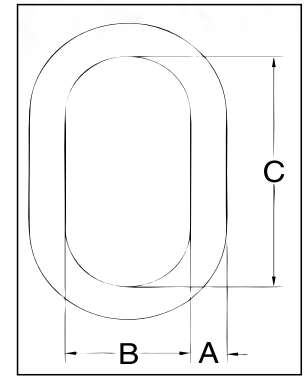


Alloy Master Links



A-342
Alloy Master
Links

- Alloy Steel — Quenched and Tempered.
- Individually Proof Tested to values shown, with certification.
- Proof Tested with 60% inside width special fixtures sized to prevent localized point loading per ASME A-952 , reference page 276.
- Forgings have a Product Identification Code (PIC) for material traceability, along with the size, the name Crosby and USA in raised lettering.
- Selected sizes designated with "W" in the size column have enlarged inside dimensions to allow additional room for sling hardware and crane hook.
- Crosby 32mm to 51mm 342/345 master links are type approved to DNV Certification Notes 2.7-1- Offshore Containers. These Crosby master links are 100% proof tested, MPI and impact tested. The tests are conducted by Crosby and 3.1 test certification is available upon request. Refer to page 164 for Crosby COLD TUFF® master links that meet the additional requirements of DNV rules for certification of lifting appliances - Loose Gear.
- Incorporates patented **QUIC-CHECK®** deformation indicators.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these links meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.



Load Rated

Fatigue Rated



A-342 Alloy Master Links

Size		A-342 Stock No.	Weight Each (kg)	WLL S.F.= 5/1 for Rope (t)*	Proof Load (kN)**	Dimensions (mm)			Deformation Indicator
(mm)	(in.)					A	B	C	
13W	1/2W	1014266	0.59	3.40	77	13	71.1	127	89
16	5/8	1014280	0.69	4.00	80	16	76.2	152	89
19W	3/4W	1014285	0.91	5.60	126	19	81.3	152	102
22W	7/8W	1014319	1.50	6.90	157	22	95.3	162	114
26W	1W	1014331	2.77	11.8	267	26	109	191	140
32W	1-1/4W	1014348	5.44	17.7	402	32	140	241	178
32W	1-1/4W	1262505†	4.17	16.4†	403	32	111	222	140
38W	1-1/2W	1014365	8.44	27.7	628	38	150	267	191
38W	1-1/2W	1262514†	7.21	24.6†	604	38	133	267	165
44	1-3/4	1014388	11.4	38.5	944	44	152	305	191
44	1-3/4	1262523†	11.2	38.5†	944	44	152	305	191
51	2	1014404	16.8	46.5	1141	51	178	356	229
51	2	1262532†	17.1	46.5†	1141	51	178	356	229
57	2-1/4	1014422	24.5	64.9	1287	57	203	406	254
63	2-1/2	1014468	31.1	72.6	1423	63	213	406	279
70	2-3/4	1014440	42.6	98.4	1930	70	251	457	318
76	3	1014486	52.0	103	2029	76	251	457	330
83	3-1/4	1014501	66.0	119	2332	83	254	508	343
89	3-1/2	1014529	91.0	126	2483	89	305	610	394
95	3-3/4	1015051	90.0	152	2990	95	254	508	343
102	4	1015060	120	169	3319	102	305	610	406
†† 108	†† 4-1/4	1015067	137	160	3150	108	305	610	-
†† 114	†† 4-1/2	1015079	156	163	3202	114	356	711	-
†† 121	†† 4-3/4	1015088	198	176	3460	121	356	711	-
†† 127	†† 5	1015094	234	179	3515	127	381	762	-

*Ultimate Load is 5 times the Working Load Limit. Based on single leg sling (in-line load), or resultant load on multiple legs with an included angle less than or equal to 120 degrees. Applications with wire rope and synthetic sling generally require a design factor of 5. **Proof Test Load equals or exceeds the requirement of ASTM A952(8.1) and ASME B30.9. †Ultimate Load is 4 times the Working Load Limit for Offshore Container Master Links. †Offshore Container Master Links Proof Tested to 2.5 times the Working Load Limit with 70 percent fixtures.



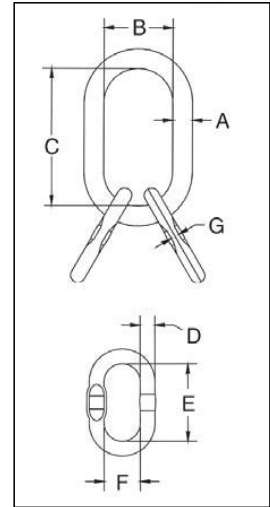
For use with chain slings, refer to page 243 for sling ratings and page 240 for proper master link selection.

Alloy Master Links with Engineered Flat



A-345
Alloy Master
Links

- Alloy Steel — Quenched and Tempered.
- Individually Proof Tested to values shown, with certification.
- Proof Tested with 60% inside width special fixtures sized to prevent localized point loading per ASME A-952 , reference page 276.
- Forgings have a Product Identification Code (PIC) for material traceability, along with the size, the name Crosby and USA in raised lettering.
- Selected sizes designated with "W" in the size column have enlarged inside dimensions to allow additional room for sling hardware and crane hook.
- Crosby 32mm to 51mm 342/345 master links are type approved to DNV Certification Notes 2.7-1- Offshore Containers. These Crosby master links are 100% proof tested, MPI and impact tested. The tests are conducted by Crosby and 3.1 test certification is available upon request. Refer to page 164 for Crosby COLD TUFF® master links that meet the additional requirements of DNV rules for certification of lifting appliances - Loose Gear.
- Incorporates patented **QUIC-CHECK®** deformation indicators.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these links meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.



Load Rated

Fatigue Rated



MAXTOUGH



A-345 Master Link Assembly with Engineered Flat for use with S-1325A coupler link.

Size		A-345 Stock No.	Weight Each (kg)	Working Load Limit Based on 5:1 Design Factor (t)*	Proof Load (kN)**	Dimensions (mm)							Deformation Indicator
(mm)	(in.)					A	B	C	D	E	F	G	
19W	3/4W	1014739	1.59	5.6	126	19	81.3	152	14.2	85.1	45.0	7.62	102
22W	7/8W	1014742	2.18	6.9	157	22	95.3	162	14.2	85.1	45.0	7.62	114
26W	1W	1014766	4.22	11.8	267	26	109	191	19.1	100	59.9	8.38	140
32W	1-1/4W	1014779	7.17	17.7	402	32	140	241	25.4	160	89.9	13.0	178
32W	1-1/4W	126260	12.5	16.4†	403	32	111	222	32	222	111	-	140
38W	1-1/2W	1014807	15.47	27.7	628	38	150	267	31.8	180	100	16.5	191
38W	1-1/2W	1262612	21.6	24.6†	604	38	133	267	38	267	133	-	160
44	1-3/4	1014814	20.9	38.5	944	44	152	305	35.1	203	127	18.5	191
44	1-3/4	1262621	33.7	38.5†	944	44	152	305	44	305	152	-	191
51	2	1014832	30.4	46.5	1141	51	178	356	38.1	229	146	-	229
51	2	1262630	51.3	46.5†	1141	51	178	356	51	356	178	-	229
64	2-1/2	1014855	93.4	72.6	1423	64	213	406	63.5	406	213	-	279
70	2-3/4	1014864	128	98.4	1929	70	251	457	69.9	457	251	-	318
102	4	1014999	303	169	3319	102	305	610	89.0	610	305	-	394***

* Ultimate Load is 5 times the Working Load Limit. The maximum individual sublink working load limit is 75% of the assembly working load limit except for 2-1/2" and 2-3/4", which are 100% of assembly working load limit. Applications with wire rope and synthetic sling generally require a design factor of 5. **Proof Test Load equals or exceeds the requirement of ASTM A952(8.1) and ASME B30.9. †† Welded Master Link. † Ultimate Load is 4 times the Working Load Limit for Offshore Container Master Links. ‡ Offshore Container Master Links Proof Tested to 2.5 times the Working Load Limit with 70 percent fixtures.



For use with chain slings, refer to page 244 for sling ratings and page 240 for proper master link selection.

RIGGING ACCESSORIES

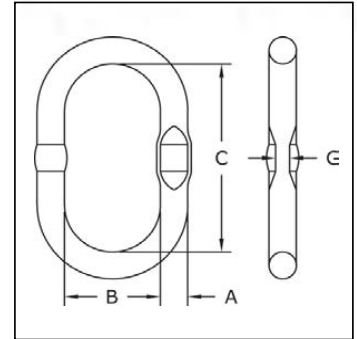
Welded Master Links with Engineered Flat



A-344
Welded Master Links

Ultimate Load is 5 times the Working Load Limit. Applications with wire rope and synthetic sling generally require a design factor of 5. Based on single leg sling (in-line load), or resultant load on multiple legs with an included angle less than or equal to 120 degrees. ** Proof Test Load equals or exceeds the requirement of ASTM A952(8.1) and ASME B30.9. For use with chain slings, refer to page 245 for sling ratings and page 240 for proper master link selection.

- Alloy Steel — Quenched and Tempered.
- Individually Proof Tested to values shown, with certification.
- Proof Tested with 60% inside width special fixtures sized to prevent localized point loading per ASME A-952 , reference page 276.
- Forgings have a Product Identification Code (PIC) for material traceability, along with the size, the name Crosby and USA in raised lettering.
- Selected sizes designated with "W" in the size column have enlarged inside dimensions to allow additional room for sling hardware and crane hook.
- Crosby 12mm to 57mm 344/347 master links are type approved to DNV Certification Notes 2.7-1- Offshore Containers. These Crosby master links are 100% proof tested, MPI and impact tested. The tests are conducted by Crosby and 3.1 test certification is available upon request. Refer to page 164 for Crosby COLD TUFF® master links that meet the additional requirements of DNV rules for certification of lifting appliances - Loose Gear.
- Incorporates patented **QUIC-CHECK®** deformation indicators.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these links meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.



A-344 Welded Master Links with Engineered Flat

Size		A-344 Stock No.	Weight Each (kg)*	Working Load Limit (t)*	Proof Load (kN)**	Dimensions (mm)				Engineered Flat Size for S-1325A (mm)
(mm)	(in.)					A	B	C	G	
12	7/16	1256862	.30	1.60	39	12.0	60.0	120	6.50	6
13	1/2	1256932	.36	2.50	61	13.0	60.0	120	6.50	7-8
17	11/16	1257002	.86	4.10	101	17.0	90.0	160	8.50	10
19	3/4	1257072	1.08	6.70	164	19.0	90.0	160	8.50	10
20	3/4	1257082	1.17	6.70	164	20.0	80.0	150	—	—
22	7/8	1257214	1.59	8.50	208	22.0	90.0	170	—	—
22	7/8	1257212	1.63	8.50	208	22.0	100	180	10.5	13
22	7/8	1257215	2.39	6.30	154	22.0	145	275	—	—
25	1	1257282	2.43	11.5	282	25.0	115	210	13.5	16
25	1	1257302	2.31	11.5	282	25.0	100	190	—	—
25	1	1257332	3.35	8.90	218	25.0	145	275	—	—
28	1-1/8	1257352	3.22	12.9	316	28.0	110	210	—	—
28	1-1/8	1257382	3.91	13.0	319	28.0	145	275	13.5	16
31	1-7/32	1257422	4.86	17.0	417	31.0	145	275	15.5	—
32	1-1/4	1257442	5.30	17.0	417	32.0	140	270	—	—
36	1-7/16	1257492	6.87	24.0	588	36.0	155	285	—	—
38	1-1/2	1257502	7.63	31.5	772	38.0	140	270	—	—
40	1-9/16	1257532	8.96	28.1	689	40.0	160	300	—	—
45	1-3/4	1257569	10.31	32.0	785	45.0	140	250	—	—
45	1-3/4	1257564	12.70	38.3	939	45.0	170	320	—	—
45	1-3/4	1257562	12.82	38.3	939	45.0	180	340	—	—
50	1-31/32	1257582	17.60	45.0	1103	50.0	200	380	—	—
51	2	1257632	18.72	45.0	1103	51.0	215	390	—	—
57	2-1/4	1257652	24.5	65.3	1601	57.0	203	406	—	—

*Ultimate Load is 5 times the Working Load Limit. The maximum individual sublink working load limit is 75% of the assembly working load limit except for 63.5 and 70mm, which are 100% of assembly working load limit. Applications with wire rope and synthetic sling generally require a design factor of 5. *There are no manufactured flats on links over 31mm (24.4). **Proof Test Load equals or exceeds the requirement of ASTM A952(8.1) and ASME B30.9.



For use with chain slings, refer to page 245 for sling ratings and page 243 for proper master link selection.

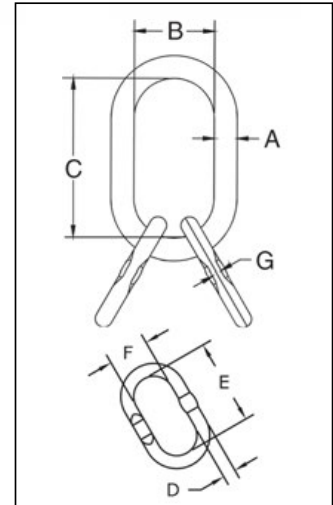
Welded Master Links with Engineered Flat



A-347
Welded Master Links

Ultimate Load is 5 times the Working Load Limit. Applications with wire rope and synthetic sling generally require a design factor of 5. Based on single leg sling (in-line load), or resultant load on multiple legs with an included angle less than or equal to 120 degrees. ** Proof Test Load equals or exceeds the requirement of ASTM A952(8.1) and ASME B30.9. For use with chain slings, refer to page 245 for sling ratings and page 240 for proper master link selection.

- Alloy Steel — Quenched and Tempered.
- Individually Proof Tested to values shown, with certification.
- Proof Tested with 60% inside width special fixtures sized to prevent localized point loading per ASME A-952, reference page 276.
- Forgings have a Product Identification Code (PIC) for material traceability, along with the size, the name Crosby and USA in raised lettering.
- Selected sizes designated with “W” in the size column have enlarged inside dimensions to allow additional room for sling hardware and crane hook.
- Crosby 12mm to 57mm 344/347 master links are type approved to DNV Certification Notes 2.7-1- Offshore Containers. These Crosby master links are 100% proof tested, MPI and impact tested. The tests are conducted by Crosby and 3.1 test certification is available upon request. Refer to page 164 for Crosby COLD TUFF® master links that meet the additional requirements of DNV rules for certification of lifting appliances - Loose Gear.
- Incorporates patented **QUIC-CHECK®** deformation indicators.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these links meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.



A-347 Welded Master Link with Engineered Flat

Size		A-347 Stock No.	Weight Each (kg)	Working Load Limit (t)*	Proof Load (kN)**	Dimensions (mm)							Engineered Flat Size for S-1325A (mm)
(mm)	(in.)					A	B	C	D	E	F	G	
13/12	1/2	1257692	.81	2.40	59	13.0	60.0	120	12.0	85.0	45.0	6.00	6
17/13	11/16	1257762	1.56	4.10	101	17.0	90.0	160	13.0	120	60.0	6.50	7
19/13	3/4	1257832	1.80	4.25	104	19.0	90.0	160	13.0	120	60.0	6.50	8
22/20	7/8	1257977	3.93	8.50	208	22.0	90.0	170	20.0	150	80.0	-	-
22/17	7/8	1257972	3.35	6.7	164	22.0	100	180	17.0	160	90.0	8.50	10
22/16	7/8	1257979	3.53	5.80	142	22.0	145	275	16.0	120	60.0	-	-
25/20	1	1258122	4.65	10.7	262	25.0	100	190	20.0	150	80.0	-	-
25/19	1	1258102	5.51	8.90	218	25.0	145	275	19.0	160	90.0	-	-
28/22	1-1/8	1258162	6.40	12.9	316	28.0	110	210	22.0	170	90.0	-	-
28/22	1-1/8	1258142	7.17	14.5	355	28.0	145	275	22.0	180	100	10.5	13
31/25	1-7/32	1258182	9.72	17.0	417	31.0	145	275	25.0	210	115	13.5	16
32/25	1-1/4	1258202	9.92	17.0	417	32.0	140	270	25.0	190	100	-	-
36/28	1-3/8	1258222	12.20	23.6	579	36.0	145	275	28.0	190	100	-	-
38/32	1-1/2	1258224	18.23	28.1	689	38.0	140	270	32.0	270	140	-	-
40/31	1-9/16	1258332	18.68	28.1	689	40.0	160	300	31.0	275	145	-	-
45/38	1-3/4	1258422	27.96	38.3	939	45.0	170	320	38.0	270	140	-	-
45/36	1-3/4	1258402	26.56	38.3	939	45.0	180	340	36.0	285	155	-	-
50/38	2	1258442	32.86	45.0	1103	50.0	200	380	38.0	270	140	-	-
51/45	2	1258462	42.92	45.0	1103	51.0	190	350	45.0	340	180	-	-
57/50	2-1/4	1258482	59.70	67.0	1643	57.0	203	406	50.0	380	200	-	-

*Ultimate Load is 5 times the Working Load Limit. The maximum individual sublink working load limit is 75% of the assembly working load limit except for 63.5 and 70mm, which are 100% of assembly working load limit. Applications with wire rope and synthetic sling generally require a design factor of 5. **Proof Test Load equals or exceeds the requirement of ASTM A952(8.1) and ASME B30.9. *** Sublink only.

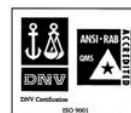
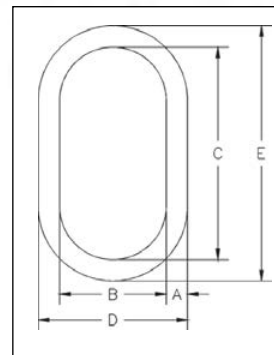


For use with chain slings, refer to page 246 for sling ratings and page 240 for proper master link selection.



A-342CT
Master Links

- Alloy Steel - Quenched and Tempered
- Individually proof tested at 2 times Working Load Limit with certification.
- Finish is Inorganic Zinc Primer.
- Certified to meet charpy impact testing of 42J. min. avg. at -20° C.
- Individually serialized and all certification shipped with each link.
- COLD TUFF® master links are suitable for use at -46° C.
- Type Approval and certification in accordance with DNV 2.7-1 Offshore Containers, DNV-OS-E101, and Rules for Certification of Lifting Appliances, and are produced in accordance with DNV MSA requirements, including required documents.
- Refer to page 88 for COLD TUFF® Shackles.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these fittings meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.



A-342CT Master Links

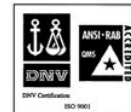
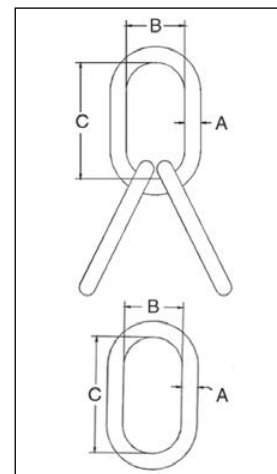
Size (mm)	A-342CT Stock No.	Working Load Limit (t)*	Weight Each (kg)	Dimensions (mm)					Deformation Indicator
				A	B	C	D	E	
31.8W	1261407	15.9	5.44	33.8	140	241	207	309	178
38.1W	1261418	27.7	8.44	40.9	149	267	231	348	191
44.5	1261423	28.3	11.4	44.5	152	305	241	394	191
51.0	1261433	44.3	16.8	51.0	178	356	279	457	229

*Minimum Ultimate Load is 5 times the Working Load Limit.



A-345CT
Master Links
Assembly

- Alloy Steel - Quenched and Tempered
- Individually proof tested at 2 times Working Load Limit with certification.
- Finish is Inorganic Zinc Primer.
- Certified to meet charpy impact testing of 42J. min. avg. at -20° C.
- COLD TUFF® master links are suitable for use at -46° C.
- Type Approval and certification in accordance with DNV 2.7-1 Offshore Containers, DNV-OS-E101, and Rules for Certification of Lifting Appliances, and are produced in accordance with DNV MSA requirements, including required documents.
- Refer to page 88 for COLD TUFF® Shackles.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these fittings meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.



A-345CT Master Link Assembly

Size (mm)	A-345CT Stock No.	Working Load Limit (t)*	Weight Each (kg)	Dimensions (mm)		
				A	B	C
31.8	1261609	15.9	13.6	31.8	111	222
38.1	1261620	21.7	23.1	38.1	133	267
44.5	1261631	28.3	35.4	44.5	152	305
51.0	1261642	44.3	56	51.0	178	356

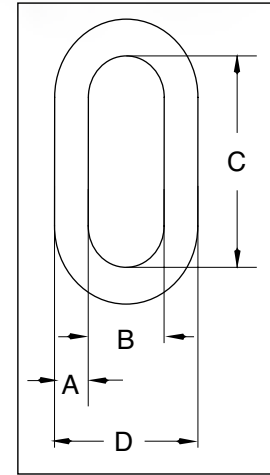
*Minimum Ultimate Load is 5 times the Working Load Limit.

Pear Shaped Links



G-340 / S-340
Weldless End Link

- Forged carbon steel - Quenched and Tempered
- Self Colored or Hot Dip Galvanized.



G-340 from 16 mm thru 22mm meet the performance requirements of Federal Specification RR-C-271F, Type XV, except for those provisions required of the contractor. For additional information, see page 450.



G-340/S-340 Weldless End Links

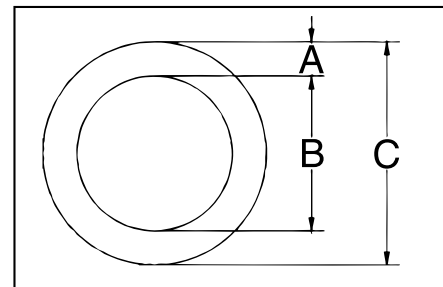
Stock No.		Working Load Limit (t)*	Weight Each (kg)	Dimensions (mm)			
G-340 Galv.	S-340 S.C.			A	B	C	D
1014057	1014066	1.13	.07	8	12.7	44.5	30.0
1014075	1014084	1.72	.10	10	14.2	47.8	35.1
1014093	1014100	2.95	.22	13	19.1	60.5	46.0
1014119	1014128	4.22	.44	16	25.4	82.5	59.0
1014137	1014146	6.35	.68	19	28.7	89.0	68.0
1014155	1014164	5.44	1.17	22	51.0	130	95.5
1014173	1014182	6.89	1.79	25	57.0	146	108
1014191	1014208	11.97	3.31	32	63.5	178	127
1014217	1014226	13.61	4.71	35	70.0	197	140

*Ultimate Load is 5 times the Working Load Limit. Based on single leg sling (in-line load), or resultant load on multiple legs with an included angle less than or equal to 120°.



S-643
Weldless Rings

- Forged carbon steel - Quenched and Tempered.
- Self Colored



Weldless Rings meet the performance requirements of Federal Specification RR-C-271F Type VI, except for those provisions required of the contractor. For additional information, see page 450.



S-643 Weldless Rings

Size (mm)	S-643 Stock No	Working Load Limit Single Pull (t)*	WeightEach (kg)	Dimensions (mm)		
				A	B	C
22.2 x 102	1013780	3.27	1.23	22.2 x 102	102	146
22.2 x 140	1013806	2.54	1.57	22.2 x 140	140	184
25.4 x 102	1013824	4.90	1.67	25.4 x 102	102	152
28.6 x 152	1013842	4.72	2.99	28.6 x 152	152	210
31.8 x 127	1013860	7.71	3.09	31.8 x 127	127	191
34.9 x 152	1013888	8.62	4.59	34.9 x 152	152	222

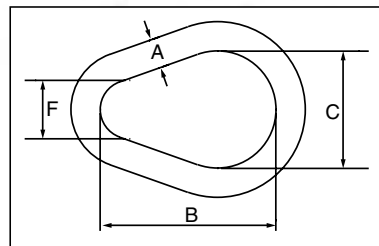
*Ultimate Load is 6 times the Working Load Limit.

Pear Shaped Links



A-341
Alloy Pear Shaped Links

- Alloy Steel - Quenched and Tempered
- Individually Proof Tested at 2 times Working Load Limit with certification.
- Proof Test certification shipped with each link.
- Sizes 13mm, 16mm, 19mm, 22mm, 25mm, 32mm and 35mm are forged.



A-341 Alloy Pear Shaped Links

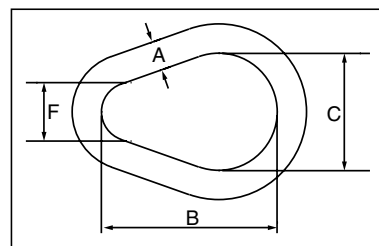
Stock Size (A) (mm)	A-341 Stock No	Working Load Limit		Weight Each (kg)	Dimensions (mm)		
		(t)*	(lbs.)		B	C	F
13	1013575	3.15	7000	.25	76.2	50.8	25.4
16	1013584	4.09	9000	.50	95.3	63.5	31.8
19	1013595	5.59	12300	.80	114	76.2	38.1
22	1013604	6.81	15000	1.28	133	88.9	44.5
25	1013613	11.0	24360	1.91	152	102	51.0
28	1013622	13.9	30600	2.83	171	114	57.0
32	1013631	16.4	36000	3.74	191	127	63.5
35	1013640	19.5	43000	5.10	210	140	70.0
†† 38	1013649	24.7	54300	6.46	229	152	76.0
†† 42	1013658	28.4	62600	8.39	248	165	82.5
†† 44	1013667	38.6	84900	10.2	267	178	89.0
†† 48	1013676	43.5	95800	13.2	286	191	95.5
†† 51	1013685	46.6	102600	15.4	305	203	102
†† 57	1013694	65.0	143100	21.8	343	229	114
†† 64	1013703	66.9	147300	29.9	381	254	127
†† 70	1013712	98.6	216900	39.9	419	279	140
†† 76	1013721	103	228000	52	457	305	152
†† 83	1013730	119	262200	66	495	330	165
†† 89	1013739	126	279000	82	533	356	178
†† 102	1013748	169	373000	123	610	406	203

*Based on single leg sling (in-line load), or resultant load on multiple legs with an included angle less than or equal to 120°. Minimum Ultimate load is 5 times the Working Load Limit. †† Welded Link.



G-341 / S-341
Weldless Sling Link

- Forged carbon steel - Quenched and Tempered.
- Self Colored or Hot Dip galvanized.



G-341 / S-341 Weldless Sling Links

Size (A) (mm)	Stock No.		Working Load Limit Single Pull (t.)*	Weight Each (kg)	Dimensions (mm)		
	G-341 Galv.	S-341 S.C.			B	C	F
10	1013897	1013904	.82	0.10	57.2	38.1	19.1
13	1013913	1013922	1.32	.25	76.2	50.8	25.4
16	1013931	1013940	1.91	.48	95.5	63.5	31.8
19	1013959	1013968	2.72	.85	114	76.2	38.1
22	1013977	1013986	3.76	1.25	133	88.9	44.5
25	1013995	1014002	4.90	1.97	152	102	51.0
32	1014011	1014020	7.60	3.45	197	127	63.5
35	1014039	1014048	9.30	5.13	210	140	70.0

*Ultimate Load is 6 times the Working Load Limit. Based on single leg sling (in-line load), or resultant load on multiple legs with an included angle less than or equal to 120°.