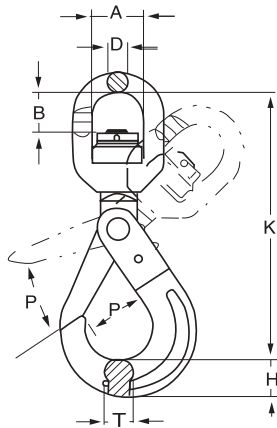
## SWIVEL SELF LOCKING HOOK, WITH BRASS BUSHING.



WORKING LOAD LIMIT TONNES*	FOR GRADE 80 CHAIN MM	DIMENSIONS(MM)							N.W. Kg
		K	P	B	A	D	T	H	
1.12	6	149	29	22	31	12	15	21	0.6
2.0	7,8	186	34	29	36	14	20	25	1.1
3.15	10	220	44	34	40	16	26	31	2.0
5.3	13	267	52	32	46	22	34	40	4.0
8.0	16	328	60	52	60	24	41	52	6.8
12.5	18,20	388	90	82	75	26	48	62	11.6
15.0	22	457	80	95	97	33	49	63	16.0
21.2	26	535	99	115	123	42	57	77	21.5

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED  
TESTED ACC. TO EN 1677, 2000.

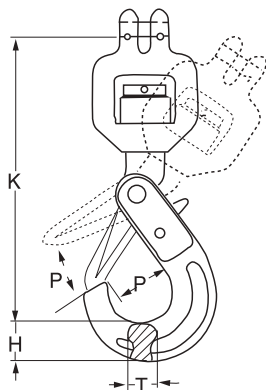
## SWIVEL SELF LOCKING HOOK, WITH BALL BEARING. BALL BEARING PERFORMS TO FULLY SWIVEL UNDER LOAD



WORKING LOAD LIMIT TONNES*	FOR GRADE 80 CHAIN MM	DIMENSIONS(MM)							N.W. Kg
		K	P	B	A	D	T	H	
1.12	6	149	29	22	31	12	15	21	0.6
2.0	7,8	186	34	29	36	14	20	25	1.1
3.15	10	220	44	34	40	16	26	31	2.0
5.3	13	267	52	32	46	22	34	40	4.0
8.0	16	328	60	52	60	24	41	52	6.8
12.5	18,20	388	90	82	75	26	48	62	11.6
15.0	22	457	80	95	97	33	49	63	16.0
21.2	26	535	99	115	123	42	57	77	21.5

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED  
TESTED ACC. TO EN 1677, 2000.

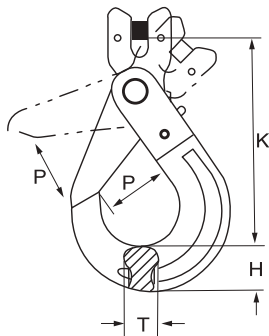
## CLEVIS SWIVEL SELF LOCKING HOOK, WITH BALL BEARING. BALL BEARING PERFORMS TO FULLY SWIVEL UNDER LOAD



WORKING LOAD LIMIT TONNES*	FOR GRADE 80 CHAIN MM	DIMENSIONS(MM)				N.W. Kg
		K	P	T	H	
1.12	6	156	29	15	19	0.7
2.0	7,8	188	34	19	24	1.3
3.15	10	215	44	24	31	2.2
5.3	13	275	52	27	40	4.4
8.0	16	323	60	36	53	7.5
12.5	18,20	417	90	49	65	13.7

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED  
TESTED ACC. TO EN 1677, 2000.

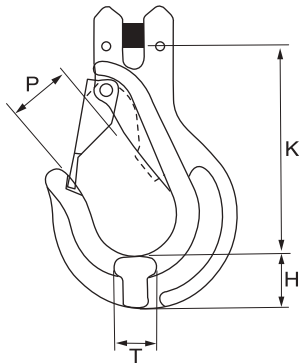
## CLEVIS SELF LOCKING HOOK.



WORKING LOAD LIMIT TONNES*	FOR GRADE 80 CHAIN MM	DIMENSIONS(MM)				N.W. Kg
		K	P	T	H	
1.12	6	100	29	14	19	0.5
2.0	7,8	119	34	19	24	0.8
3.15	10	143	44	24	31	1.5
5.3	13	179	52	27	40	2.8
8.0	16	212	60	36	53	5.6
12.5	18,20	319	90	49	71	7.5

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED  
TESTED ACC. TO EN 1677, 2000.

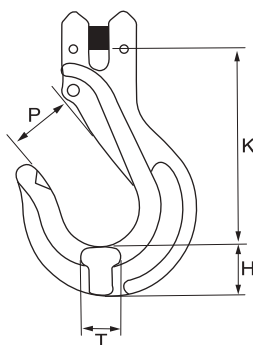
## CLEVIS SLING HOOK, WITH LATCH.



WORKING LOAD LIMIT TONNES*	FOR GRADE 80 CHAIN MM	DIMENSIONS(MM)				N.W. Kg
		K	P1	T	H	
1.12	6	79	22.6	15	18	0.3
2.0	7,8	98	27	18	22	0.5
3.15	10	121	34	23	29	1.0
5.3	13	147	44	30	37	2.1
8.0	16	166	48	38	42	3.7
12.5	18,20	200	56	47	50	6.0

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED  
TESTED ACC. TO EN 1677, 2000.

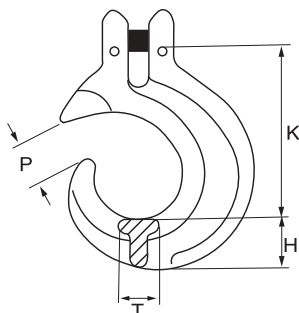
## CLEVIS SLING HOOK, WITHOUT LATCH.



WORKING LOAD LIMIT TONNES*	FOR GRADE 50 CHAIN MM	DIMENSIONS(MM)				N.W. Kg
		K	P	T	H	
1.12	6	79	25	15	18	0.3
2.0	7,8	98	31	18	22	0.4
3.15	10	121	40	23	29	0.8
5.3	13	147	48	30	37	1.9
8.0	16	166	56	39	42	3.4
12.5	18,20	200	69	47	50	5.3

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED  
TESTED ACC. TO EN 1677, 2000.

## CLEVIS C HOOK. ODE.

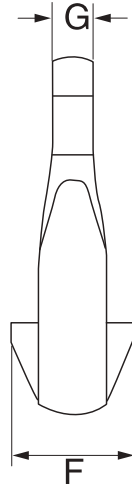
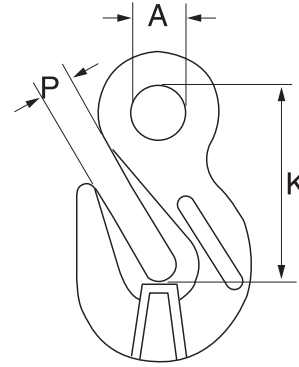


WORKING LOAD LIMIT TONNES*	FOR GRADE 80 CHAIN MM	DIMENSIONS(MM)				N.W. Kg
		K	P	T	H	
2.0	7,8	80	20	16	31	0.5
3.15	10	105	27	22	26	0.9
5.3	13	138	35	32	34	1.9
8.0	16	170	43	40	42	3.6

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED  
TESTED ACC. TO EN 1677, 2000.

## EYE GRAB HOOK.

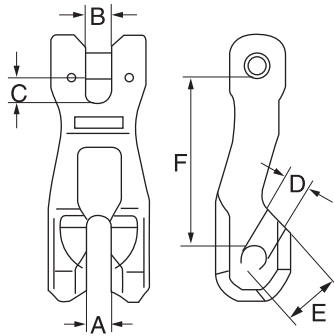
NOT FOR USE WITH OMEGA LINK ITEM. 8-018  
NO REDUCTION OF WORKING LOAD LIMIT,  
THANKS TO SUPPORTING  
WINGS WHICH PREVENT CHAIN LINK  
DEFORMATION.



◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED  
TESTED ACC. TO EN 1677, 2000.

WORKING LOAD LIMIT	FOR GRADE 80 CHAIN	DIMENSIONS(MM)					N.W.
		P	A	G	K	F	
TONNES*	MM	P	A	G	K	F	Kg
1.12	6	8	13	8	51	30	0.2
2.0	7,8	10	15	9	60	30	0.2
3.15	10	13	20	13	84	41	0.6
5.3	13	16	25	15	102	52	1.2
8.0	16	20	30	20	114	57	2.3
12.5	18,20	23	36	23	132	98	4.6
15.0	22	27	38	26	157	110	8.2
21.2	26	29	41	32	187	100	9.8
31.5	32	37	57	40	230	90	19.4

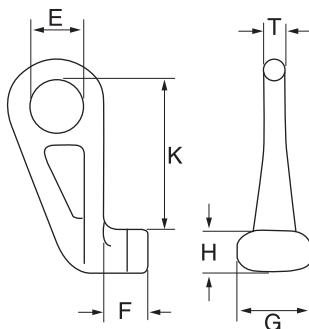
## CLEVIS CLUTCH.



WORKING LOAD LIMIT	FOR GRADE 80 CHAIN	DIMENSIONS(MM)					N.W.
		A,B	C	D	E	F	
TONNES*	MM	A,B	C	D	E	F	Kg
1.12	6	6	8	7	11	45	0.2
2.0	7,8	8	10	9	16	62	0.4
3.15	10	12	14	12	25	87	0.9
5.3	13	16	17	15	32	115	1.9
8.0	16	20	19	19	39	143	3.2
12.5	18,20	21	23	22	46	152	6.2

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED  
TESTED ACC. TO EN 1677, 2000.

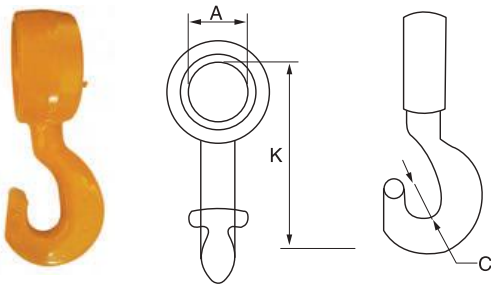
## EYE CONTAINER HOOK.



DSC.	WORKING LOAD LIMIT	DIMENSIONS(MM)						N.W.
		K	E	F	T	G	H	
	TONNES*	K <td>E <td>F <td>T <td>G <td>H</td> <td>Kg</td> </td></td></td></td>	E <td>F <td>T <td>G <td>H</td> <td>Kg</td> </td></td></td>	F <td>T <td>G <td>H</td> <td>Kg</td> </td></td>	T <td>G <td>H</td> <td>Kg</td> </td>	G <td>H</td> <td>Kg</td>	H	Kg
STRAIGHT	12.5	192	70	46	25	75	48	4.0
LEFE 45°	12.5	192	70	46	25	75	48	4.0
RIGHT45°	12.5	192	70	46	25	75	48	4.0

◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED  
TESTED ACC. TO EN 1677, 2000.

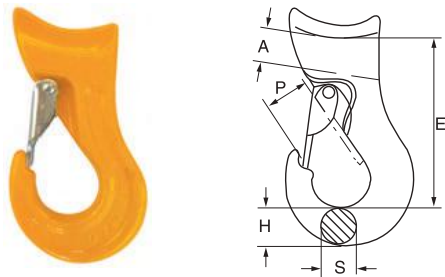
## TWIST EYE CHOKE HOOK.



◆ DESIGN FACTOR 4:1 PROOF TESTED AND CERTIFIED  
TESTED ACC. TO EN 1677, 2000.

WORKING LOAD LIMIT TONNES*	FOR GRADE 80 CHAIN MM	DIMENSIONS(MM)			N.W. Kg
		K	C	A	
2.0	7,8	9	19	32	0.4
3.15	10	116	21	41	0.8
5.3	13	150	27	50	1.9
8.0	16	185	32	67	3.0

## SLIDING CHOKE HOOK.

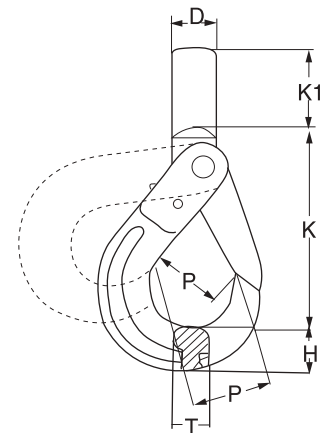


WORKING LOAD LIMIT TONNES*	FOR WIRE ROPE MM	DIMENSIONS(MM)					N.W. Kg
		A	E	P	S	H	
1.5	9,13	16	87	18	18	24	0.6
2.2	14,16	21	98	20	22	29	1.0

◆ DESIGN FACTOR 5:1

## SHANK SELF LOCKING HOOK.

- ◆ D MIN. =THE SMALLEST SHANK DIMENSION AFTER MACHINING.  
NOTE: AFTER MACHINING THE SHANK, PROOF LOADING MUST BE CARRIED OUT.
- ◆ DESIGN FACTOR 4:1

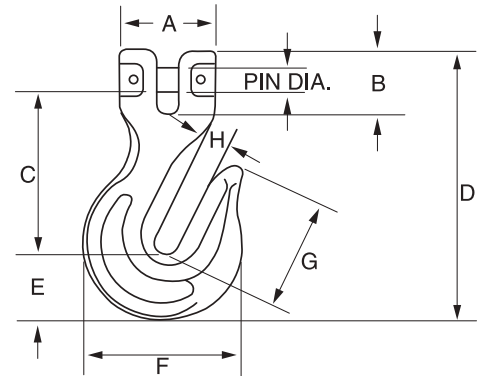


WORKING LODA LIMIT TONNES*	DIMENSIONS(MM)							N.W. Kg
	K	P	K1	D	d min.**	T	H	
1.12	70	29	31	12	11	15	22	0.5
2.0	87	34	38	19	13	20	26	0.9
3.15	100	44	44	23	16	26	34	1.6
5.3	127	52	54	25	20	30	42	3.0
8.0	157	60	68	30	25	40	55	5.5
12.5	232	90	88	46	38	48	65	10.9
15.0	225	80	115	50	45	49	63	13.0
21.2	238	99	140	65	50	56	69	17.6

## G80 GLEVIS GRAB HOOK

### A-338

- ◆ ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ INDIVIDUALLY PROOF TESTED AT 2-1/2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

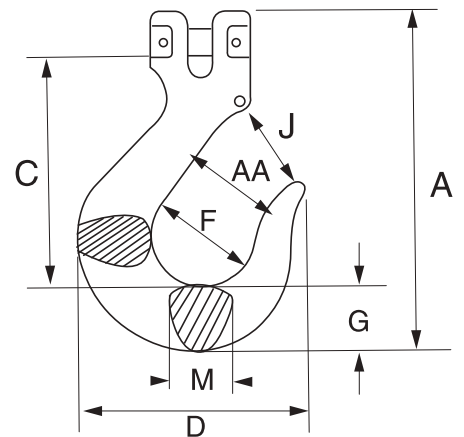


CHAIN SIZE (IN.)	WORKING LOAD LIMIT* (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)								
			A	B	C	D	E	F	G	H	PIN DIAMETER
9/32	3500	0.62	1.56	1.10	2.61	4.17	0.89	2.16	1.44	0.38	0.37
3/8	7100	1.26	1.79	1.32	3.25	5.34	1.16	3.00	2.12	0.50	0.47
1/2	12000	3.45	2.38	1.61	4.19	7.12	1.69	4.00	2.86	0.62	0.63
5/8	18100	5.64	2.68	2.05	5.03	8.38	1.88	4.64	3.56	0.75	0.78
3/4	28300	10.40	3.46	2.71	5.95	9.97	2.19	5.47	4.25	0.88	0.83
7/8	34200	13.62	3.96	3.07	6.88	11.56	2.56	6.31	4.88	1.00	0.94

## G80 GLEVIS SLING HOOK

### A-339

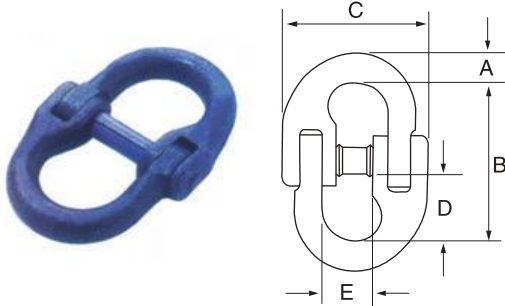
- ◆ ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ INDIVIDUALLY PROOF TESTED AT 2-1/2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.



HOOK SIZE		HOOK ID CODE	WORKING LOAD LIMIT (T)*	WEIGHT EACH (KG)	DIMENSIONS (IN.)							
(IN.)	(MM)				A	C	D	F	G	J	M	AA
--	6	DA	1.12	0.27	107	75.0	72.5	32.0	18.5	23.6	406	38.1
1/4-5/16	7-8	HA	2	0.68	144	101	98.0	41.1	26.2	30.2	484	51.0
3/8	10	IA	3.15	0.95	171	120	111	51.0	30.2	38.9	606	63.5
1/2	13	JA	5.3	1.90	213	150	142	63.5	36.6	45.2	729	76.2
5/8	16	KA	8	3.80	259	177	172	76.0	47.8	61.0	929	102
3/4**	20	-	11.2	5.20	294	170	187	82.5	55.0	68.5	1019	--
7/8**	22	-	15	8.00	334	193	215	92.0	62.0	77.5	1129	--

## ALLOY CONNECTING LINKS, AMERICAN TYPE

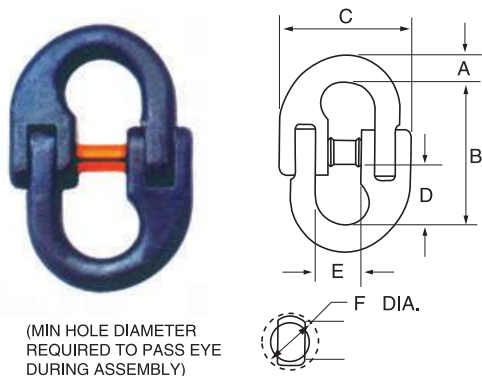
### A-336



- ◆ ALLOY STEEL--QUENCHED AND TEMPERED.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

CHAIN SIZE (IN.)	WORKING LOAD LIMIT (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)					DIA. HOLE TO ACCEPT LINK
			A	B	C	D	E	
1/4	3250	0.24	0.31	2.06	1.69	0.78	0.78	0.50
3/8	6600	0.58	0.45	2.72	2.31	1.06	1.09	0.66
1/2	11250	1.20	0.58	3.34	3.16	1.28	1.41	0.88
5/8	16500	2.42	0.78	3.91	3.94	1.56	1.69	1.06
3/4	23000	6.89	0.89	4.84	4.44	1.97	2.00	1.19
7/8	28750	6.08	1.00	5.81	5.31	2.38	2.12	1.38
1	38750	7.03	1.08	6.48	6.07	3.84	2.55	1.47
1.1/4	57500	13.20	1.38	8.48	7.65	3.77	3.77	1.73

## ALLOY CONNECTING LINKS, AMERICAN TYPE



(MIN HOLE DIAMETER REQUIRED TO PASS EYE DURING ASSEMBLY)

- ◆ ALLOY STEEL--QUENCHED AND TEMPERED.
- ◆ INDIVIDUALLY PROOF TESTED AT 2-1/2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

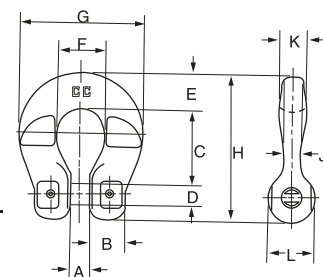
### A-337

CHAIN SIZE		WEIGHT EACH (LBS.)	WORKING LOAD LIMIT (LBS.)	DIMENSIONS (IN.)					
(IN.)	(MM.)			A	B	C	D	E	F
9/32(1/4)	7	0.28	3500	0.36	1.88	1.75	0.78	0.66	0.56
5/16	8	0.33	4500	0.39	2.13	1.97	0.88	0.69	0.63
3/8	10	0.73	7100	0.52	2.50	2.50	1.03	0.88	0.75
1/2	13	1.67	12000	0.64	3.44	3.22	0.44	1.13	0.94
5/8	16	2.86	18100	0.75	4.13	3.78	0.73	1.41	1.13
3/4	20	5.00	28300	0.97	4.94	4.66	2.06	1.63	1.28
7/8	22	7.50	34200	1.06	5.50	5.63	2.31	2.00	1.44
1	25	11.03	47700	1.22	6.00	6.19	2.50	2.25	1.88
1.1/4	32	20.38	72300	1.50	7.43	7.63	3.06	2.56	2.19

## GRADE 8 OMEGA LINK

### S-325A

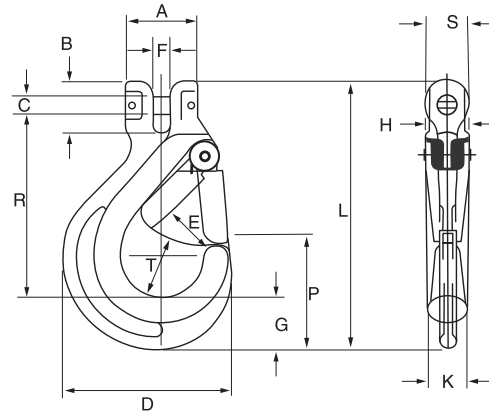
- ◆ ALLOY STEEL--QUENCHED AND TEMPERED.
- ◆ INDIVIDUALLY PROOF TESTED AT 2-1/2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.



CHAIN SIZE		WEIGHT EACH (LBS.)	WORKING LOAD LIMIT (LBS.)	DIMENSIONS (IN.)										
(IN.)	(MM.)			A	B	C	D	E	F	G	H	J	K	L
--	6	0.25	2500	0.28	0.43	1.04	0.30	0.50	0.74	1.74	2.06	0.24	0.35	0.67
1/4-5/16	7-8	0.50	4500	0.36	0.67	1.41	0.37	0.68	0.88	2.32	2.76	0.31	0.51	0.87
3/8	10	0.76	7100	0.45	0.68	1.86	0.47	0.75	1.18	2.72	3.43	0.39	0.63	0.98
1/2	13	1.65	12000	0.57	0.91	2.12	0.63	1.06	1.50	3.62	4.24	0.47	0.75	1.26
5/8	16	1.90	18100	0.71	0.98	2.84	0.78	1.22	1.96	4.40	5.39	0.59	0.95	1.57



## G80 CLEVIS CHAIN HOOK WITH INTEGRATED LATCH

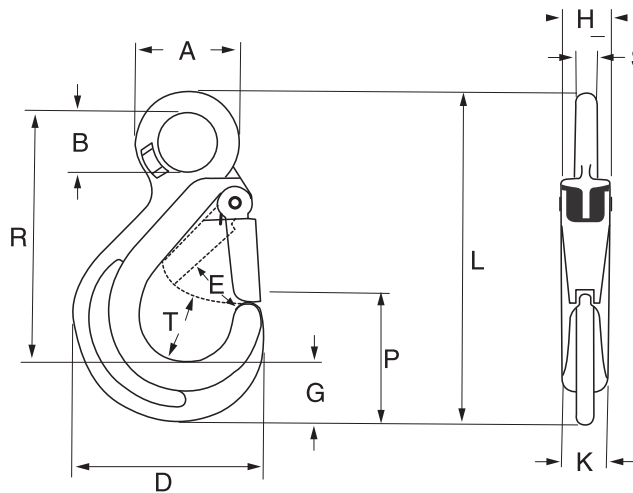


**S-314A**

CHAIN SIZE		GRADE 8 ALLOY CHAIN WORKING LOAD LIMIT * (LBS.)	DIMENSIONS (IN.)														WEIGHT EACH (LBS.)
(IN.)	(MM)		A	B	C	D	E	F	G	H	K	L	P	R	S	T	
--	6	2500	1.14	0.79	0.30	2.60	0.81	0.28	0.79	0.69	0.63	4.15	1.83	2.84	0.67	1.02	0.69
1/4-5/16	7-8	4500	1.50	1.10	0.37	3.50	1.08	0.36	1.10	0.89	0.81	5.63	2.40	3.86	0.87	1.28	1.53
3/8	10	7100	1.79	1.32	0.47	4.35	1.42	0.45	1.15	0.98	0.94	6.90	2.87	4.93	0.98	1.66	2.84
1/2	13	12000	2.38	1.61	0.63	5.45	1.52	0.57	1.66	1.26	1.16	8.41	3.63	5.69	1.26	1.94	5.17
5/8	16	18100	2.68	2.05	0.78	6.56	1.91	0.71	2.05	1.38	1.50	10.18	4.37	6.80	1.57	2.32	4.98

## G80 EYE CHAIN HOOK WITH INTEGRATED LATCH

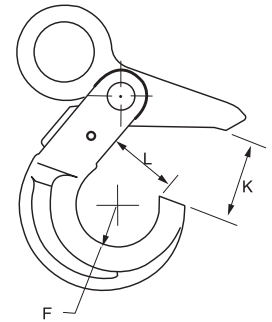
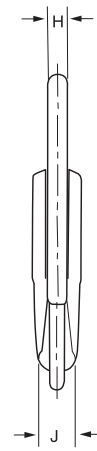
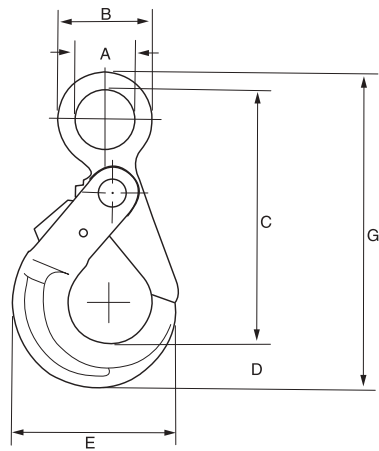
- ◆ FORGED ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ INDIVIDUALLY PROOF TESTED AT 2-1/2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.



**S-315A**

CHAIN SIZE		GRADE 8 ALLOY CHAIN WORKING LOAD LIMIT * (LBS.)	DIMENSIONS (IN.)												WEIGHT EACH (LBS.)
(IN.)	(MM)		A	B	D	E	G	H	K	L	P	R	S	T	
--	6	2500	1.42	0.79	2.60	0.81	0.79	0.69	0.63	4.47	1.83	3.37	0.31	1.02	0.56
1/4-5/16	7-8	4500	1.89	1.10	3.50	1.08	1.10	0.89	0.81	6.12	2.40	4.62	0.39	1.28	1.31
3/8	10	7100	2.44	1.42	4.35	1.42	1.15	0.98	0.94	7.87	2.87	6.20	0.51	1.66	2.60
1/2	13	12000	3.15	1.81	5.45	1.52	1.66	1.26	1.16	9.55	3.63	7.22	0.67	1.94	4.70
5/8	16	18100	3.94	2.20	6.56	1.91	2.05	1.38	1.50	11.85	4.37	8.94	0.87	2.32	8.55

## EYE TYPE SELF LOCKING HOOKS

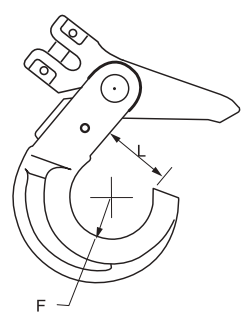
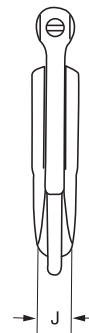
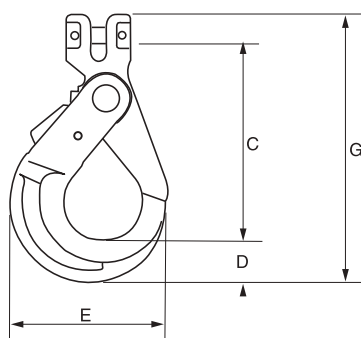


### S-316A

CHAIN SIZE		GRADE 8 ALLOY CHAIN WORKING LOAD LIMIT * (LBS.)	DIMENSIONS (IN.)											WEIGHT EACH (LBS.)
(IN.)	(MM)		A	B	C	D	E	F	G	H	J	K	L	
--	6	2500	0.79	1.42	3.95	0.79	2.60	0.67	5.06	0.31	0.63	1.34	1.14	0.85
1/4-5/16	7-8	4500	0.98	1.88	5.24	1.10	3.50	0.87	5.64	0.39	0.81	1.71	1.46	1.81
3/8	10	7100	1.30	2.44	6.63	1.15	4.35	1.10	8.30	0.51	0.94	2.20	1.87	3.24
1/2	13	12000	1.81	3.15	8.31	1.66	5.45	1.26	10.63	0.67	1.16	2.64	2.11	5.96
5/8	16	18100	2.20	3.94	10.06	2.05	6.56	1.50	12.97	0.87	1.50	3.15	2.49	12.75

- ◆ FORGED ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ INDIVIDUALLY PROOF TESTED AT 2-1/2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

## CLEVIS TYPE SELF LOCKING HOOKS

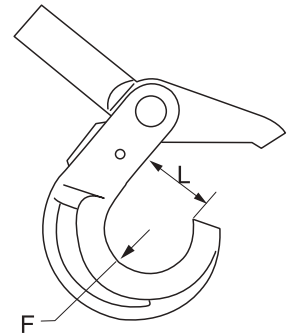
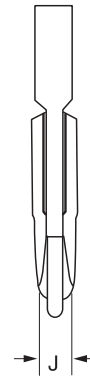
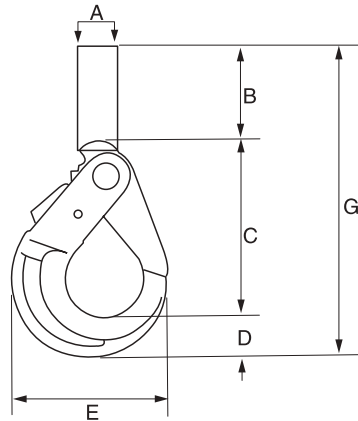


### S-317A

CHAIN SIZE		GRADE 80 ALLOY CHAIN WORKING LOAD LIMIT (T)*	DIMENSIONS (IN.)							WEIGHT EACH (KG)
(IN.)	(MM)		C	D	E	F	G	J	L	
--	6	1.12	87.0	20.1	66.0	17.0	121	16.0	28.7	0.35
1/4-5/16	7-8	2.0	114	27.9	89.0	22.1	159	20.6	35.1	0.81
3/8	10	3.15	140	29.7	112	27.9	192	23.9	44.5	1.45
1/2	13	5.3	173	42.4	138	32.0	242	29.5	53.5	3.06
5/8	16	8.0	209	52.0	167	38.1	295	38.1	63.0	5.42

- ◆ FORGED ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

## SELF LOCKING HOOK WITH SHANK

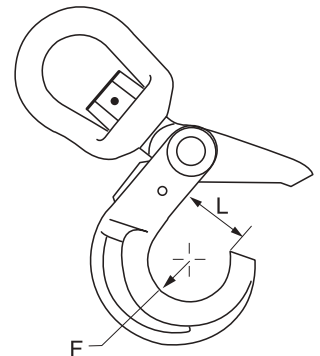
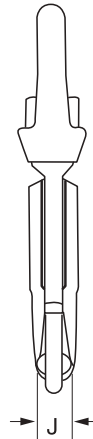
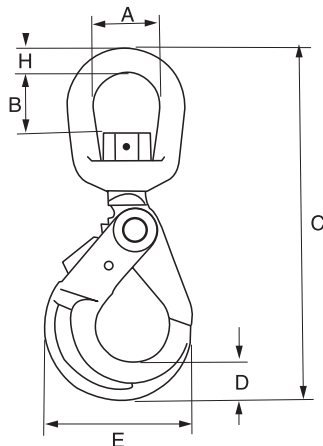


### S-318A

CHAIN SIZE		GRADE 80 ALLOY CHAIN WORKING LOAD LIMIT (T)*	DIMENSIONS (IN.)										WEIGHT EACH (KG)
(IN.)	(MM)		A	B	C	D	E	F	G	J	L		
--	6	1.12	20.1	55.0	84.0	20.1	66.0	17.0	159	16.0	28.7	0.45	
1/4-5/16	7-8	2.0	25.4	61.0	106	27.9	89.0	22.1	195	20.6	35.1	0.90	
3/8	10	3.15	29.0	75.0	131	29.7	112	27.9	235	23.9	44.5	1.61	
1/2	13	5.3	34.0	85.0	160	42.4	138	32.0	288	29.5	53.5	3.18	
5/8	16	8.0	41.4	100	185	52.0	167	38.1	337	38.1	63.0	7.26	

- ◆ FORGED ALLOY STEEL--QUENCHED AND TEMPERED.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

## SWIVEL TYPE SELF LOCKING HOOK



### S-326A

CHAIN SIZE		GRADE 8 ALLOY CHAIN WORKING LOAD LIMIT * (T) 4:1*	WIRE ROPE XIP IWRC MECHANICAL SPLICE		DIMENSIONS (IN.)									WEIGHT EACH (KG)
(IN.)	(MM)		SIZE (MM)	WORKING LOAD LIMIT (T) 5:1*	A	B	C	D	E	F	H	J	L	
--	6	1.12	8	0.9	38.1	33.5	156	20.1	66.0	17.0	12.7	16.0	28.7	0.57
1/4-5/16	7-8	2.0	11	1.7	44.5	40.4	193	27.9	89.0	22.1	16.0	20.6	35.1	1.18
3/8	10	3.15	13	2.3	51.0	43.9	224	29.7	112	27.9	19.1	23.9	44.5	2.13
1/2	13	5.3	16	3.5	63.5	60.5	284	42.4	138	32.0	25.4	29.5	53.5	3.92
5/8	16	8.0	22	6.9	70.0	64.5	330	52.0	167	38.1	28.7	38.1	63.0	7.71

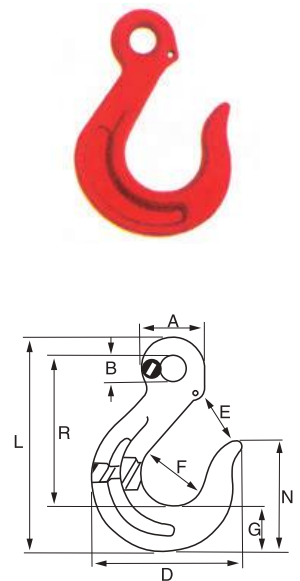
- ◆ FORGED ALLOY STEEL--QUENCHED AND TEMPERED.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

## EYE SLING HOOK

### S-327

CHAIN SIZE (IN.)	WORKING LOAD LIMIT (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)								
			A	B	D	E	F	G	L	N	R
9/32(1/4)	3500	0.81	1.34	0.56	3.47	1.30	1.75	0.89	5.00	2.55	3.72
3/8	7100	2.10	1.83	0.75	4.55	1.40	2.23	1.25	6.53	3.41	4.73
1/2	12000	3.71	2.25	0.94	5.50	1.75	2.50	1.55	7.88	4.09	5.66
5/8	18100	6.40	2.77	1.12	6.50	2.00	2.88	1.88	9.28	4.78	6.59
3/4	28300	9.80	3.27	1.28	7.36	2.15	3.27	2.16	10.75	5.53	7.61
7/8	34200	15.40	3.72	1.44	8.48	2.50	3.62	2.47	12.17	6.23	8.56

- ◆ ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ INDIVIDUALLY PROOF TESTED AT 2-1/2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

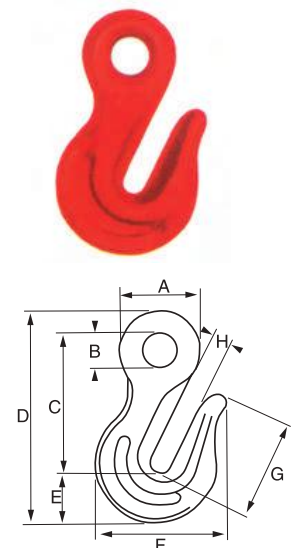


## EYE GRAB HOOK

### A-328

CHAIN SIZE (IN.)	WORKING LOAD LIMIT (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)							
			A	B	C	D	E	F	G	H
9/32(1/4)	3500	0.60	1.38	0.59	2.56	3.84	0.91	2.16	1.44	0.38
3/8	7100	1.20	1.80	0.80	3.25	4.91	1.16	3.00	2.13	0.50
1/2	12000	3.00	2.25	0.98	4.19	6.50	1.69	4.00	2.86	0.63
3/4	28300	8.25	3.22	1.36	5.95	9.08	2.19	5.47	4.25	0.88
7/8	34200	11.90	3.70	1.55	6.88	10.44	2.59	6.31	4.88	1.00

- ◆ ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ INDIVIDUALLY PROOF TESTED AT 2-1/2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.

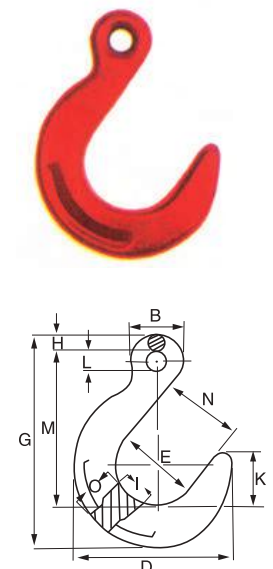


## EYE FOUNDRY HOOK

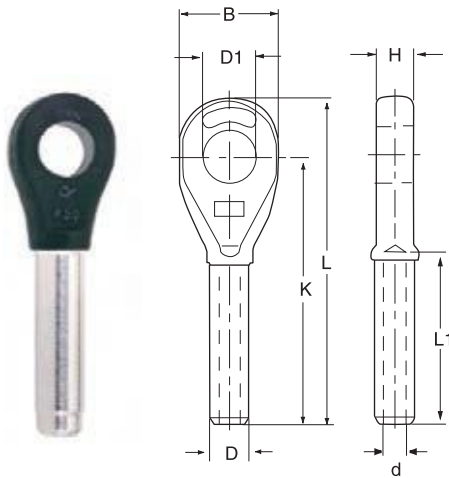
### A-329

CHAIN SIZE (IN.)	WORKING LOAD LIMIT (LBS.)	WEIGHT EACH (LBS.)	DIMENSIONS (IN.)										
			B	D	E	G	H	I	K	L	M	N	O
9/32(1/4)	3500	2.40	1.56	4.75	2.50	6.45	0.47	1.00	1.56	0.63	4.75	2.50	1.23
3/8	7100	4.50	2.00	5.75	3.00	7.88	0.63	1.27	1.88	0.75	5.75	3.00	1.50
1/2	12000	7.10	2.50	6.75	3.50	9.37	0.75	1.50	2.22	1.00	6.88	3.50	1.75
5/8	18100	12.20	3.00	7.81	4.00	10.97	0.78	1.81	2.63	1.25	8.06	4.00	2.03
3/4	28300	19.30	3.50	9.13	4.50	12.81	1.00	2.20	3.00	1.50	9.25	4.50	2.56
7/8	34200	26.30	4.00	10.06	5.00	14.20	1.13	2.25	3.38	1.75	10.38	5.00	2.70

- ◆ ALLOY STEEL—QUENCHED AND TEMPERED.
- ◆ INDIVIDUALLY PROOF TESTED AT 2-1/2 TIMES WLL.
- ◆ MINIMUM BREAKING LOAD IS 4 TIMES THE WLL.



## FORGED CLOSED SWAGE WIRE ROPE SOCKET, SELF COLORED.



• 8-732 CLOSED SWAGE SOCKETS ARE FORGED FROM SPECIAL BAR QUALITY CARBON STEEL WITH VERY FINEST HARDNESS CONTROLLED BY SPHEROIDIZE ANNEALING.

SWAGE SOCKETS PRIPERLY APPLIED HAVE AN EFFICIENCY RATING OF 100% BASED ON THE CATALOG STRENGTH OF WIRE ROPE.

• SWAGE SOCKETS ARE RECOMMENDED FOR USE WITH 6×19,6×37,AND IWRC WIRE ROPE, THEY ARE ALSO SATISFACTORY ON GALVAIZED BRIDGE ROPE.

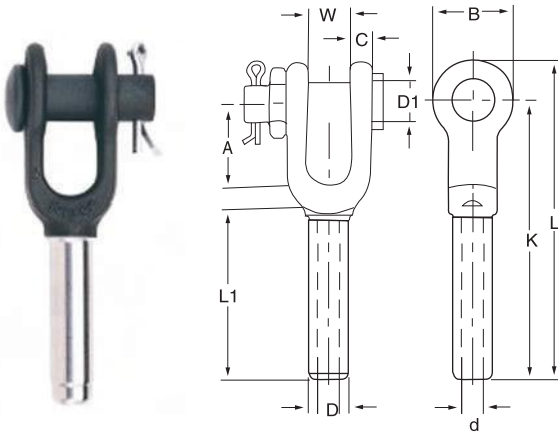
• SWAGE SOCKETS ARE NOT RECOMMENDED FOR USE ON FIBER CORE OR LANG LAY ROPE.

ALL SLINGS SWAGED WITH SOCKETS SHALL BE PROOF LOADED IN ACCODANCE WITH ANSI B30.9

ROPE SIZE	BEFORE SWAGE DIMENSIONS (INCH)								MAX. AFTER SWAGE DIM.	N.W.
	L	D	B	D1	d	L1	H	K		
INCH	L	D	B	D1	d	L1	H	K	INCH	LBS
1/4	4.33	0.50	1.38	0.75	0.27	2.13	0.50	3.50	0.46	0.3
5/16	5.50	0.77	1.63	0.89	0.34	3.15	0.67	4.50	0.71	0.8
3/8	5.50	0.77	1.63	0.89	0.41	3.15	0.67	4.50	0.71	0.7
7/16	6.93	0.98	2.00	1.06	0.48	4.25	0.89	5.75	0.91	1.4
1/2	6.93	0.98	2.00	1.06	0.55	4.25	0.89	5.75	0.91	1.4
9/16	8.70	1.25	2.40	1.26	0.61	5.31	1.14	7.28	1.16	2.9
5/8	8.70	1.25	2.40	1.26	0.67	5.31	1.14	7.28	1.16	2.9
3/4	10.20	1.55	2.87	1.44	0.80	6.38	1.31	8.54	1.42	5.0
7/8	11.97	1.70	3.11	1.70	0.94	7.44	1.50	10.16	1.55	6.8
1	13.46	1.98	3.62	2.05	1.06	8.50	1.77	11.54	1.80	10.4
1-1/8	15.04	2.25	4.02	2.32	1.19	9.57	2.00	12.72	2.05	14.8
1-1/4	16.97	2.53	4.50	2.56	1.33	10.63	2.25	14.33	2.30	21.6
1-3/8	18.70	2.80	5.00	2.56	1.45	11.69	2.25	15.83	2.56	28.5
1-1/2	20.12	3.08	5.50	2.81	1.58	12.75	2.52	17.01	2.81	38.1
1-3/4	23.54	3.39	6.26	3.54	1.86	14.88	3.00	20.00	3.08	51.0
2	27.64	3.94	7.24	3.82	2.13	17.01	3.27	23.00	3.56	89.3

ROPE SIZE	BEFORE SWAGE DIMENSIONS (MM)								MAX. AFTER SWAGE DIM.	N.W.
	L	D	B	D1	d	L1	H	K		
MM	L	D	B	D1	d	L1	H	K	MM	Kg
6-7	110	13	35	19	7	54	13	89	12	0.2
8	140	20	41	22	9	80	17	114	18	0.3
9-10	140	20	41	22	11	80	17	114	18	0.3
11-12	176	25	51	27	12	108	22	146	23	0.6
13	176	25	51	27	14	108	22	146	23	0.6
14-15	221	32	61	32	15	135	29	185	30	1.3
16	221	32	61	32	17	135	29	185	30	1.3
18-20	259	39	73	36	20	162	33	217	36	2.3
22-23	304	43	79	43	24	189	38	258	39	3.1
24-25	342	50	92	52	27	216	45	293	46	4.7
28	382	57	102	59	30	243	51	323	52	6.7
32	431	64	114	65	34	270	57	364	58	9.8
35-36	475	71	127	65	37	297	57	402	65	13.0
38	511	78	140	71	40	323	64	432	71	17.3
44-45	598	86	159	90	47	378	76	508	78	23.1
48-51	702	100	184	97	54	432	83	584	90	40.5

## FORGED OPEN SWAGE WIRE ROPE SOCKET, WITH SAFETY BOLT PIN, SELF COLORED.



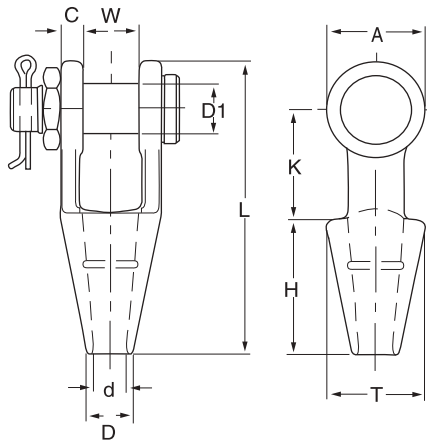
- 8-730 OPENED SWAGE SOCKETS ARE FORGED FROM SPECIAL BA QUALITY CARBON STEEL WITH VERY FINEST HARDNESS CONTROLLED BY SPHEROIDIZE ANNEALING.
- SWAGE SOCKETS PROPERLY APPLIED HAVE AN EFFICIENCY RATING OF 100% BASED ON THE CATALOG STRENGTH OF WIRE ROPE.
- SWAGE SOCKETS ARE RECOMMENDED FOR USE WITH 6 × 19,6 × 37, AND IWRC WIRE ROPE, THEY ARE ALSO SATISFACTORY ON GALVAIZED BRIDGE ROPE.
- SWAGE SOCKETS ARE NOT RECOMMENDED FOR USE ON FIBER CORE OR LANG LAY ROPE.

ALL SLINGS SWAGED WITH SOCKETS SHALL BE PROOF LOADED IN ACCODANCE WITH ANSI B30.9

ROPE SIZE	BEFORE SWAGE DIMENSIONS (INCH)										MAX. AFTER SWAGE DIM.	N.W.
	INCH	L	D	B	D1	d	L1	W	K	C		
1/4	4.80	0.50	1.38	0.67	0.27	2.17	0.67	4.02	0.35	1.50	0.46	0.6
5/16	6.26	0.77	1.65	0.79	0.34	3.15	0.79	5.31	0.47	1.77	0.71	1.4
3/8	6.26	0.77	1.65	0.79	0.41	3.15	0.79	5.31	0.47	1.77	0.71	1.6
7/16	7.83	0.98	2.00	0.98	0.48	4.33	1.00	6.85	0.55	1.96	0.91	2.4
1/2	7.83	0.98	2.00	0.98	0.55	4.33	1.00	6.85	0.55	1.96	0.91	2.4
9/16	9.45	1.25	2.36	1.19	0.61	5.31	1.22	8.27	0.68	2.25	1.16	5.2
5/8	9.45	1.25	2.36	1.19	0.67	5.31	1.22	8.27	0.68	2.25	1.16	5.0
3/4	11.61	1.55	2.75	1.38	0.80	6.34	1.50	10.07	0.79	2.75	1.42	8.9
7/8	13.39	1.70	3.15	1.63	0.94	7.44	1.77	11.81	0.94	3.23	1.55	13.0
1	15.55	1.98	3.94	2.00	1.06	8.50	2.00	13.58	1.02	3.86	1.80	20.0
1-1/8	17.40	2.25	4.06	2.20	1.19	9.37	2.25	15.08	1.19	4.26	2.05	28.3
1-1/4	19.06	2.53	4.45	2.48	1.33	10.59	2.48	16.50	1.34	4.72	2.30	39.2
1-3/8	21.02	2.80	5.00	2.44	1.45	11.69	2.52	18.23	1.38	5.20	2.56	48.0
1-1/2	22.88	3.08	5.51	2.75	1.58	12.40	3.00	19.75	1.69	5.75	2.81	63.6
1-3/4	26.53	3.39	6.70	3.50	1.86	14.88	3.50	23.00	2.11	6.75	3.06	97.0
2	31.44	3.94	8.00	3.75	2.11	16.96	4.00	26.88	2.31	8.00	3.56	161.0

ROPE SIZE	BEFORE SWAGE DIMENSIONS (MM)										MAX. AFTER SWAGE DIM.	N.W.
	MM	L	D	B	D1	d	L1	W	K	C		
6-7	122	13	35	18	7	55	17	102	9	38	12	0.3
8	159	20	42	21	9	80	20	135	12	45	18	0.6
9-10	159	20	42	21	10	80	20	135	12	45	18	0.7
11-12	199	25	50	25	12	110	25	174	14	50	23	1.1
13	199	25	50	25	14	110	25	174	14	50	23	1.1
14-15	240	32	60	30	15	135	31	210	17	70	30	2.4
16	240	32	60	30	17	135	31	210	17	57	30	2.3
18-20	295	39	70	35	20	161	38	256	20	70	36	4.0
22-23	340	43	80	41	24	189	45	300	24	82	40	5.9
24-25	395	50	100	51	27	216	50	345	26	98	46	9.1
28	442	57	103	57	30	238	57	383	30	108	52	12.8
32	484	64	113	64	34	269	63	419	34	120	59	17.8
35-36	534	71	127	64	37	297	64	463	35	132	65	21.8
38	581	78	140	70	40	315	76	502	43	146	72	28.9
44-45	674	86	170	89	47	378	89	584	54	171	78	44.0
48-51	798	100	203	95	54	431	101	682	60	203	91	73.1

## FORGED OPEN SPELTER WIRE ROPE SOCKET, WITH SAFETY BOLT PIN.



- SPELTER SOCKETS ARE FORGED FROM SPECIAL BAR QUALITY CARBON STEEL WITH VERY FINEST HARDNESS CONTROLLED.
- SPELTER SOCKETS PROPERLY APPLIED HAVE AN EFFICIENCY RATING OF 100% BASED ON THE CATALOG STRENGTH OF WIRE ROPE.
- SOCKET SIZE 1/4" THRU 3/4" USE ONE GROOVE. 7/8" THRU 1-1/2" USE 2 GROOVES.
- OPEN SPELTER SOCKETS MEET THE PERFORMANCE REQUIREMENTS OF FEDERAL SPECIFICATION RR-S-550D, TYPE A.

IN ACCORDANCE WITH ASME B30.9 ALL ASSEMBLY SLINGS WITH Poured SPELTER SOCKETS, SHALL BE PROOF LOADED.

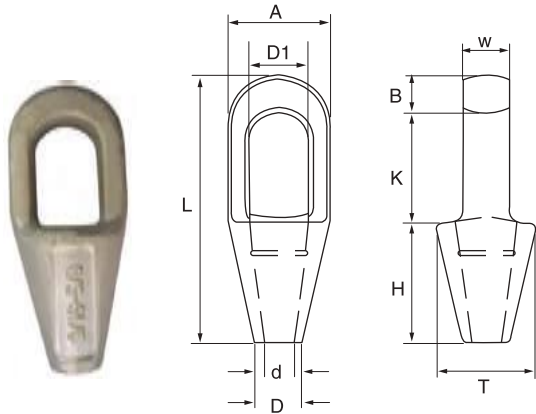
ROPE DIA.	STRUCTURAL STRAND DIA.	DIMENSIONS (INCH)										N.W.	
		L	W	D1	d	D	T	H	K	A	C		
INCH	INCH												LBS
1/4	---	4.65	0.91	0.67	0.38	0.71	1.54	2.25	1.56	1.31	0.35	1.5	
5/16 ~ 3/8	---	4.84	0.83	0.79	0.51	0.83	1.73	2.25	1.77	1.50	0.44	2.0	
7/16 ~ 1/2	---	5.62	1.00	0.98	0.56	0.98	1.96	2.48	2.13	1.91	0.50	3.5	
9/16 ~ 5/8	1/2	6.77	1.26	1.19	0.70	1.14	2.25	3.00	2.52	2.28	0.55	4.9	
3/4	9/16 ~ 5/8	7.96	1.50	1.38	0.81	1.26	2.64	3.52	3.00	2.64	0.62	7.5	
7/8	11/16 ~ 3/4	9.25	1.77	1.63	0.94	1.50	3.35	4.02	3.50	3.17	0.80	11.9	
1	13/16 ~ 7/8	10.55	2.05	2.00	1.14	1.75	3.75	4.48	4.02	3.78	0.91	18.7	
1 1/8	15/16 ~ 1	11.81	2.25	2.25	1.26	2.00	4.12	5.00	4.62	4.12	1.00	25.6	
1 1/4 ~ 1 3/8	1 1/16 ~ 1 1/8	13.20	2.52	2.50	1.50	2.25	4.72	5.51	5.00	4.75	1.14	35.2	
1 1/2	1 3/16 ~ 1 1/4	15.12	3.00	2.75	1.63	2.75	5.25	6.00	6.00	5.38	1.19	52.9	

◆ S.C = SELF COLORED.

ROPE DIA.	STRUCTURAL STRAND DIA.	DIMENSIONS (INCH)										N.W.	
		L	W	D1	d	D	T	H	K	A	C		
MM	MM												Kg
6-7	---	115	23	17	8	18	39	57	40	33	9	0.7	
8-10	---	123	21	20	13	21	44	57	45	38	11	0.9	
11-13	---	142	25	25	15	25	50	63	54	48	13	1.6	
14-16	13	172	32	30	18	29	57	76	64	58	14	2.2	
18-20	14-16	202	38	35	22	32	67	92	76	67	16	3.4	
22-23	18-20	235	45	41	24	38	85	102	89	80	20	5.4	
24-26	22-23	268	52	51	29	44	95	114	102	96	23	8.5	
28-30	24-25	300	57	56	32	51	105	127	117	105	25	11.6	
32-35	26-28	335	64	62	38	57	120	140	127	121	29	16.0	
36-39	30-32	384	76	70	41	70	133	152	152	137	30	24.0	

◆ S.C = SELF COLORED.

## FORGED OPEN SPELTER WIRE ROPE SOCKET, WITH ROUND PIN.



- SPELTER SOCKETS ARE FORGED FROM SPECIAL BAR QUALITY CARBON STEEL WITH VEY FINEST HARDNESS CONTROLLED.
- SPELTER SOCKETS PROPERLY APPLIED HAVE AN EFFICIENCY RATING OF 100% BASED ON THE CATALOG STRENGTH OF WIRE ROPE.
- SOCKET SIZE 1/4" THRU 3/4" USE ONE GROOVE, 7/8" THRU 1-1/2" USE 2 GROOVES.
- CLOSED SPELTER SOCKETS MEET THE PERFORMANCE REQUIREMENTS OF FEDERAL SPECIFICATION RR-S-550D, TYPE B.

IN ACCORDANCE WITH ASME B30.9 ALL ASSEMBLY SLINGS WITH Poured SPELTER SOCKETS, SHALL BE PROOF LOADED.

ROPE DIA.	STRUCTURAL STRAND DIA.	DIMENSIONS (INCH)										N.W.
		L	B	A	D1	d	D	T	H	W	K	
1/4	---	4.50	0.50	1.50	0.88	0.39	0.71	1.50	2.25	0.5	1.73	0.5
5/16 ~ 3/8	---	4.88	0.62	1.69	0.98	0.50	0.83	1.70	2.25	0.71	2.00	0.8
7/16 ~ 1/2	---	5.43	0.71	2.00	1.19	0.55	0.98	1.96	2.52	0.87	2.25	1.5
9/16 ~ 5/8	1/2	6.31	0.83	2.63	1.41	0.71	1.12	2.50	3.00	0.98	2.52	2.5
3/4	9/16 ~ 5/8	7.58	1.06	3.00	1.61	0.81	1.26	2.75	3.50	1.26	3.00	4.3
7/8	11/16 ~ 3/4	8.75	1.26	3.63	1.89	0.94	1.50	3.46	3.98	1.50	3.50	7.5
1	13/16 ~ 7/8	9.88	1.38	4.13	2.28	1.14	1.77	3.78	4.50	1.77	4.02	10.5
1 1/8	15/16 ~ 1	10.98	1.50	4.50	2.56	1.26	2.00	4.12	5.00	2.00	4.50	14.3
1 1/4 ~ 1 3/8	1 1/16 ~ 1 1/8	12.31	1.63	5.31	2.80	1.50	2.25	4.75	5.50	2.25	5.00	19.8
1 1/2	1 3/16 ~ 1 1/4	13.94	1.93	5.31	3.19	1.63	2.75	5.25	6.00	2.52	6.00	29.2

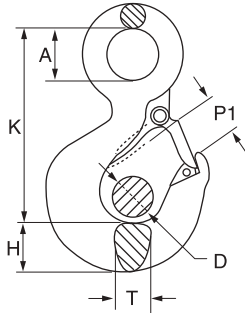
◆ S.C = SELF COLORED.

ROPE DIA.	STRUCTURAL STRAND DIA.	DIMENSIONS (INCH)										N.W.
		L	B	A	D1	d	D	T	H	W	K	
MM	MM	L	B	A	D1	d	D	T	H	W	K	Kg
6-7	---	114	13	38	22	10	18	38	57	13	44	0.2
8-10	---	124	16	43	25	13	21	43	57	18	51	0.4
11-13	---	138	18	51	30	14	25	50	64	22	57	0.7
14-16	13	160	21	67	36	18	28	63	76	25	64	1.1
18-20	14-16	192	27	76	41	21	32	70	89	32	76	2.0
22-23	18-20	222	32	92	48	24	38	88	101	38	89	3.4
24-26	22-23	251	35	104	58	29	45	96	114	45	102	4.8
28-30	24-25	279	38	114	65	32	51	105	127	50	114	6.5
32-35	26-28	308	41	135	71	38	57	121	140	57	127	9.0
36-39	30-32	354	49	135	81	41	70	133	152	64	152	13.3

◆ S.C = SELF COLORED.



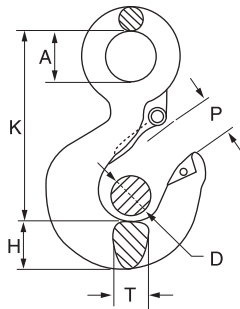
## ALLOY EYE HOIST HOOK, WITH LATCH.



- ◆ MINIMUM UTMATE LOAD IS 5 TIMES THE WORKING LOAD LIMIT.
- ◆ MINIMUM UTMATE LOAD IS 4 TIMES THE WORKING LOAD LIMIT.
- ◆ MAXIMUM PROOF LOAD IS 2 TIMES THE WORKING LOAD LIMIT.

WORKING LOAD LIMIT TONNES*	DIMENSIONS(MM)						N.W. Kg
	P1	A	T	H	K	D	
1★	22	19	14	19	85	22	0.2
1.5★	23	23	16	21	96	35	0.4
2★	25	29	20	26	107	26	0.6
3★	29	32	22	29	122	29	0.8
5★	38	40	30	37	150	38	1.9
7★	44	51	36	47	191	49	3.7
11★★	52	60	43	48	217	60	5.2
15★★	82	50	32	74	240	81	8.5
22★★	80	66	34	80	270	90	12.7
30★★	90	75	37	91	320	96	16.5

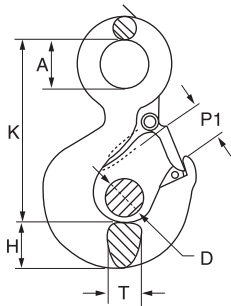
## ALLOY EYE HOIST HOOK, WITHOUT LATCH.



- ◆ MINIMUM UTMATE LOAD IS 5 TIMES THE WORKING LOAD LIMIT.
- ◆ MINIMUM UTMATE LOAD IS 4 TIMES THE WORKING LOAD LIMIT.
- ◆ MAXIMUM PROOF LOAD IS 2 TIMES THE WORKING LOAD LIMIT.

WORKING LOAD LIMIT TONNES*	DIMENSIONS(MM)						N.W. Kg
	P1	A	T	H	K	D	
1★	22	19	14	19	85	22	0.2
1.5★	23	23	16	21	96	35	0.4
2★	25	29	20	26	107	26	0.6
3★	29	32	22	29	122	29	0.8
5★	38	40	30	37	150	38	1.9
7★	44	51	36	47	191	49	3.7
11★★	52	60	43	48	217	60	5.2
15★★	82	50	32	74	240	81	8.5
22★★	80	66	34	80	270	90	12.7
30★★	90	75	37	91	320	96	16.5

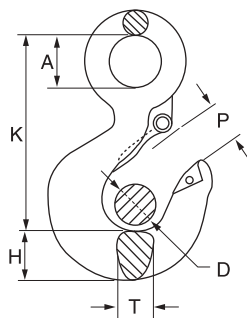
## RAPID DOUBLE END CHOKER.



- ◆ MINIMUM UTMATE LOAD IS 5 TIMES THE WORKING LOAD LIMIT
- ◆ MAXIMUM PROOF LOAD IS 2 TIMES THE WORKING LOAD LIMIT.

WORKING LOAD LIMIT TONNES*	DIMENSIONS(MM)						N.W. Kg
	P1	A	T	H	K	D	
0.75	22	19	14	19	85	22	0.2
1	23	23	18	21	96	35	0.4
1.5	25	29	20	26	107	26	0.6
2	29	32	22	29	122	29	0.8
3	38	40	30	37	150	38	1.9
5	44	51	36	47	191	49	3.7

## CARBON EYE HOIST HOOK. WITHOUT LATCH.



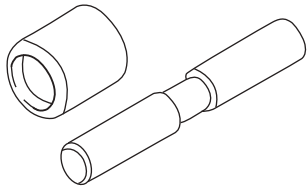
- ◆ MINIMUM UTMATE LOAD IS 5 TIMES THE WORKING LOAD LIMIT.
- ◆ MAXIMUM PROOF LOAD IS 2 TIMES THE WORKING LOAD LIMIT.

WORKING LOAD LIMIT TONNES*	DIMENSIONS(MM)						N.W. Kg
	P1	A	T	H	K	D	
0.75	22	19	14	19	85	22	0.2
1	23	23	18	21	96	35	0.4
1.5	25	29	20	26	107	26	0.6
2	29	32	22	29	122	29	0.8
3	38	40	30	37	150	38	1.9
5	44	51	36	47	191	49	3.7

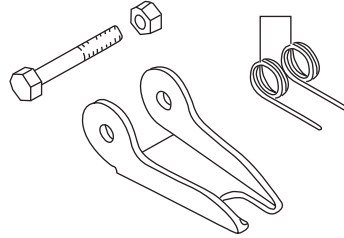
## COUPLING PIN & SLEEVE SET.

## LATCH KITS.

FOR 8-801, 8-701



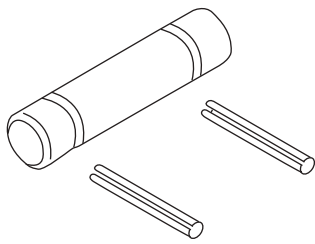
SIZE		WORKING LOAD LIMIT
INCH	MM	LBS
7/32	6	2,100
1/4 ~ 5/16	7	4,500
3/8	10	7,100
1/2	13	12,000
5/8	16	18,100
3/4	18/20	28,300
7/8	22	34,200
1	26	47,700
1-1/4	32	72,300



HOOK SIZE	
ALLOY	CARBON
8-801-01t	8-701-0.75t
8-801-015t	8-701-1t
8-801-02t	8-701-1.5t
8-801-03t	8-701-2t
8-801-05t	8-701-3t
8-801-07t	8-701-5t

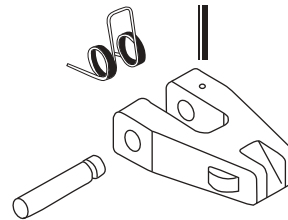
## LOAD PIN KITS.

## COUPLING PIN & SLEEVE SET.



SIZE		WORKING LOAD LIMIT
INCH	MM	LBS
7/32	6	2,100
1/4 ~ 5/16	7	4,500
3/8	10	7,100
1/2	13	12,000
5/8	16	18,100
3/4	18/20	28,300

FOR 8-081



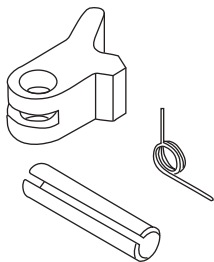
SIZE
TON
1
2
3
4
5
8
10

## TRIGGER KITS.

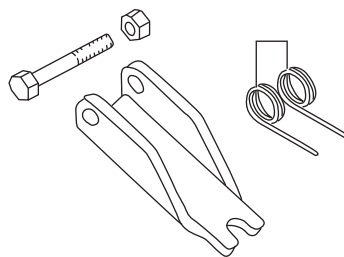
## LATCH KITS.

FOR 8-023, 8-024,  
8-025, 8-026, 8-027

FOR 8-044, 8-043,



SIZE	
INCH	LBS
7/32	6
1/4 ~ 5/16	7
3/8	10
1/2	13
5/8	16
3/4	18/20
7/8	22
1	26
1-1/4	32



SIZE	
INCH	LBS
7/32	6
1/4 ~ 5/16	7
3/8	10
1/2	13
5/8	16
3/4	18/20
7/8	22
1	26
1-1/4	32

## HANDLE TYPE



ITEM NC	CAPACITY (TONS)	CISMPING FONGE	DIMENSIONS (MM)											WEIGHT (KG)
			L	M	T2	T	h1	h2	M	b1	b2	B	D	
SVC-1/2H	0.5	0-10	250	12	45	86	60	24	158	36	26	131	36	3
SVC-1H	1	0-25	310	16	59	86	69	24	185	42	32	152	48	6
SVC-2H	2	0-30	375	18	71	86	77	30	210	48	39	172	60	10.5
SVC-3H	3	0-35	405	20	75	86	81	34	225	51	42	182	66	12.5
SVC-5H	5	0-40	455	22	86	88	94	45	260	60	52	213	84	20.5



杭州腾力工贸有限公司 **ATLI INDUSTRY CO.,LIMITED**





杭州腾力工贸有限公司 ATLI INDUSTRY CO.,LIMITED

**SALES CENTER:**

ATLI INDUSTRY CO.,LIMITED  
 杭州腾力工贸有限公司  
 NO.1-1207 Tongren Jinhua Bld  
 NO.616,Gudun Rd.HangZhou,310015,ZheJing,China  
 浙江省杭州市古墩路616号同人精华大厦1号楼1207室  
 www.atli.cn sales@atli.cn  
 TEL:+86571 85839980 FAX:+86571 85839982

**PRODUCTION CENTER:**

ATLI CHINA INDUSTRY(JINHUA)CO.,LTD  
 金华市腾力链业有限公司  
 浙江省金华市金东园十八里工业园  
 NO.120 , Shibali industry Zone 321000,JinHua,ZheJing,China  
 www.atlichain.com sales@atlichain.com  
 TEL:+86571 85839981 FAX:+86571 85839982