

Essential Performance Properties

Lesson Focus: Overall performance requirements, not just strength, are critical factors that must be considered for proper Master Link selection.

Strength is important, but it is just one of the four essential performance characteristics that must be taken into consideration during product selection. Master links must have the strength to lift their rated capacity. However, material strength is determined by hardness, and higher hardness generally reduces ductility. In harsh rigging environments, material strength must be managed with three other characteristics to create a durable, dependable product. Hardness (strength) must be balanced against *ductility* which allows for deformation before failure, *toughness* which provides resistance to crack initiation and growth and *fatigue* which allows for repeated application of a load. Achieving the perfect balance of all four characteristics is where Crosby's expertise excels.

Recent incidents in the Gulf of Mexico involving competitor's master links reinforce the need to consider overall *performance*. The events forced a leading oil company to conduct an extensive review of lifting products used within their operations. The investigation concluded the incidents were caused by a combination of two contributing factors. One, the metallurgical properties of the master links and two, the environment to which the links were exposed.

As a result of the findings, the company modified their specifications to approve only those manufacturers who supply master links that meet new, more stringent requirements.

CROSBY WAS APPROVED

Crosby's **standard** master links meet the new specifications.

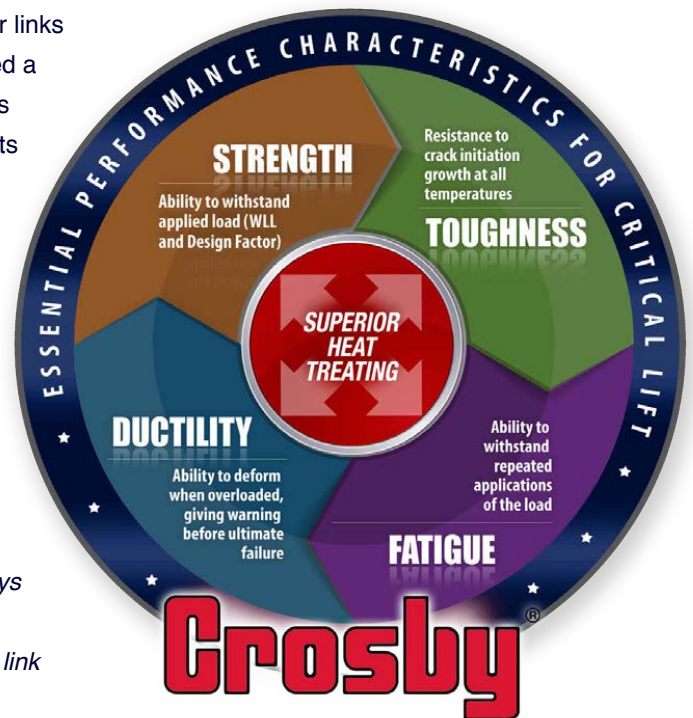
Why? The metallurgical properties of Crosby master links have always defined the industry standard, and our commitment to ensure the "Essential Performance Characteristics" are met in every master link we produce.

Throughout our 100 plus year history, Crosby has strived to maintain the necessary balance of performance properties for lifting products. This hasn't happened by chance, but rather through disciplined and rigorous engineering design, which includes raw material selection (highest quality available), heat treating (utilizing our perfected Quench and Tempering process) and stringent quality control.

*Bottom line: Crosby will not sacrifice one performance property at the expense of the other three. Strength, Toughness, Ductility and Fatigue must all work together to provide a safe and reliable lifting environment. The result – the **peace of mind** you and your team deserve when making a critical lift.*

How do Crosby's "off the shelf" master links benefit you?

Bottom line, Crosby's "off the shelf" master links meet the new stringent specifications without the need for additional time-consuming and expensive testing.



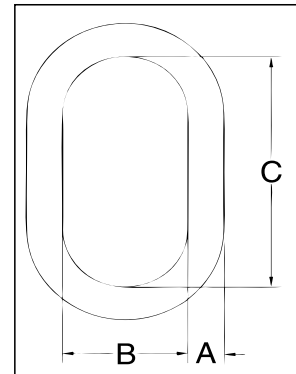


ALLOY MASTER LINKS



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 275.
- 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 1 ¼” to 2” 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 167 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-342 Alloy Master Links

Size		A-342 Stock No	Weight Each (lbs.)	Working Load Limit (lbs.)*	Proof Load (lbs.)**	Dimensions (in.)			
(in.)	(mm)					A	B	C	Deformation Indicator
1/2W	13W	1014266	1.3	7400	17200	.62	2.80	5.00	3.50
7/8W	22W	1014319	3.3	15200	35200	.88	3.75	6.38	4.50
1W	26W	1014331	6.1	26000	60000	1.10	4.30	7.50	5.50
1-1/4W	32W	1014348	12.0	39100	90400	1.33	5.50	9.50	7.00
1-1/2W	38W	1014365	18.6	61100	141200	1.61	5.90	10.50	7.50
1-3/4	44	1014388	25.2	84900	212250	1.75	6.00	12.00	7.50
2	51	1014404	37.0	102600	256500	2.00	7.00	14.00	9.00
2-1/4	57	1014422	54.1	143100	289200	2.25	8.00	16.00	10.00
2-1/2	63	1014468	68.5	160000	320000	2.50	8.38	16.00	11.00
2-3/4	70	1014440	94.0	216900	433800	2.75	9.88	18.00	12.50
3	76	1014486	115	228000	456000	3.00	9.88	18.00	13.00
3-1/4	83	1014501	145	262200	524400	3.25	10.00	20.00	13.50
3-1/2	89	1014529	200	279000	558000	3.50	12.00	24.00	15.50
3-3/4	95	1015051	198	336000	672000	3.75	10.00	20.00	13.50
4	102	1015060	264	373000	746000	4.00	12.00	24.00	16.00
†† 4-1/4	†† 108	1015067	302	354000	708000	4.25	12.00	24.00	-
†† 4-1/2	†† 114	1015079	345	360000	720000	4.50	14.00	28.00	-
†† 4-3/4	†† 121	1015088	436	389000	778000	4.75	14.00	28.00	-
†† 5	†† 127	1015094	516	395000	790000	5.00	15.00	30.00	-

*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. †† Welded Master Link.

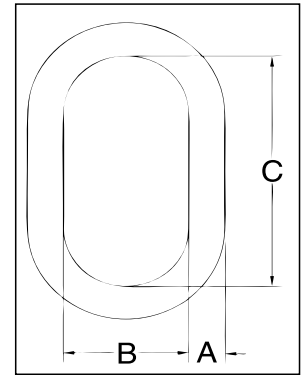


ALLOY MASTER LINKS



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 275.
- 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 167 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-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)			
(mm)	(in.)					A	B	C	Deformation Indicator
13W	1/2W	1014266	0.59	3.40	77	13	71.1	127	89
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
38W	1-1/2W	1014365	8.44	27.7	628	38	150	267	191
44	1-3/4	1014388	11.4	38.5	944	44	152	305	191
51	2	1014404	16.8	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. †† Welded Master Link.

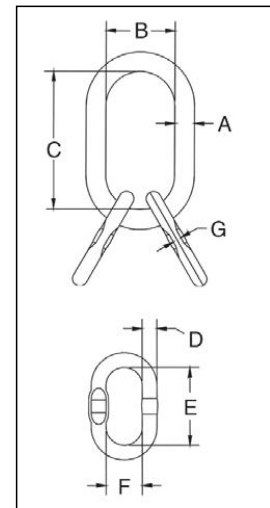


ALLOY MASTER LINKS



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 275.
- 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 1 1/4" to 2" 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 167 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 (lbs.)	Working Load Limit Based on 5:1 Design Factor (lbs.)*	Proof Load (lbs.)**	Dimensions (in.)							Deformation Indicator
(in.)	(mm)					A	B	C	D	E	F	G	
3/4W	19W	1014739	3.5	12300	28400	.73	3.20	6.00	.56	3.35	1.77	.30	4.00
7/8W	22W	1014742	4.8	15200	35200	.88	3.75	6.38	.56	3.35	1.77	.30	4.50
1W	26W	1014766	9.3	26000	60000	1.10	4.30	7.50	.75	3.94	2.36	.33	5.50
1-1/4W	32W	1014779	15.8	39100	90400	1.33	5.50	9.50	1.00	6.30	3.54	.51	7.00
1-1/2W	38W	1014807	34.1	61100	141200	1.61	5.90	10.50	1.25	7.09	3.94	.65	7.50
1-3/4	44	1014814	46.7	84900	212250	1.75	6.00	12.00	1.38	8.00	5.00	.73	7.50
2	51	1014832	67.2	102600	256500	2.00	7.00	14.00	1.50	9.00	5.75	-	9.00
2-1/2	64	1014855	206	160000	320000	2.50	8.38	16.00	2.50	16.00	8.38	-	11.00
2-3/4	70	1014864	282	216900	433800	2.75	9.88	18.00	2.75	18.00	9.88	-	12.50
4	102	1014999	667	373000	746000	4.00	12.00	24.00	3.50	24.00	12.00	-	15.50***

* 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.

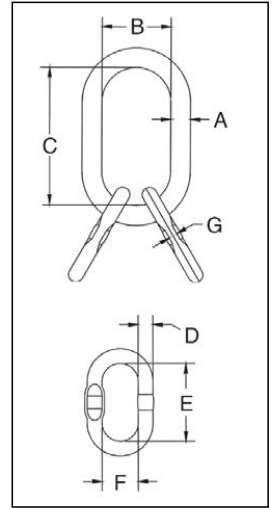


ALLOY MASTER LINKS



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 275.
- Forgings have a Product Identification Code (PIC) for material traceability, along with the size, the name Crosby and USA in raised lettering.
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- 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
38W	1-1/2W	1014807	15.47	27.7	628	38	150	267	31.8	180	100	16.5	191
44	1-3/4	1014814	20.9	38.5	944	44	152	305	35.1	203	127	18.5	191
51	2	1014832	30.4	46.5	1141	51	178	356	38.1	229	146	-	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 63mm 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. †† Welded Master Link.

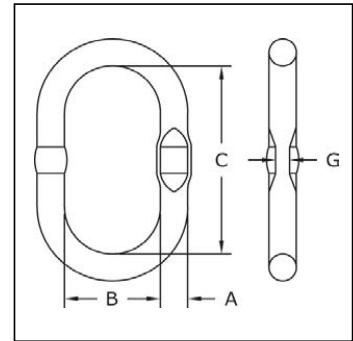


WELDED MASTER LINKS



A-344
Welded 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 269.
- Each link has a Product Identification Code (PIC) for material traceability, along with the size and the name Crosby® or “CG”.
- Large inside width and length to allow additional room for sling hardware and crane hook.
- Engineered Flat for use with S-1325A coupler link.
- 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.
- 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 167 for Crosby COLD TUFF® master links that meet the additional requirements of DNV rules for certification of lifting appliances - Loose Gear.
- 7/16” through 1-7/32” have Engineered Flat.



A-344 Welded Master Link with Engineered Flat

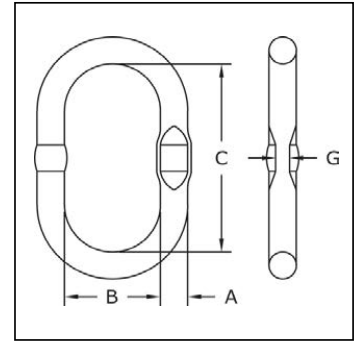
Size		A-344 Stock No	Weight Each (lbs.)	Working Load Limit (lbs.)*	Proof Load (lbs.)**	Dimensions (in.)				Engineered Flat Size for S-1325A (in.)
(in.)	(mm)					A	B	C	G	
7/16	12	1256862	0.66	3500	8800	.47	2.36	4.72	.24	1/4
1/2	13	1256932	0.79	5500	14000	.51	2.36	4.72	.26	1/4
11/16	17	1257002	1.85	9000	22700	.67	3.54	6.30	.33	3/8
3/4	19	1257072	2.36	14700	36800	.75	3.54	6.30	.33	3/8
7/8	22	1257212	3.55	18700	46800	.87	3.94	7.10	.41	1/2
1	26	1257282	5.22	25300	63400	.98	4.53	8.10	.53	1/2
1-1/8	28	1257382	8.33	28600	71700	1.10	5.71	10.83	.53	1/2
1-7/32	31	1257422	10.3	37400	93700	1.22	5.71	10.83	.61	5/8
1-7/16	36	1257492	15.1	52900	132200	1.42	6.10	11.20	-	-
1-9/16	40	1257532	19.6	61900	154900	1.57	6.30	11.80	-	-
1-3/4	45	1257562	28.1	84400	211100	1.77	7.10	13.40	-	-
2	51	1257632	38.1	99200	248000	2.00	8.50	15.30	-	-

*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. †† Welded Master Link.



A-344
Welded 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 275.
- 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 167 for Crosby COLD TUFF® master links that meet the additional requirements of DNV rules for certification of lifting appliances - Loose Gear.
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A-344 Welded Master Link with Engineered Flat

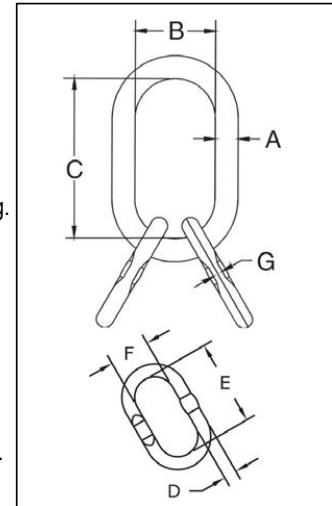
Size		A-344 Stock No.	Weight Each (kg)*	Working Load Limit (t)*	Proof Load (kN)**	Dimensions (mm)				Engineered Flat Size for S-1325A (mm)
(mm)	(in.)					A	B	C	G	
12	7/16	1256862	.30	1.60	39	12.0	60.0	120	6.50	6
13	1/2	1256932	.36	2.50	61	13.0	60.0	120	6.50	7-8
17	11/16	1257002	.86	4.10	101	17.0	90.0	160	8.50	10
19	3/4	1257072	1.08	6.70	164	19.0	90.0	160	8.50	10
22	7/8	1257212	1.63	8.50	208	22.0	100	180	10.5	13
25	1	1257282	2.43	11.5	282	25.0	115	210	13.5	16
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	—
36	1-7/16	1257492	6.87	24.0	588	36.0	155	285	—	—
40	1-9/16	1257532	8.96	28.1	689	40.0	160	300	—	—
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	—	—

* 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 63mm 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. †† Welded Master Link.



A-347
Welded 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 275.
- 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 1 1/4” to 2” 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 167 for Crosby COLD TUFF® master links that meet the additional requirements of DNV rules for certification of lifting appliances - Loose Gear.
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A-347 Welded Master Link Assembly with Engineered Flat

Size		A-347 Stock No	Weight Each (lbs.)	Working Load Limit (lbs.)*	Proof Load (lbs.)**	Dimensions (in.)							Engineered Flat Size for S-1325 (in.)
(in.)	(mm)					A	B	C	D	E	F	G	
1/2	13/12	1257692	1.80	5300	13200	.51	2.36	4.72	.47	3.35	1.77	.24	—
11/16	17/13	1257762	3.40	9000	22700	.67	3.54	6.30	.51	4.72	2.36	.26	1/4
3/4	19/13	1257832	4.00	9300	23400	.75	3.54	6.30	.51	4.72	2.36	.26	1/4
7/8	22/17	1257972	7.20	17600	44100	.87	3.94	7.10	.67	6.30	3.54	.33	5/16
1-1/8	28/22	1258142	15.4	31900	79800	1.10	5.71	10.83	.87	7.10	3.94	.41	3/8
1-7/32	31/25	1258182	20.8	37500	93700	1.22	5.71	10.83	.98	8.10	4.53	.53	1/2
1-9/16	40/31	1258332	40.5	61900	154900	1.57	6.30	11.80	1.22	10.63	5.50	—	—
1-3/4	45/36	1258402	58.2	84400	211100	1.77	7.10	13.40	1.42	11.20	6.10	—	—
2	51/45	1258462	95.0	99200	248000	2.00	7.50	13.80	1.80	13.40	7.10	—	—

*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. †† Welded Master Link.

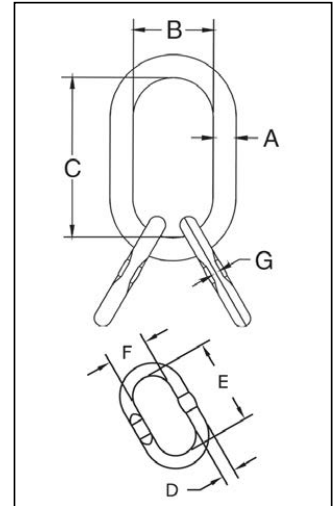


WELDED MASTER LINKS



A-347
Welded 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 275.
- 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 167 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 Assembly 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
22/17	7/8	1257972	3.35	7.98	196	22.0	100	180	17.0	160	90.0	8.50	10
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
40/31	1-9/16	1258332	18.68	28.1	689	40.0	160	300	31.0	275	145	—	—
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	—	—

* 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 63mm 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. †† Welded Master Link.