

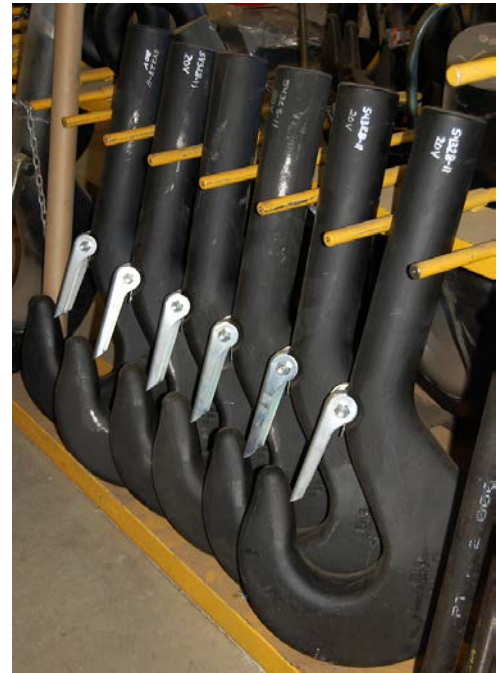
FORGED HOOKS

Miller's forged hooks are produced to the following comprehensive, international standards:

- DIN 15400- Materials, properties, capacities, stresses
- DIN 15401- Single hooks, forged
- DIN 15402- Double hooks, forged
- DIN 7540 - Eye hooks class 8 (grade 80), forged



DIN is the German Institute for Standardization (Deutsches Institut für Normung) and has been based in Berlin since 1917. DIN has historically developed the detailed and exacting standards used in German engineering and is the body that represents Germany in international standards organizations.



Forged Shank Hooks

Hooks are identified by hook number and material. Each hook number maintains identical dimensions across a range of different materials with its load capacity dependent on the material used. Shank hooks are forged and heat-treated for optimal strength and toughness and are available in single and double configurations in standard working loads to 1,100 tons. Standard design factor is 5:1.

Hook forgings are available in three increasingly stronger carbon and alloy steel materials:

- DIN class P: Fine-grained carbon steel, St-E355/St-E420, similar to ASTM A573 Gr. 65
- DIN class T: Structural low alloy steel, 34CrMo4 or 34CrNiMo6, similar to SAE 4135/4340
- DIN class V: Super alloy steel, 34CrNiMo6 or 30CrNiMo8, similar to SAE 4340/4337

Forged hooks are also available to order, in bronze alloy or stainless steel for non-sparking or other special applications. Stainless steel hooks are forged from ANSI 304 or 316L stainless steel and bronze hooks are forged from a non-sparking aluminum-nickel bronze alloy (CuAl10Ni/C95500).

In the succeeding selection tables, working load limits (WLL) are indicated for each hook number depending on the material selected.

Standard safety latches are included with all hook forgings. Heavy duty positive locking latches are available upon request. See the special section of this catalog for instructions on how to order replacement latches.

Extended length shanks are available upon request.

All hooks are supplied with certifications by serial number for mechanical and chemical properties including Charpy testing, and include 100% ultrasonic and magnetic particle non-destructive examination. Hooks include markings of fixed distances ("y" dimension in tables) which allow confirmation that no deformation has occurred in use or during proof testing. Class V hooks are API-2C compliant.

Machined Hooks with Nut, Suspensions and Blocks

Miller can provide forged hooks fully machined and threaded to customer requirements, matching nut included and ready for assembly into the customer's structure. We can also provide the complete hook suspension with trunnion and thrust bearing, and since Miller is a block manufacturer, we can provide a complete hook block assembly for any crane type. Miller has a full range of standard blocks for mobile cranes and produces custom blocks to order for overhead cranes.

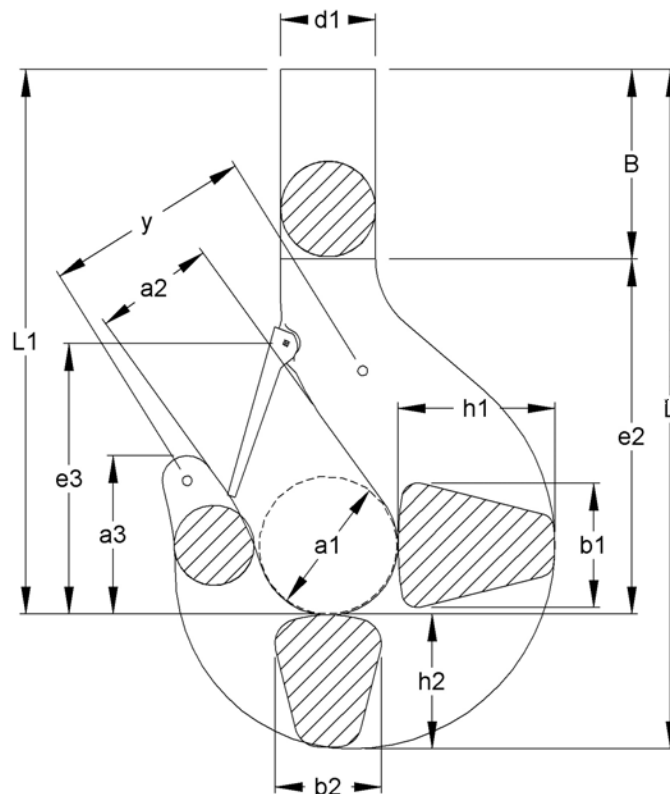


Forged Heavy-Duty Eye Hooks

Miller's DIN 7540 Grade 80 Eye Hook features the traditional eye-ring of circular cross section allowing the maximum degree of motion in the connection and is available standard in working loads up to 400 metric tons (440 short tons). These heavy duty eye hooks are forged from 34CrNiMo6V alloy steel, include a safety latch, and can be adapted for ROV use. The standard design factor is 4:1. See detailed eye hook tables following the shank hook tables.

FORGED HOOKS- SINGLE HOOKS DIN 15401

Imperial Dimensions

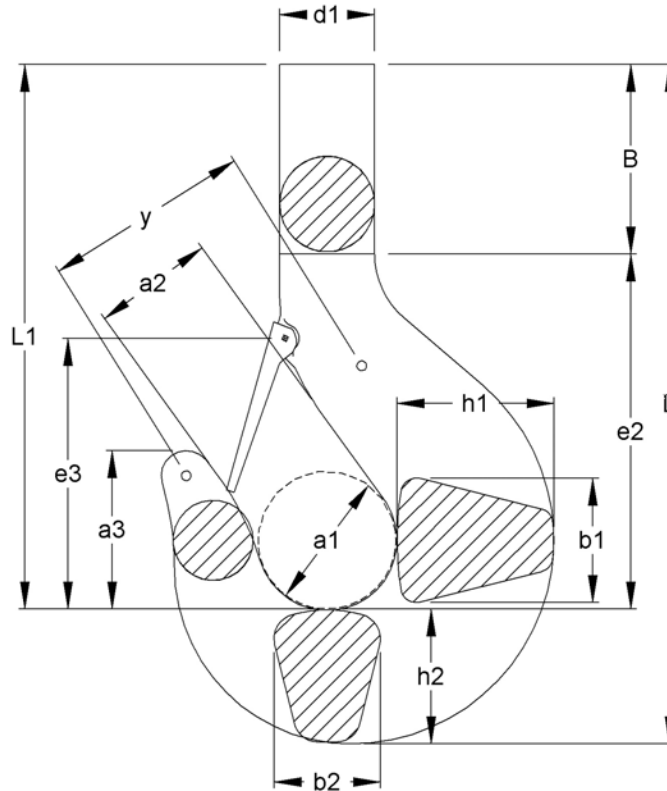


Model Number	Capacity Short Tons Carbon Class P	Capacity Short Tons Alloy Class T	Capacity Short Tons Super Alloy Class V	Capacity Short Tons STAIN-LESS STEEL	a1	a2	a3	B	b1	b2	d1	e2	e3	h1	h2	L	L1	y	Weight Lbs.
GS 1,6	3.5	6	6.9	3	2.21	1.77	2.52	3.07	1.77	1.50	1.42	5.75	4.65	2.21	1.89	10.72	8.83		10
GS 2,5	6	9	11	4.4	2.48	1.97	2.84	3.39	2.09	1.77	1.65	6.58	5.20	2.64	2.29	12.25	9.97		14
GS 4	9	13.8	18	6.9	2.80	2.21	3.15	3.74	2.48	2.09	1.89	7.49	5.83	3.15	2.64	13.87	11.23		19
GS 5	11	18	22	9	3.15	2.48	3.55	4.06	2.80	2.36	2.09	8.47	6.50	3.55	2.96	15.48	12.53		27
GS 6	14	22	28	11	3.55	2.80	3.98	5.52	3.15	2.64	2.36	9.46	7.29	3.94	3.35	18.32	14.97	5.12	38
GS 8	18	28	35	14	3.94	3.15	4.45	5.91	3.55	2.96	2.64	10.56	8.27	4.41	3.74	20.21	16.47	5.71	53
GS 10	22	35	44	18	4.41	3.55	5.00	6.54	3.94	3.35	2.96	11.27	8.71	4.93	4.18	21.99	17.81	6.30	75
GS 12	28	44	55	22	4.93	3.94	5.63	8.23	4.41	3.74	3.35	12.45	9.93	5.52	4.65	25.33	20.69	7.09	121
GS 16	35	55	69	28	5.52	4.41	6.30	9.38	4.93	4.18	3.74	14.07	11.03	6.30	5.20	28.64	23.44	7.88	170
GS 20	44	69	88	35	6.30	4.93	7.09	10.24	5.52	4.65	4.18	15.96	13.00	7.09	5.91	32.11	26.20	8.87	247
GS 25	55	88	110	44	7.09	5.52	7.96	11.03	6.30	5.20	4.65	17.93	14.18	7.88	6.70	35.66	28.96	10.05	353
GS 32	69	110	138	55	7.88	6.30	8.87	11.82	7.09	5.91	5.20	20.09	15.76	8.83	7.49	39.40	31.91	11.43	485
GS 40	88	138	176	69	8.83	7.09	9.93	13.32	7.88	6.70	5.91	22.34	17.61	9.85	8.35	44.01	35.66	12.61	683
GS 50	110	176	220	88	9.85	7.88	11.23	13.99	8.83	7.49	6.70	25.02	19.11	11.03	9.30	48.30	39.01	13.99	948
GS 63	138	220	276	110	11.03	8.83	12.61	16.15	9.85	8.35	7.49	27.97	21.67	12.41	10.44	54.57	44.13	15.76	1323
GS 80	176	276	353	138	12.41	9.85	14.11	18.44	11.03	9.30	8.35	31.6	23.56	13.99	11.82	61.86	50.04	17.73	1896
GS 100	220	353	441	176	13.99	11.03	15.84	20.21	12.41	10.44	9.26	35.54	27.11	15.76	13.20	68.95	55.75	19.90	2690
GS 125	276	441	551	n/a	15.76	12.41	17.73	22.46	13.99	11.82	10.44	40.19	29.55	17.73	14.78	77.42	62.65	22.46	3836
GS 160	353	551	705	n/a	17.73	13.99	19.90	25.41	15.76	13.20	11.82	45.11	32.51	19.70	16.75	87.27	70.53	25.22	5467
GS 200	441	705	882	n/a	19.70	15.76	22.26	30.38	17.73	14.78	13.20	50.24	35.46	22.06	18.72	99.41	80.69	28.37	7540
GS 250	705	882	1102	n/a	22.83	17.71	25.00	34.44	19.68	16.73	14.76	56.29	38.58	24.80	20.86	111.6	90.75	39.96	10582

•Design factor is 5:1 •For dimensional tolerances and extended shank options see page 70 •Capacities listed are per DIN 15400 drive group 1Am, which generally reflect loading conditions for mobile crane applications. The 1Am drive group can generally be approximated to CMAA Specification No. 70, Service Class B. For application-specific information consult the relevant standard or contact Miller for assistance.

FORGED HOOKS- SINGLE HOOKS DIN 15401

Metric Dimensions

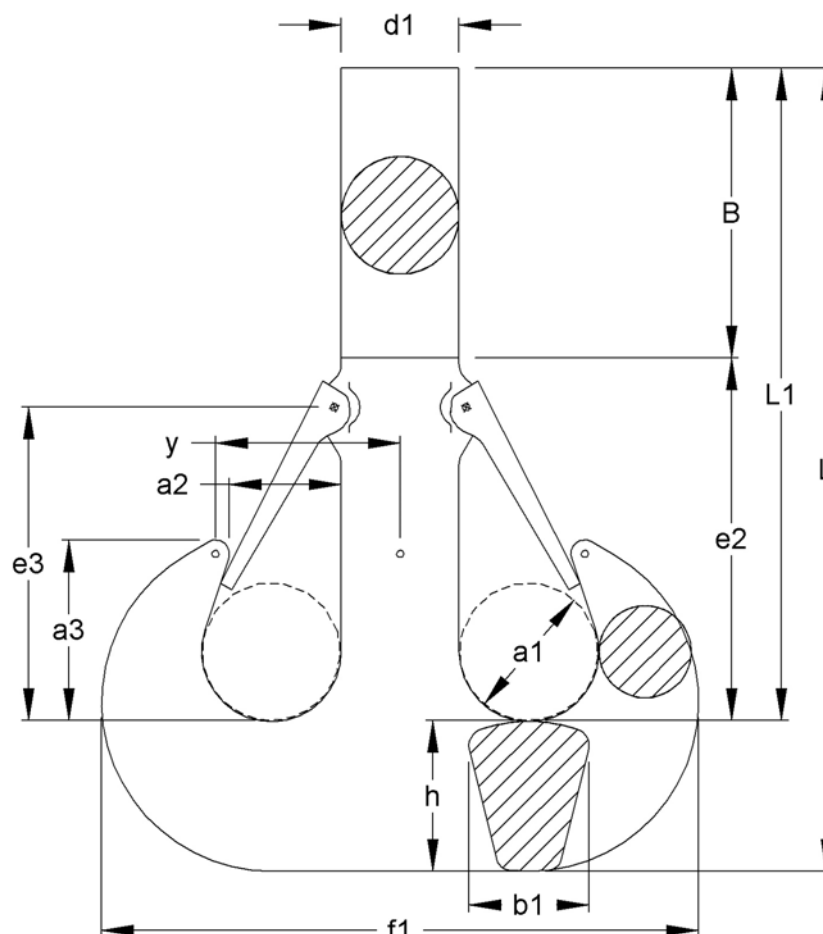


Model Number	Capacity Metric Tons Carbon Class P	Capacity Metric Tons Alloy Class T	Capacity Metric Tons Super Alloy Class V	Capacity Metric Tons STAIN-LESS STEEL	a1	a2	a3	B	b1	b2	d1	e2	e3	h1	h2	L	L1	y	Weight Kg
GS 1,6	3.2	5	6.3	2.5	56	45	64	78	45	38	36	146	118	56	48	272	224		4.5
GS 2,5	5	8	10	4	63	50	72	86	53	45	42	167	132	67	58	311	253		6.3
GS 4	8	12.5	16	6.3	71	56	80	95	63	53	48	190	148	80	67	352	285		8.8
GS 5	10	16	20	8	80	63	90	103	71	60	53	215	165	90	75	393	318		12.3
GS 6	12.5	20	25	10	90	71	101	140	80	67	60	240	185	100	85	465	380	130	17.1
GS 8	16	25	32	12.5	100	80	113	150	90	75	67	268	210	112	95	513	418	145	24
GS 10	20	32	40	16	112	90	127	166	100	85	75	286	221	125	106	558	452	160	34
GS 12	25	40	50	20	125	100	143	209	112	95	85	316	252	140	118	643	525	180	55
GS 16	32	50	63	25	140	112	160	238	125	106	95	357	280	160	132	727	595	200	77
GS 20	40	63	80	32	160	125	180	260	140	118	106	405	330	180	150	815	665	225	112
GS 25	50	80	100	40	180	140	202	280	160	132	118	455	360	200	170	905	735	255	160
GS 32	63	100	125	50	200	160	225	300	180	150	132	510	400	224	190	1000	810	290	220
GS 40	80	125	160	63	224	180	252	338	200	170	150	567	447	250	212	1117	905	320	310
GS 50	100	160	200	80	250	200	285	355	224	190	170	635	485	280	236	1226	990	355	430
GS 63	125	200	250	100	280	224	320	410	250	212	190	710	550	315	265	1385	1120	400	600
GS 80	160	250	320	125	315	250	358	468	280	236	212	802	598	355	300	1570	1270	450	860
GS 100	200	320	400	160	355	280	402	513	315	265	235	902	688	400	335	1750	1415	505	1220
GS 125	250	400	500	n/a	400	315	450	570	355	300	265	1020	750	450	375	1965	1590	570	1740
GS 160	320	500	640	n/a	450	350	505	645	400	335	300	1145	825	500	425	2215	1790	640	2480
GS 200	400	640	800	n/a	500	400	565	771	450	375	335	1275	900	560	475	2523	2048	720	3420
GS 250	640	800	1000	n/a	580	450	635	875	500	425	375	1430	980	630	530	2835	2305	1015	4800

•Design factor is 5:1 •For dimensional tolerances and extended shank options see page 70 •Capacities listed are per DIN 15400 drive group 1Am, which generally reflect loading conditions for mobile crane applications. The 1Am drive group can generally be approximated to CMAA Specification No. 70, Service Class B. For application-specific information consult the relevant standard or contact Miller for assistance.

FORGED HOOKS- DUPLEX HOOK DIN 15402

Imperial Dimensions

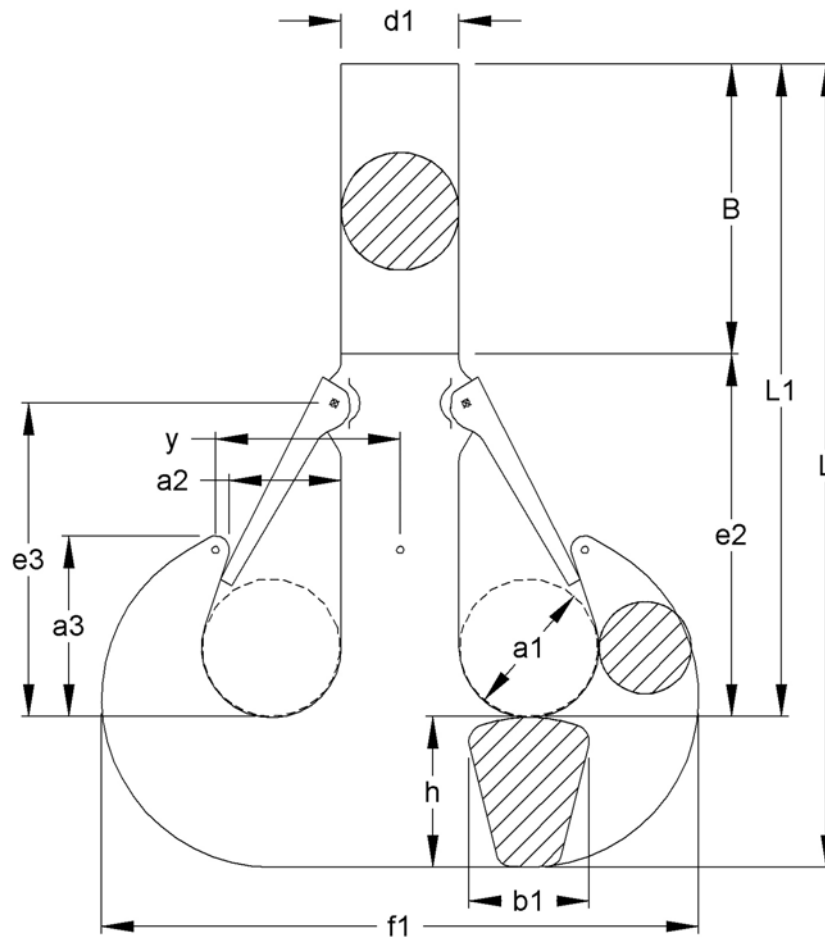


Model Number	Capacity Short Tons Carbon Class P	Capacity Short Tons Alloy Class T	Capacity Short Tons Super Alloy Class V	a1	a2	a3	B	f1	b1	e2	d1	e3	h	L	L1	y	Weight Lbs.
GD 6	14	22	28	2.80	2.21	3.62	7.21	11.86	2.36	7.56	2.36	6.30	2.96	17.73	14.78	3.66	37
GD 8	18	28	35	3.15	2.48	4.06	7.76	13.28	2.64	8.59	2.64	7.17	3.35	19.70	16.35	4.12	56
GD 10	22	35	44	3.55	2.80	4.57	8.67	14.85	2.96	9.06	2.96	7.56	3.74	21.47	17.73	4.63	80
GD 12	28	44	55	3.94	3.15	5.12	10.17	16.59	3.35	9.93	3.35	8.27	4.18	24.27	20.09	5.22	111
GD 16	35	55	69	4.41	3.55	5.75	11.66	18.56	3.74	11.19	3.74	9.34	4.65	27.50	22.85	5.85	157
GD 20	44	69	88	4.93	3.94	6.42	13.08	20.92	4.18	12.53	4.18	10.44	5.20	30.81	25.61	6.52	219
GD 25	55	88	110	5.52	4.41	7.17	13.67	23.56	4.65	14.89	4.65	12.41	5.91	34.08	28.17	7.29	304
GD 32	69	110	138	6.30	4.93	8.08	15.29	26.48	5.20	15.84	5.20	13.20	6.70	37.82	31.13	8.16	434
GD 40	88	138	176	7.09	5.52	9.06	17.14	29.71	5.91	17.73	5.91	14.78	7.49	42.36	34.87	9.18	631
GD 50	110	176	220	7.88	6.30	10.24	18.16	33.17	6.70	19.86	6.70	16.55	8.35	46.37	38.02	10.44	869
GD 63	138	220	276	8.83	7.09	11.50	21.20	37.19	7.49	21.75	7.49	18.12	9.30	52.24	42.95	11.70	1206
GD 80	176	276	353	9.85	7.88	12.81	24.31	41.84	8.35	24.35	8.35	20.29	10.44	59.10	48.66	13.04	1673
GD 100	220	353	441	11.03	8.83	14.34	26.99	46.73	9.26	27.19	9.26	22.66	11.82	66.00	54.18	14.58	2337
GD 125	276	441	551	12.41	9.85	16.08	30.57	52.40	10.44	30.50	10.44	25.41	13.20	74.27	61.07	16.33	3287
GD 160	353	551	705	13.99	11.03	18.05	34.45	59.30	11.82	34.25	11.82	28.57	14.78	83.53	68.75	18.36	4663
GD 200	441	705	882	15.76	12.41	20.29	40.82	66.39	13.20	37.83	13.20	31.52	16.75	95.47	78.72	20.59	6647
GD 250	551	882	1102	17.73	13.99	22.85	47.05	74.27	14.78	41.53	14.78	34.48	18.72	107.3	88.65	23.15	9409

•Design factor is 5:1 •For dimensional tolerances and extended shank options see page 70 •Capacities listed are per DIN 15400 drive group 1Am, which generally reflect loading conditions for mobile crane applications. The 1Am drive group can generally be approximated to CMAA Specification No. 70, Service Class B. For application-specific information consult the relevant standard or contact Miller for assistance.

FORGED HOOKS- DUPLEX HOOK DIN 15402

Metric Dimensions

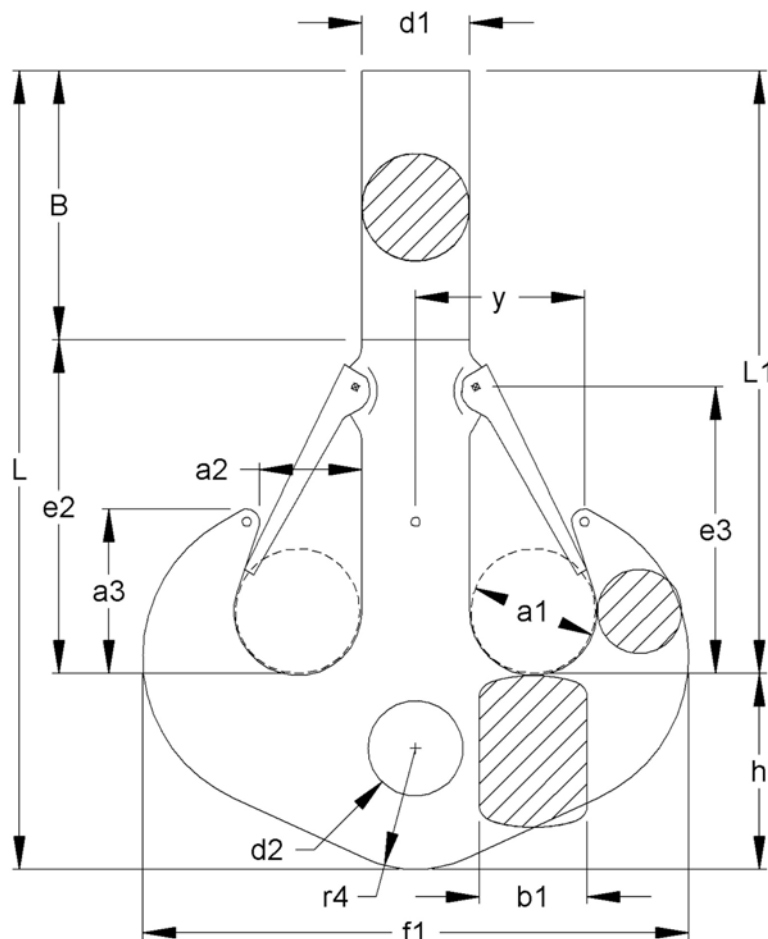


Model Number	Capacity Metric Tons Carbon Class P	Capacity Metric Tons Alloy Class T	Capacity Metric Tons Super Alloy Class V	a1	a2	a3	B	f1	b1	e2	d1	e3	h	L	L1	y	Weight Kg
GD 6	12.5	20	25	71	56	92	183	301	60	192	60	160	75	450	375	93	16.8
GD 8	16	25	32	80	63	103	197	337	67	218	67	182	85	500	415	104.5	25.3
GD 10	20	32	40	90	71	116	220	377	75	230	75	192	95	545	450	117.5	35.3
GD 12	25	40	50	100	80	130	258	421	85	252	85	210	106	616	510	132.5	50
GD 16	32	50	63	112	90	146	296	471	95	284	95	237	118	698	580	148.5	71
GD 20	40	63	80	125	100	163	332	531	106	318	106	265	132	782	650	165.5	100
GD 25	50	80	100	140	112	182	347	598	118	378	118	315	150	865	715	185	138
GD 32	63	100	125	160	125	205	388	672	132	402	132	335	170	960	790	207	197
GD 40	80	125	160	180	140	230	435	754	150	450	150	375	190	1075	885	233	286
GD 50	100	160	200	200	160	260	461	842	170	504	170	420	212	1177	965	265	394
GD 63	125	200	250	224	180	292	538	944	190	552	190	460	236	1326	1090	297	547
GD 80	160	250	320	250	200	325	617	1062	212	618	212	515	265	1500	1235	331	760
GD 100	200	320	400	280	224	364	685	1186	235	690	235	575	300	1675	1375	370	1060
GD 125	250	400	500	315	250	408	776	1330	265	774	265	645	335	1885	1550	414.5	1491
GD 160	320	500	500	355	280	458	875	1505	300	870	300	725	375	2120	1745	466	2115
GD 200	400	640	800	400	315	515	1037	1685	335	961	335	800	425	2423	1998	522.5	3015
GD 250	500	800	1000	450	355	580	1195	1885	375	1055	375	875	475	2725	2250	587.5	4268

•Design factor is 5:1 •For dimensional tolerances and extended shank options see page 70 •Capacities listed are per DIN 15400 drive group 1Am, which generally reflect loading conditions for mobile crane applications. The 1Am drive group can generally be approximated to CMAA Specification No. 70, Service Class B. For application-specific information consult the relevant standard or contact Miller for assistance.

FORGED HOOKS- DUPLEX HOOK DIN 15402-B

Imperial Dimensions



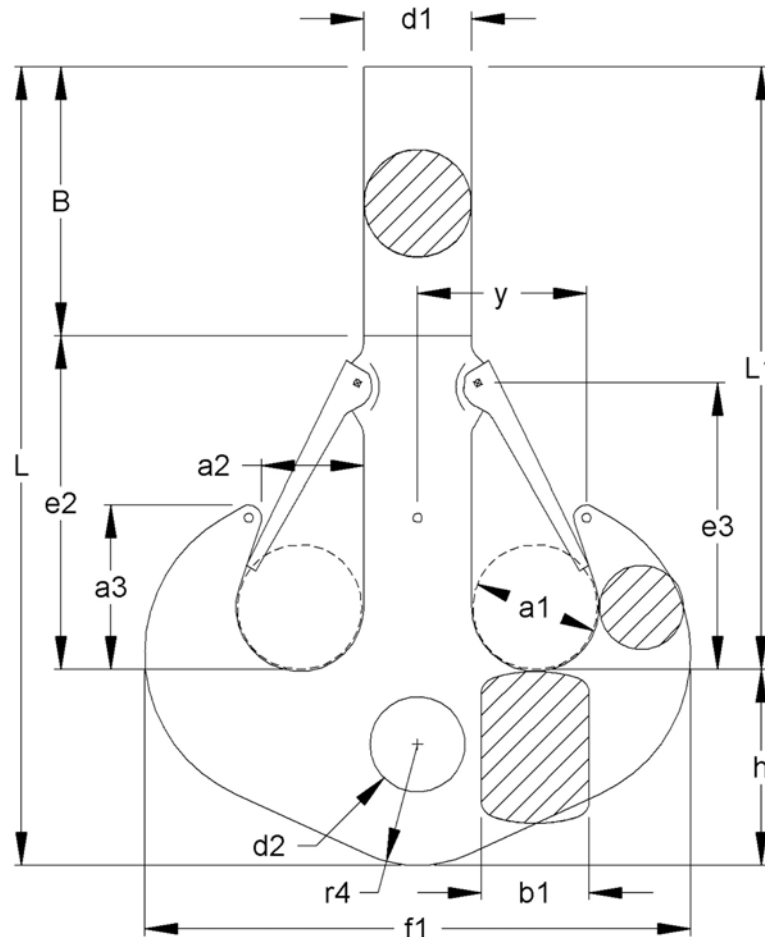
Model Number	Capacity Short Tons Carbon Class P	Capacity Short Tons Alloy Class T	Capacity Short Tons Super Alloy Class V	a1	a2	a3	B	f1	b1	d2	e2	d1	e3	h	L	L1	r4	y	Weight Lbs.
GDB 10	22	35	44	3.55	2.80	4.57	8.67	14.85	2.96	2.92	9.06	2.96	7.56	5.12	22.85	17.73	3.35	4.63	90
GDB 12	28	44	55	3.94	3.15	5.12	10.17	16.59	3.35	3.07	9.93	3.35	8.27	5.91	26.00	20.09	3.74	5.22	126
GDB 16	35	55	69	4.41	3.55	5.75	11.66	18.56	3.74	3.39	11.19	3.74	9.34	6.70	29.55	22.85	4.17	5.85	181
GDB 20	44	69	88	4.93	3.94	6.42	13.08	20.92	4.18	3.78	12.53	4.18	10.44	7.49	33.10	25.61	4.65	6.52	254
GDB 25	55	88	110	5.52	4.41	7.17	13.67	23.56	4.65	4.18	14.89	4.65	12.41	8.35	36.52	28.17	5.2	7.29	353
GDB 32	69	110	138	6.30	4.93	8.08	15.29	26.48	5.20	4.57	15.84	5.20	13.20	9.30	40.42	31.13	5.9	8.16	505
GDB 40	88	138	176	7.09	5.52	9.06	17.14	29.71	5.91	5.16	17.73	5.91	14.78	10.44	45.31	34.87	6.7	9.18	728
GDB 50	110	176	220	7.88	6.30	10.24	18.16	33.17	6.70	5.75	19.86	6.70	16.55	11.82	49.84	38.02	7.48	10.44	1010
GDB 63	138	220	276	8.83	7.09	11.50	21.20	37.19	7.49	6.62	21.75	7.49	18.12	13.20	56.15	42.95	8.35	11.70	1407
GDB 80	176	276	353	9.85	7.88	12.81	24.31	41.84	8.35	7.41	24.35	8.35	20.29	14.78	63.43	48.66	9.29	13.04	1967
GDB 100	220	353	441	11.03	8.83	14.34	26.99	46.73	9.26	8.20	27.19	9.26	22.66	16.75	70.92	54.18	10.4	14.58	2751
GDB 125	276	441	551	12.41	9.85	16.08	30.57	52.40	10.44	9.26	30.50	10.44	25.41	18.72	79.79	61.07	11.8	16.33	3873
GDB 160	353	551	705	13.99	11.03	18.05	34.45	59.30	11.82	10.24	34.25	11.82	28.57	20.88	89.64	68.75	13.2	18.36	5512
GDB 200	441	705	882	15.76	12.41	20.29	40.82	66.39	13.20	11.11	37.83	13.20	31.52	23.64	100.8	77.22	14.8	20.59	7848
GDB 250	551	882	1102	17.73	13.99	22.85	47.05	74.27	14.78	12.29	41.54	14.78	34.48	26.40	113.4	87.07	16.7	23.15	11096

•Design factor is 5:1 •For dimensional tolerances and extended shank length options see page 70. •Hole tolerance +2%/-0

•Capacities listed are per DIN 15400 drive group 1Am, which generally reflect loading conditions for mobile crane applications. The 1Am drive group can generally be approximated to CMAA Specification No. 70, Service Class B. For application-specific information consult the relevant standard or contact Miller for assistance.

FORGED HOOKS- DUPLEX HOOK DIN 15402-B

Metric Dimensions



Model Number	Capacity Metric Tons Carbon Class P	Capacity Metric Tons Alloy Class T	Capacity Metric Tons Super Alloy Class V	a1	a2	a3	B	f1	b1	d2	e2	d1	e3	h	L	L1	r4	y	Weight Kg
GDB 10	20	32	40	90	71	116	220	377	75	74	230	75	192	130	580	450	85	117.5	41
GDB 12	25	40	50	100	80	130	258	421	85	78	252	85	210	150	660	510	95	132.5	57
GDB 16	32	50	63	112	90	146	296	471	95	86	284	95	237	170	750	580	106	148.5	82
GDB 20	40	63	80	125	100	163	332	531	106	96	318	106	265	190	840	650	118	165.5	115
GDB 25	50	80	100	140	112	182	347	598	118	106	378	118	315	212	927	715	132	185	160
GDB 32	63	100	125	160	125	205	388	672	132	116	402	132	335	236	1026	790	150	207	229
GDB 40	80	125	160	180	140	230	435	754	150	131	450	150	375	265	1150	885	170	233	330
GDB 50	100	160	200	200	160	260	461	842	170	146	504	170	420	300	1265	965	190	265	458
GDB 63	125	200	250	224	180	292	538	944	190	168	552	190	460	335	1425	1090	212	297	638
GDB 80	160	250	320	250	200	325	617	1062	212	188	618	212	515	375	1610	1235	236	331	892
GDB 100	200	320	400	280	224	364	685	1186	235	208	690	235	575	425	1800	1375	265	370	1248
GDB 125	250	400	500	315	250	408	776	1330	265	235	774	265	645	475	2025	1550	300	414.5	1757
GDB 160	320	500	640	355	280	458	875	1505	300	260	875	300	725	530	2275	1745	335	466	2500
GDB 200	400	640	800	400	315	515	1037	1685	335	282	1037	335	800	600	2560	1960	375	522.5	3560
GDB 250	500	800	1000	450	355	580	1195	1885	375	312	1195	375	875	670	2880	2210	425	587.5	5030

•Design factor is 5:1 •For dimensional tolerances and extended shank length options see page 70.

•Hole tolerance is +2%/-0 •Capacities listed are per DIN 15400 drive group 1Am, which generally reflect loading conditions for mobile crane applications. The 1Am drive group can generally be approximated to CMAA Specification No. 70, Service Class B. For application-specific information consult the relevant standard or contact Miller for assistance.

DIN SHANK HOOKS- TOLERANCES & OPTIONAL LONG SHANKS



DIN SHANK HOOKS- TOLERANCES AND OPTIONAL EXTENDED LENGTH SHANKS

METRIC DIMENSIONS

Single hooks per DIN 15401

Single Hook Number	Long Shank Add Value to L1 (mm)	Single Hook Number	Dimensional Tolerances (mm)									
			a1	a2	a3	b1	b2	d1	e3	h1	h2	L1
2.5	62	1.6 and 2.5	+3 / -0									
4	100	4 and 5	+4 / -0									
5	92	6 and 8	+5 / -0									
6	50	10 to 16	+6 / -0									
8	102	20	+8 / -0									
10 to 20	150	25 and 32	+12 / -0		+/- 10	+16 / -0		+12 / -0	+/- 10		+20 / -0	
25 to 125	200	40 to 63	+16 / -0		+/- 12	+20 / -0		+16 / -0	+/- 12		+24 / -0	
160 and 200	Per Order	80 to 125	+20 / -0		+/- 16	+25 / -0		+20 / -0	+/- 16		+32 / -0	
		160 to 200	+25 / -0		+/- 20	+32 / -0		+25 / -0	+/- 20		+40 / -0	

Duplex hooks per DIN 15402

Duplex Hook Number	Long Shank Add Value to L1 (mm)	Duplex Hook Number	Dimensional Tolerances (mm)									
			a1	a2	a3	b1		d1	e	h		L1
6	115	6 and 8	+5 / -0									
8	120	10 to 16	+6 / -0									
10 and 12	110	20 and 25	+8 / -0									
16 and 20	N/A	32	+12 / -0		+/- 10	+16 / -0		+12 / -0	+5 / -0		+20 / -0	
25	150	40 to 63	+16 / -0		+/- 12	+20 / -0		+16 / -0	+6 / -0		+24 / -0	
32 to 160	200	80 to 125	+20 / -0		+/- 16	+25 / -0		+20 / -0	+8 / -0		+32 / -0	
200 and 250	Per Order	160 to 250	+25 / -0		+/- 20	+32 / -0		+25 / -0	+10 / -0		+40 / -0	

IMPERIAL DIMENSIONS

Single hooks per DIN 15401

Single Hook Number	Long Shank Add Value to L1 (in)	Single Hook Number	Dimensional Tolerances (inches)									
			a1	a2	a3	b1	b2	d1	e3	h1	h2	L1
2.5	2.44	1.6 and 2.5	+.12 / -0									
4	3.94	4 and 5	+.16 / -0									
5	3.62	6 and 8	+.2 / -0									
6	1.97	10 to 16	+.24 / -0									
8	4.02	20	+.32 / -0									
10 to 20	5.91	25 and 32	+.47 / -0		+/- .39	+.63 / -0		+.47 / -0	+/- .39		+.79 / -0	
25 to 125	7.88	40 to 63	+.63 / -0		+/- .47	+.79 / -0		+.63 / -0	+/- .47		+.95 / -0	
160 and 200	Per Order	80 to 125	+.79 / -0		+/- .63	+.99 / -0		+.79 / -0	+/- .63		+1.26 / -0	
		160 to 200	+.99 / -0		+/- .79	+1.26 / -0		+.99 / -0	+/- .79		+1.58 / -0	

Duplex hooks per DIN 15402

Duplex Hook Number	Long Shank Add Value to L1 (in)	Duplex Hook Number	Dimensional Tolerances (inches)									
			a1	a2	a3	b1		d1	e	h		L1
6	4.53	6 and 8	+.2 / -0									
8	4.73	10 to 16	+.24 / -0									
10 and 12	4.33	20 and 25	+.32 / -0									
16 and 20	N/A	32	+.47 / -0		+/- .39	+.63 / -0		+.47 / -0	+.2 / -0		+.79 / -0	
25	5.91	40 to 63	+.63 / -0		+/- .47	+.79 / -0		+.63 / -0	+.24 / -0		+.95 / -0	
32 to 160	7.88	80 to 125	+.79 / -0		+/- .63	+.99 / -0		+.79 / -0	+.32 / -0		+1.26 / -0	
200 and 250	Per Order	160 to 250	+.99 / -0		+/- .79	+1.26 / -0		+.99 / -0	+.39 / -0		+1.58 / -0	

LATCH KITS FOR HOOKS



Miller Lifting Products
100A Sturbridge Rd.
Charlton MA 01507 USA
800.733.7071
sales@millerproducts.net

LATCH KITS FOR STANDARDIZED EUROPEAN SHANK HOOKS

DIN 15401 SINGLE HOOKS ■ DIN 15402 DOUBLE HOOKS
STANDARD OR HEAVY-DUTY LOCKING TYPE

*Attachment hardware included

Hook Frame Number		Standard	Heavy-Duty
Single	Duplex	Flapper	Positive-Locking
1.6	2.5	M291805106	M291807106
2.5	4	M291805106	M291807205
4	5	M291805004	M291807005
5	6	M291805005	M291807007
6	8	M291805006	M291807006
8	10	M291805008	M291807008
10	12	M291805010	M291807010
12	16	M291805012	M291807012
16	20	M291805016	M291807016
20	25	M291805020	M291807020
25	32	M291805025	M291807025
32	40	M291805032	M291807032
40	50	M291805040	M291807040
50	63	M291805050	M291807050
63	80	M291805063	M291807063
80	100	M291805080	M291807080
100	125	M291805100	M291807100
125	160	M291805125	M291807125
160	200	M291805160	M291807160
200	250	M291805200	M291807200

Standard HD Pos Lock



*Lock Pin
Not Shown

How to locate hook frame number:

See hook markings located as indicated below. Hook frame number is followed by a single letter P, T, V, S, or M



LATCH KITS FOR EUROPEAN EYE HOOKS

DIN 7540 Standard Flapper Latch Kits

*Attachment hardware included

Hook Frame Number	Part Number
34	M291991034
35	M291991035
36	M291991036
37 and 38	M291991037
39, 40 and 41	M291991039
42	M291991042

* Positive locking latches by special order

How to locate hook frame number:

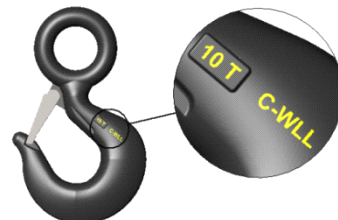
See hook markings located as indicated below. Hook frame number is a two-digit number 34 through 42



LATCH KITS FOR ELD EYE HOOKS

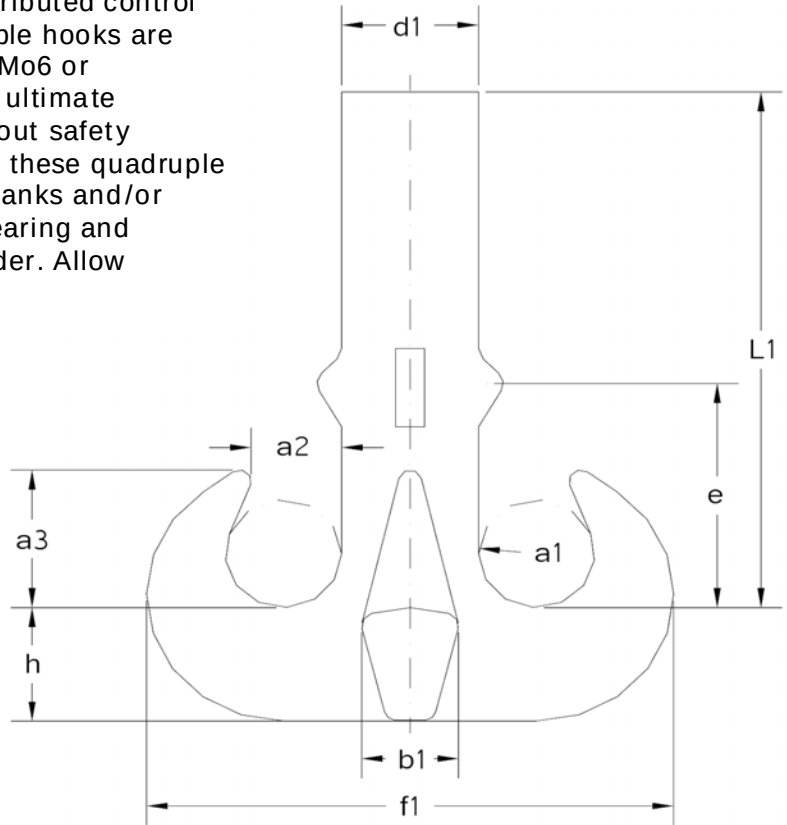
*Attachment hardware included

Working Load & Material	Part Number
3 TON CARBON	M291803000
5 TON CARBON / 7.5 TON ALLOY	M291804005
7.5 TON CARBON / 11.5 TON ALLOY	M291804007
10 TON CARBON / 16 TON ALLOY	M291804004
22 TON ALLOY	M291804009



FORGED HOOKS- QUADRUPLE HOOK - BASED ON DIN 15402

For heavy lift activity where more distributed control of the load is necessary, these quadruple hooks are forged from class V superalloy, 34CrNiMo6 or 30CrNiMo8. The static design factor to ultimate strength is 5:1. Available with or without safety latches. Shown here as a raw forging, these quadruple hooks are also available with longer shanks and/or machined with matching nut, thrust bearing and trunnion. Quad hooks are forged to order. Allow adequate time for delivery.



Metric Dimensions

Model Number	Capacity (SWL) Metric Tons*	a1	a2	a3	b1	d1	e	f1	h	L1**	Weight Kg
GQ16V	160	112	90	146	95	132	237	508	118	580	146
GQ20V	200	125	100	163	106	150	265	575	132	650	208
GQ25V	250	140	112	182	118	170	315	650	150	715	300
GQ32V	320	160	125	205	132	190	335	730	170	790	418
GQ40V	400	180	140	230	150	212	375	816	190	885	604
GQ50V	500	200	160	260	170	236	420	908	212	965	785

Imperial Dimensions

Model Number	Capacity (SWL) Short Tons*	a1	a2	a3	b1	d1	e	f1	h	L1**	Weight Lbs.
GQ16V	176	4.41	3.54	5.75	3.74	5.20	9.33	20.00	4.65	22.83	322
GQ20V	220	4.92	3.94	6.42	4.17	5.91	10.43	22.64	5.20	25.59	459
GQ25V	275	5.51	4.41	7.17	4.65	6.69	12.40	25.59	5.91	28.15	661
GQ32V	352	6.30	4.92	8.07	5.20	7.48	13.19	28.74	6.69	31.10	922
GQ40V	440	7.09	5.51	9.06	5.91	8.35	14.76	32.13	7.48	34.84	1332
GQ50V	551	7.87	6.30	10.24	6.69	9.29	16.54	35.75	8.35	37.99	1731

▪ Tolerance per DIN15402

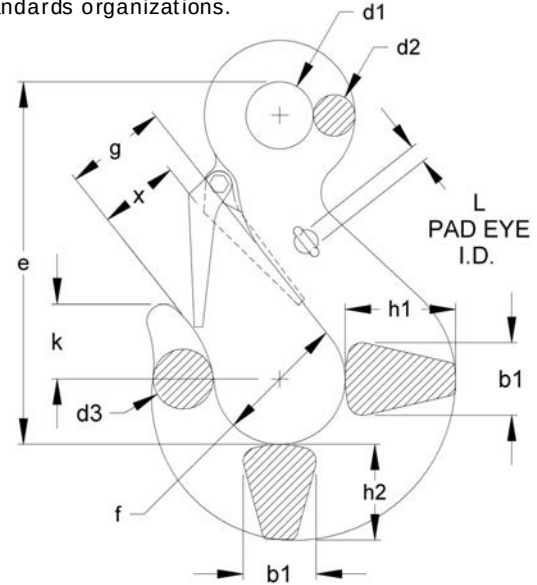
* Capacities based on FEM 1Bm/ISO M3 service class ** Additional length, L1 is available

FORGED EYE HOOKS- DIN 7540 GRADE 80



DIN is the German Institute for Standardization (Deutsches Institut für Normung) and has been based in Berlin since 1917. DIN has historically developed the detailed and exacting standards used in German engineering and is the body that represents Germany in international standards organizations.

- "L" suffix on model number indicates **large eye** version
- Forged from high-strength alloy steel 34CrNiMo6V
- Safe Working Loads from 40 to 400 metric tons
- Design factor 4:1 to ultimate strength
- Proof load is 2.5 times Safe Working Load
- Includes safety latch
- ROV modification (addition of pad eyes) available upon request
- Higher load capacities available upon request



Metric Dimensions

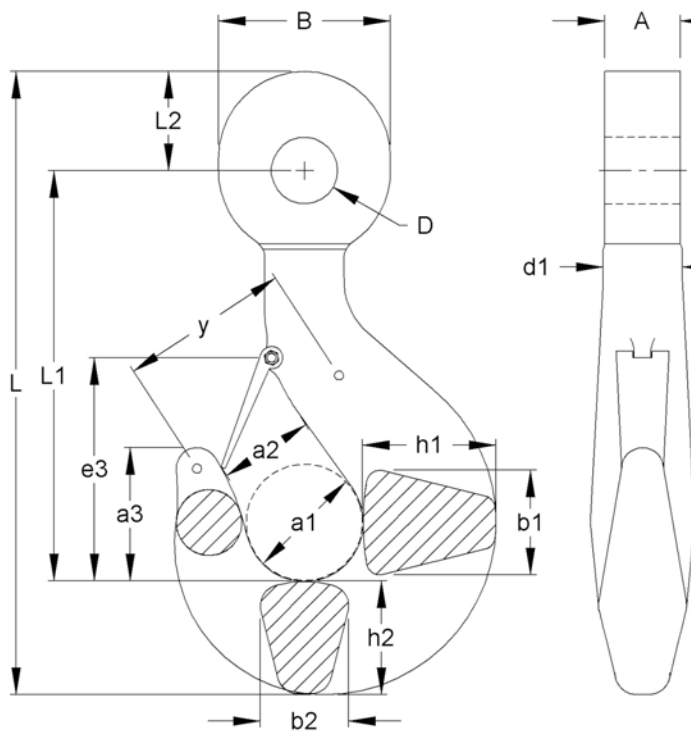
Model Number	Capacity (SWL) Metric Tons	MBL Metric ton	b1	d1	d1 Tolerance	d2	d3	e	f	g	h1	h2	K	L	X	Weight Kg
EH34	40	160	78	72	+1.9 / -3.7	44	66	388	140	109	118	103	80	19	90	31.5
EH34L	40	160	78	114	+/- 5.7	51	66	460	140	109	118	103	80	19	90	35
EH35	50	200	89	84	+1.9 / -3.7	50	74	442	158	124	135	116	90	19	103	46
EH35L	50	200	89	130	+/- 6.5	50.5	74	520	158	124	135	116	90	19	103	54.5
EH36	63	250	99	90	+2.3 / -4.7	56	83	494	176	138	151	130	101	19	114	63
EH36L	63	250	99	144	+/- 7.2	64	83	548	176	138	151	130	101	19	110	70
EH37	80	320	110	102	+2.3 / -4.7	63	93	610	198	155	168	145	113	19	131	80
EH38	100	400	125	116	+/- 5.0	74	120	650	225	175	195	172	133	19	147	125
EH39	150	600	140	130	+/- 6.5	86	140	765	250	200	225	199	160	19	166	250
EH40	200	800	160	150	+/- 7.5	102	161	850	275	225	260	237	195	25	*	365
EH41	250	1000	180	170	+/- 8.5	120	195	928	310	255	290	269	210	25	*	515
EH42	300	1200	200	190	+/- 9.5	140	223	1052	350	290	330	310	240	32	*	730
EH43	400	1600	240	210	+/- 10.5	170	240	1195	400	320	380	345	270	32	*	1055

Imperial Dimensions

Model Number	Capacity (SWL) Short Tons	MBL Short ton	b1	d1	d1 Tolerance	d2	d3	e	f	g	h1	h2	k	L	X	Weight Lbs.
EH34	44	176	3.07	2.83	+ .07 / - .14	1.73	2.60	15.28	5.51	4.29	4.65	4.06	3.15	.75	3.54	69
EH34L	44	176	3.07	4.49	+/- .22	2.01	2.60	18.11	5.51	4.29	4.65	4.06	3.15	.75	3.54	77
EH35	55	220	3.50	3.31	+ .07 / - .14	1.97	2.91	17.40	6.22	4.88	5.31	4.57	3.54	.75	4.06	102
EH35L	55	220	3.50	5.12	+/- .25	1.99	2.91	20.47	6.22	4.88	5.31	4.57	3.54	.75	4.06	120
EH36	69	275	3.90	3.54	+ .09 / - .18	2.20	3.27	19.45	6.93	5.43	5.94	5.12	3.98	.75	4.49	139
EH36L	69	275	3.90	5.67	+/- .28	2.52	3.27	21.57	6.93	5.43	5.94	5.12	3.98	.75	4.33	154
EH37	88	353	4.33	4.02	+ .09 / - .18	2.48	3.66	24.02	7.88	6.10	6.61	5.71	4.45	.75	5.16	176
EH38	110	441	4.92	4.57	+/- .19	2.91	4.72	25.59	8.86	6.89	7.68	6.77	5.24	.75	5.79	276
EH39	165	661	5.51	5.12	+/- .25	3.39	5.51	30.12	9.84	7.87	8.86	7.83	6.30	.75	6.54	551
EH40	220	882	6.30	5.91	+/- .29	4.02	6.34	33.46	10.83	8.86	10.24	9.33	7.68	.98	*	805
EH41	276	1102	7.09	6.69	+/- .33	4.72	7.68	36.54	12.20	10.04	11.42	10.59	8.27	.98	*	1135
EH42	331	1322	7.87	7.48	+/- .37	5.51	8.78	41.42	13.78	11.42	12.99	12.20	9.45	1.26	*	1609
EH43	441	1764	8.27	8.27	+/- .41	6.69	9.45	47.05	15.75	12.60	14.96	13.58	10.63	1.26	*	2326

- Except where otherwise noted, dimensional tolerances for hooks through model EH37 are approximately $\pm 5\%$, and increase somewhat for hooks larger than model EH37. Contact Miller for detailed tolerance data.
- Load capacities indicated are for operating temperatures between -40°C and 200°C (-40°F and 392°F). Outside this range check with Miller for reduced capacity limits.
- * x dimension please inquire.

FORGED HOOKS- HEAVY DUTY SHACKLE EYE HOOK



Heavy Duty Eye Hooks for Shackles

Miller Heavy Duty Eye Hooks are specifically intended for use with shackles or other pin-type connections. The cylindrical cross-section of the eye assures uniform pin loading while limiting relative hook motion.

Based also the DIN norms, they are typically forged from the strongest DIN "V" material class (see above) and carry a 5:1 design safety factor and a positive locking latch. Adaptable for ROV (Remotely Operated Vehicles) use, these eye hooks fit standard shackles and also are available in customized versions. Deformation indicators are also included on these heavy duty models.

Metric Dimensions

Model Number	Capacity Metric Tons	A	a1	a2	a3	B	b1	b2	D	d1	e3	h1	h2	b	L1	L2	L	y	Weight Kg
GSOJ8T	30	52	100	80	113	115	90	75	43	67	210	112	95	51	419	65	569	145	17
GSOJ8V	40	65	100	80	113	140	90	75	52.5	67	210	112	95	59	427	80	602	145	24
GSOJ12V	55	74.5	125	100	143	155	112	95	60.5	85	252	140	118	68	484	90	692	180	55
GSOJ20V	85	96.5	160	125	180	195	140	118	73	106	330	180	150	80	585	112	847	225	112
GSOJ25V	120	119	180	140	202	235	160	132	86	118	360	200	170	91	646	135	951	255	160
GSOJ32V	150	125	200	160	225	250	180	150	98.5	132	400	224	190	112	722	145	1057	290	220
GSOJ40T	175	131.5	224	180	252	285	200	170	109.5	150	447	250	212	126	793	165	1170	320	310
GSOJ40V	200	144.5	224	180	252	320	200	170	122.5	150	447	250	212	147	814	185	1211	320	310
GSOJ50V	250	179	250	200	285	340	224	190	135	170	485	280	236	168	903	195	1334	355	430
GSOJ63V	300	179	280	224	320	405	250	212	154	190	550	315	265	168	978	235	1478	400	600
GSOJ80V	400	201.5	315	250	358	460	280	236	179.5	212	598	355	300	196	1098	265	1663	450	860

•Dimensional Tolerance are, A=+0/-1%, D=+2/-0% and all others are +7/-2%

Imperial Dimensions

Model Number	Capacity Short Tons	A	a1	a2	a3	B	b1	b2	D	d1	e3	h1	h2	b	L1	L2	L	y	Weight Lbs.
GSOJ8T	33	2.05	3.94	3.15	4.45	4.53	3.55	2.96	1.69	2.64	8.27	4.41	3.74	2.01	16.51	2.56	22.42	5.71	37
GSOJ8V	44	2.56	3.94	3.15	4.45	5.52	3.55	2.96	2.07	2.64	8.27	4.41	3.74	2.32	16.82	3.15	23.72	5.71	53
GSOJ12V	61	2.94	4.93	3.94	5.63	6.11	4.41	3.74	2.38	3.35	9.93	5.52	4.65	2.68	19.07	3.55	27.26	7.09	121
GSOJ20V	94	3.80	6.30	4.93	7.09	7.68	5.52	4.65	2.88	4.18	13.00	7.09	5.91	3.15	23.05	4.41	33.37	8.87	247
GSOJ25V	132	4.69	7.09	5.52	7.96	9.26	6.30	5.20	3.39	4.65	14.18	7.88	6.70	3.59	25.45	5.32	37.47	10.05	353
GSOJ32V	165	4.93	7.88	6.30	8.87	9.85	7.09	5.91	3.88	5.20	15.76	8.83	7.49	4.41	28.45	5.71	41.65	11.43	485
GSOJ40T	193	5.18	8.83	7.09	9.93	11.23	7.88	6.70	4.31	5.91	17.61	9.85	8.35	4.96	31.24	6.50	46.10	12.61	683
GSOJ40V	220	5.69	8.83	7.09	9.93	12.61	7.88	6.70	4.83	5.91	17.61	9.85	8.35	5.79	32.07	7.29	47.71	12.61	683
GSOJ50V	276	7.05	9.85	7.88	11.23	13.40	8.83	7.49	5.32	6.70	19.11	11.03	9.30	6.62	35.58	7.68	52.56	13.99	948
GSOJ63V	331	7.05	11.03	8.83	12.61	15.96	9.85	8.35	6.07	7.49	21.67	12.41	10.44	6.62	38.53	9.26	58.23	15.76	1323
GSOJ80V	441	7.94	12.41	9.85	14.11	18.12	11.03	9.30	7.07	8.35	23.56	13.99	11.82	7.72	43.26	10.44	65.52	17.73	1896

•Dimensional Tolerance are, A=+0/-1%, D=+2/-0% and all others are +7/-2%