

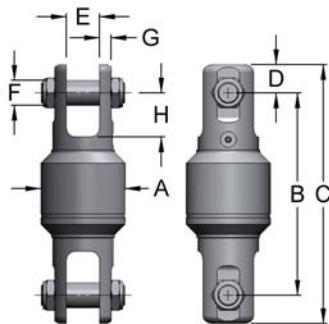
SWIVELS- HD-LINK, HEAVY DUTY (ANGULAR CONTACT)



- Heavy Duty (HD) barrel for maximized swivel life in rough conditions
- Thick-walled barrel protects bearings and seals from shock and dust
- Equipped with low torque angular contact ball bearings like Miller Y-Link
- Designed for high impact, abrasive environments as found in demolition, quarries, ect.
- Machined from solid forged alloy steel bar
- Zinc plating inside and out for effective protection against corrosion
- Grease fitting allows for easy, frequent lubrication
- For Working Loads from 5 to 35 tons and wire rope sizes 5/8" to 1 1/2"
- Higher capacities are available upon request

For demolition, the swivel selected should be one size larger than the normally recommended size, should be lubricated daily, and should be installed 4-6 feet above the breaking ball overhaul weight.

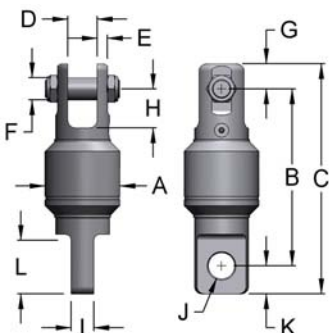
CLEVIS TO CLEVIS - TYPE 131



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	Weight Lbs.
5	D-131	5/8	3.50	7.94	10.19	1.13	1	.88	.56	1.56	12
8.5	EE-131	3/4	4.00	9.63	12.31	1.34	1.56	1.19	.56	2.09	19.75
15	GG-131	1	5.00	14	17.5	1.75	1.75	1.5	.81	3.5	50
35	HH-131	1 1/2	6.00	15.94	20.69	2.38	2	2	1.13	3.69	99

* Design factor 5:1

CLEVIS TO EYE - TYPE 132



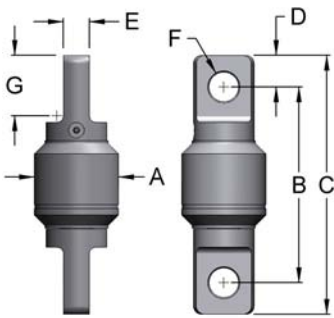
WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	I	J	K	L	Weight Lbs.
5	D-132	5/8	3.50	7.88	10.19	1.00	0.56	.88	1.13	1.56	1.00	1.28	1.19	2.5	11.38
8.5	EE-132	3/4	4.00	9.5	12.34	1.56	0.56	1.19	1.34	2.09	1.25	1.41	1.5	3.13	19.75
10	G-132	7/8	5.00	13.94	17.5	1.75	0.81	1.5	1.75	3.5	1.72	1.66	1.81	4.66	49
15	GG-132	1	5.00	13.63	17.5	1.75	0.81	1.5	1.75	3.5	2.00	2.03	2.13	4.91	50
35	HH-132	1 1/2	6.00	16.44	21.19	2.00	1.13	2	2.38	3.69	2.25	2.31	2.38	5.25	96

* Design factor 5:1



SWIVELS- HD-LINK, HEAVY DUTY (ANGULAR CONTACT)

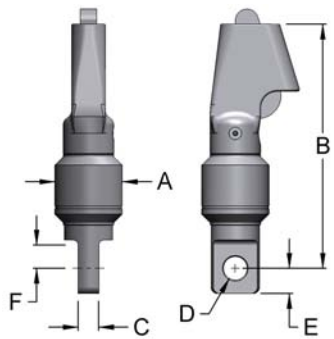
EYE TO EYE - TYPE 232



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	Weight Lbs.
5	D-232	5/8	3.50	7.69	10.19	1.19	1	1.28	2.50	11
8.5	EE-232	3/4	4.00	9.31	12.34	1.50	1.25	1.41	3.13	19.25
10	G-232	7/8	5.00	13.88	17.5	1.81	1.72	1.66	4.66	47
15	GG-232	1	5.00	13.25	17.5	2.13	2	2.03	4.91	48
35	HH-232	1.5	6.00	16.5	21.19	2.38	2.25	2.31	5.25	93

* Design factor 5:1

WEDGE TO EYE - TYPE 732



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	Weight Lbs.
5	D-732	1/2, 5/8	3.50	12.5	1	1.28	1.19	1.31	15
8.5	EE-732	1/2, 5/8, 3/4	4.00	14.25	1.25	1.41	1.5	1.63	25
10	G-732	3/4, 7/8, 1	5.00	19.69	1.72	1.66	1.81	2.84	55
15	GG-732	3/4, 7/8, 1	5.00	19.38	2	2.03	2.13	2.78	56
25	H-732	1 1/8, 1 1/4	6.00	25.44	2.25	2.31	2.38	2.88	119
35	HH-732	1 1/8, 1 1/4	6.00	25.44	2.25	2.31	2.38	2.88	119

* Design factor 5:1

MILLER

Load Handling SOLUTIONS

- ▶ Swivels
- ▶ Forged Hooks
- ▶ Blocks
- ▶ Sheaves

SCR Pull-in Swivel
375 metric tons working load

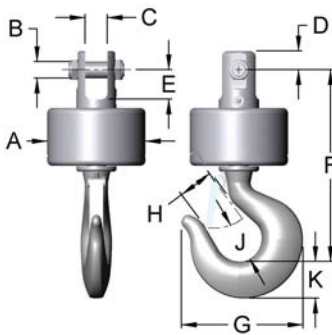
www.millerproducts.net

SWIVELS- g-LINK, OVERHAUL (ANGULAR CONTACT)



- Miller's **g-Link** overhaul swivels weigh 2 ½ to nearly four times as much standard swivels of the same type
- Adds overhaul weight without increasing overall length
- Ideal for small truck cranes and low head room applications where only minimal overhaul weight is required
- For 1.5 to 8.5 ton Working Loads
- Angular contact ball bearings for low torque swivel motion
- Machined from forged alloy steel bar
- Zinc plating inside and out for effective protection against corrosion.
- The g-Link is available with many of the other end fittings shown in this catalog. If you do not see your requirement in the following tables, please inquire.

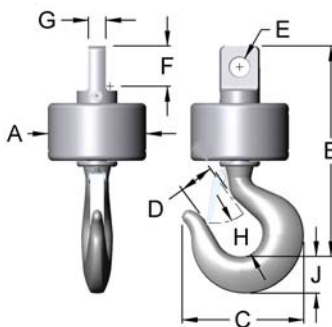
CLEVIS TO HOOK - TYPE 125



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	J	K	Weight Lbs.
1.5	B-125	3/8	4.00	0.5	0.5	.69	0.78	6.09	4.09	1.13	1.19	1.13	9
3	C-125	1/2	5.00	0.75	0.75	.94	1.19	8.38	4.94	1.34	1.38	1.48	17.94
5	D-125	5/8	7.00	0.88	1	1.13	1.56	12.63	6.50	1.69	1.75	1.81	43.81
8.5	EE-125	3/4	7.00	1.19	1.56	1.34	2.09	13.75	8.94	2.25	2.56	2.59	60

* Design factor 5:1

EYE TO HOOK - TYPE 225



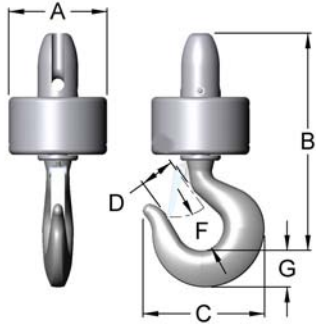
WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	J	Weight Lbs.
1.5	B-225	3/8	4.00	6.25	4.09	1.13	0.66	1.38	.50	1.19	1.13	9
3	C-225	1/2	5.00	9.75	4.81	1.34	0.91	1.88	.75	1.38	1.44	17.94
5	D-225	5/8	7.00	12.5	6.5	1.69	1.28	2.5	1.00	1.75	1.81	43.81
8.5	EE-225	3/4	7.00	13.5	8.69	2.25	1.41	3.13	1.25	2.56	2.59	60

* Design factor 5:1



SWIVELS- g-LINK, OVERHAUL (ANGULAR CONTACT)

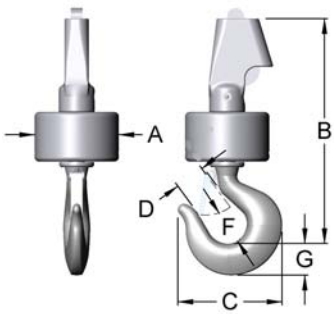
THIMBLE TO HOOK - TYPE 625



WLL* Tons	Model Number	Rope Size	A	B	C	D	F	G	Weight Lbs.
1.5	B-625	3/8	4.00	8.22	4.09	1.13	1.19	1.13	9.38
3	C-625	1/2	5.00	10.5	4.94	1.34	1.38	1.19	19.19
5	D-625	5/8	7.00	14.22	6.5	1.69	1.75	1.81	45.31
8.5	EE-625	3/4	7.00	15.5	8.69	2.25	2.19	2.59	56.25

* Design factor 5:1

WEDGE TO HOOK - TYPE 725



WLL* Tons	Model Number	Rope Size	A	B	C	D	F	G	Weight Lbs.
3	C-725	1/2	5.00	12.69	4.94	1.34	1.13	1.19	20.38
5	D-725	1/2, 5/8	7.00	17.19	6.5	1.69	1.75	1.81	47.88
8.5	EE-725	1/2, 5/8, 3/4	7.00	18.5	8.69	2.25	2.56	2.59	65.25

* Design factor 5:1

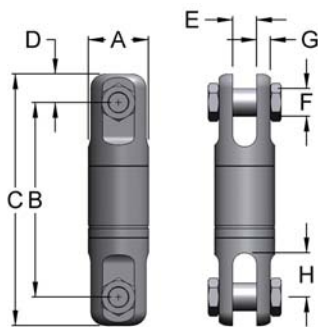
SWIVELS- Y-LINK/HP, HIGH PRESSURE



Miller Y-Link alloy steel swivels are available in a high pressure version in six popular configurations, suitable for use in submerged environments where corrosion exposure from long term unattended deployments are not a major concern. These swivels are based on our Y-Link models and contain special pressure compensating seals for reliable operation to ocean depths of 10,000 feet. Y-Link/HP models are slightly longer than standard Y-Link models due to the addition of special high pressure seals.

- **Y-Link/HP** high pressure swivels contain special pressure compensating seals and oil-filled cavities for reliable operation to depths of 10,000 feet
- Working Load Limits from 0.75 to 600 tons
- Angular contact bearing design extends the life of the wire rope, and maximizes efficiency, reliability and service life
- Alloy steel structural components are zinc plated inside and out for corrosion protection
- Design Factor of 5 to 1 minimum for swivels 35 ton and below
- Design Factor of 4 to 1 minimum for swivels 45 tons and above
- Proof Load is 2 x WLL
- Models 8.5 tons and up include lubrication fitting
- Special designs are available

CLEVIS TO CLEVIS - TYPE 111HP



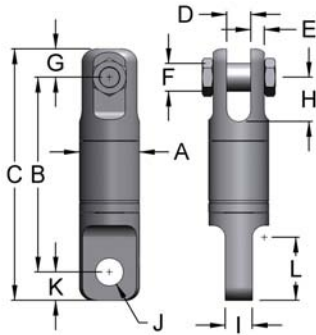
WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	Weight Lbs.
0.75	BB-111HP	.25	1.31	3.69	5.56	.44	0.31	.38	.22	0.56	1
1.5	B-111HP	.375	1.63	5	6.38	.69	0.5	.5	.31	0.78	2
3	C-111HP	.5	2.00	5.44	9.31	.94	0.75	.75	.38	1.19	5
5	D-111HP	.625	2.50	9.19	11.44	1.13	1	.88	.56	1.56	10
8.5	EE-111HP	.75	3.00	10.38	13.06	1.34	1.56	1.19	.53	2.03	15
15	GG-111HP	1	4.00	15.5	19	1.75	1.75	1.5	.81	3.5	43
35	HH-111HP	1.5	5.00	18.19	22.94	2.38	2	2	1.13	3.69	85
45	I-111HP		6.00	22.56	28.56	3.00	2.5	2.25	1.25	4	156
60	JJ-111HP		7.00	24	31	3.50	3	2.5	1.50	4.5	229
75	K-111HP		8.00	27	35	4.00	3.5	3	1.75	5	328
100	KK-111HP		10.00	36.5	47.5	5.50	4.06	4	2.00	6.75	747
200	L-111HP		11.25	36.31	48.31	6.00	5.06	4.5	3.09	8.25	885
300	M-111HP		14.00	43.95	58.95	7.50	6.13	4.75	3.94	9.5	1680

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1



SWIVELS- Y-LINK/HP, HIGH PRESSURE

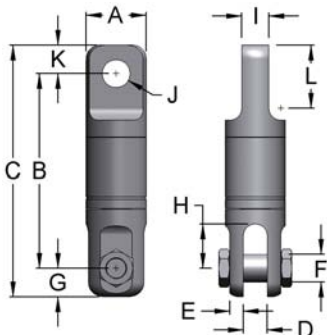
CLEVIS TO EYE - TYPE 112HP



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	I	J	K	L	Weight Lbs.
0.75	BB-112HP	.25	1.31	4.75	5.56	.31	0.22	.38	.44	0.56	.31	.38	.44	0.94	1
1.5	B-112HP	.375	1.63	5	6.31	.50	0.31	.5	.68	0.78	.50	.66	.63	1.34	2
3	C-112HP	.5	2.00	7.31	9.31	.75	0.38	.75	.94	1.19	.75	.91	1	1.94	5
5	D-112HP	.625	2.50	9.13	11.44	1.00	0.56	.88	1.13	1.56	1.00	1.28	1.19	2.5	11
8.5	EE-112HP	.75	3.00	10.25	13.09	1.56	0.53	1.19	1.34	2.09	1.25	1.41	1.5	3.13	16
15	GG-112HP	1	4.00	15.25	19.13	1.75	0.81	1.5	1.75	3.5	2.00	2.03	2.13	4.91	43
35	HH-112HP	1.5	5.00	18.19	22.94	2.00	1.13	2	2.38	3.69	2.25	2.31	2.38	5.25	82
45	I-112HP		6.00	22.56	28.56	2.50	1.25	2.25	3.00	4	2.50	2.53	3	7	149
60	JJ-112HP		7.00	24	31	3.00	1.5	2.5	3.50	4.5	3.50	2.88	3.5	7	226
75	K-112HP		8.00	27	35	3.50	1.75	3	4.00	5	3.50	3.38	4	8.13	333
100	KK-112HP		10.00	36.5	47.5	4.06	2	4	5.50	6.75	4.50	4.03	5.5	11.38	698
200	L-112HP		11.25	35.92	48.29	5.06	3.09	4.5	6.00	8.25	5.00	4.81	6.38	13.5	885
300	M-112HP		14.00	43.45	58.95	6.13	3.94	4.75	7.50	9.5	6.00	6.06	8	17	1645

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1

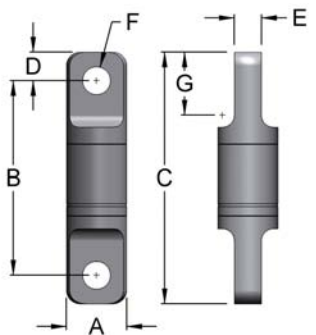
EYE TO CLEVIS - TYPE 211HP



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	I	J	K	L	Weight Lbs.
0.75	BB-211HP	1/4	1.31	4.69	5.56	.31	0.22	.38	.44	0.56	.31	.38	.44	0.94	1
1.5	B-211HP	3/8	1.63	5	6.31	.50	0.31	.5	.68	0.78	.50	.66	.63	1.34	2
3	HP	1/2	2.00	7.31	9.31	.75	0.38	.75	.94	1.19	.75	.91	1	1.94	5
5	D-211HP	5/8	2.50	9.13	11.44	1.00	0.56	.88	1.13	1.56	1.00	1.28	1.19	2.5	10
8.5	EE-211HP	3/4	3.00	10.25	13.09	1.56	0.53	1.19	1.34	2.09	1.25	1.41	1.5	3.13	16
15	GG-211HP	1	4.00	15.25	19.13	1.75	0.81	1.5	1.75	3.5	2.00	2.03	2.13	4.91	43
35	HH-211HP	1 1/2	5.00	18.19	22.94	2.00	1.13	2	2.38	3.69	2.25	2.31	2.38	5.25	80
45	I-211HP		6.00	22.56	28.56	2.50	1.25	2.25	3.00	4	2.50	2.53	3	7	149
60	JJ-211HP		7.00	24	31	3.00	1.5	2.5	3.50	4.5	3.50	2.88	3.5	7	233
75	K-211HP		8.00	27	35	3.50	1.75	3	4.00	5	3.50	3.38	4	8.25	333
100	KK-211HP		10.00	36.5	47.5	4.06	2	4	5.50	6.75	4.50	4.03	5.5	11.38	731
200	L-211HP		11.25	35.93	48.31	5.06	3.09	4.5	6.00	8.25	5.00	4.81	6.38	13.5	885
300	M-211HP		14.00	43.45	58.95	6.13	3.94	4.75	7.50	9.5	6.00	6.06	8	17	1645

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1

EYE TO EYE - TYPE 212HP

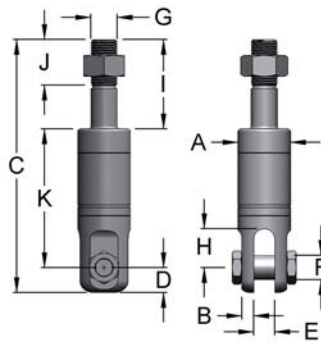


WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	Weight Lbs.
0.75	BB-212HP	1/4	1.31	4.94	5.88	.44	0.31	.39	.94	1
1.5	B-212HP	3/8	1.63	5	6.25	.69	0.5	.66	1.34	2
3	C-212HP	1/2	2.00	7.31	9.31	1.00	0.75	.91	1.94	5
5	D-212HP	5/8	2.50	9.06	11.44	1.19	1	1.28	2.50	10
8.5	EE-212HP	3/4	3.00	10.13	13.06	1.50	1.25	1.41	3.13	16
15	GG-212HP	1	4.00	15.13	19.38	2.13	2	2.03	4.91	43
35	HH-212HP	1 1/2	5.00	18.19	22.94	2.38	2.25	2.31	5.25	79
45	I-212HP		6.00	22.56	28.56	3.00	2.5	2.53	7.00	142
60	JJ-212HP		7.00	24	31	3.50	3.5	2.88	7.00	231
75	K-212HP		8.00	27	35	4.00	3.5	3.38	8.25	340
100	KK-212HP		10.00	36.5	47.5	5.50	4.5	4.03	11.38	704
200	L-212HP		11.25	35.56	48.31	6.38	5	4.81	13.50	875
300	M-212HP		14.00	42.95	58.95	8.00	6	6.06	17.00	1600

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1

SWIVELS- Y-LINK/HP, HIGH PRESSURE

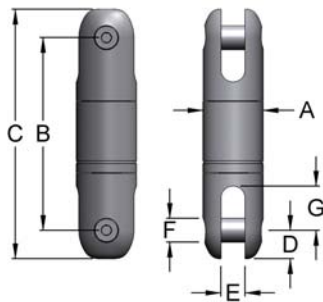
STUD TO CLEVIS - TYPE 311HP



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	I	J	K	Weight Lbs.
0.75	BB-311HP	1/4	1.31	0.22	5.81	.44	0.31	.38	.63	0.56	2.00	1.50	4.38	1
1.5	B-311HP	3/8	1.63	0.31	7	.69	0.5	.5	.75	0.78	2.00	1.50	4.31	2
3	C-311HP	1/2	2.00	0.38	10.44	.88	0.75	.75	.88	1.19	3.00	2.63	5.25	5
5	D-311HP	5/8	2.50	0.56	11.19	1.13	1	.88	1.25	1.56	3.50	3.13	6.56	11
8.5	EE-311HP	3/4	3.00	0.53	13.78	1.34	1.56	1.19	1.50	2.09	4.00	3.00	8.44	15
15	GG-311HP	1	4.00	0.81	18.69	1.75	1.75	1.5	2.00	3.5	5.50	3.00	11.44	40
35	HH-311HP	1 1/2	5.00	1.13	25.56	2.38	2	2	2.50	3.69	8.50	4.25	14.69	84
45	I-311HP		6.00	1.25	28	3.00	2.5	2.25	3.00	4	8.00	4.00	17	141
60	JJ-311HP		7.00	1.5	31.5	3.50	3	2.5	3.25	4.5	8.00	4.00	20	219
75	K-311HP		8.00	1.75	36.5	4.00	3.5	3	3.75	5	10.00	5.00	22.5	295
100	KK-311HP		10.00	2	54.75	5.50	4.06	4	6.25	6.75	20.50	7.25	28.75	699

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1

BULLET NOSE TO BULLET NOSE - TYPE 414HP

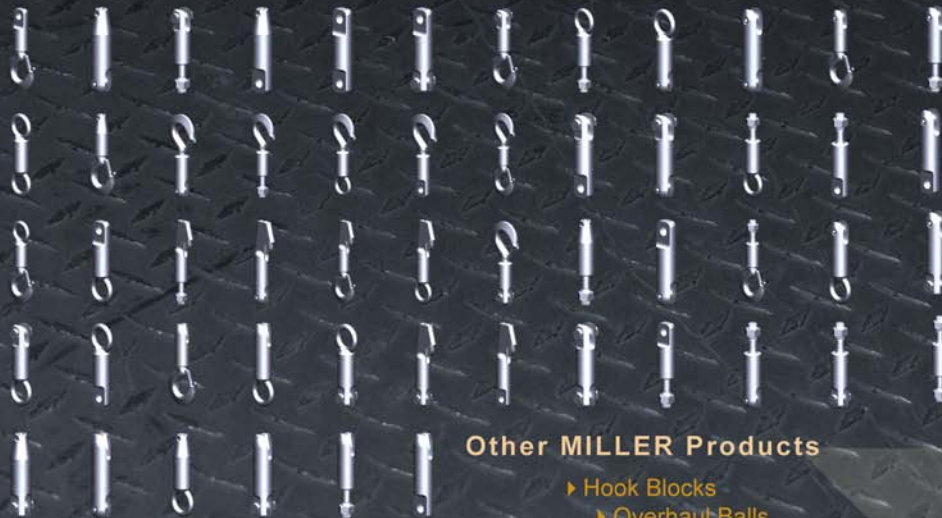


WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	Weight Lbs.
0.75	BB-414HP	.25	1.31	4.88	5.63	.44	0.31	.38	.56	1
1.5	B-414HP	3/8	1.63	5	6.25	.56	0.5	.44	.81	2
3	C-414HP	3/8	2.00	6.5	8.13	.81	0.75	.63	.94	4
5	D-414HP	5/8	2.50	9.25	11.38	1.13	1	.88	1.56	9
8.5	EE-414HP	3/4	3.00	10.56	13.13	1.25	1.28	1	2.13	16
15	GG-414HP	1	4.00	15	18.5	1.75	1.75	1.5	3.25	42
35	HH-414HP	1 1/2	5.00	18.16	22.91	2.38	2	2	3.69	87

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1

54 termination combinations to suit your requirements so far. Don't see the one you need? No problem. Miller has the largest range of swivels worldwide and customization is our specialty. We've been at it since 1935 and have more than a few ideas.

54 Varieties... & COUNTING



- ▶ Angular Contact Y-Link
- ▶ Thrust Bearing Econo-Link
- ▶ Stainless
- ▶ Undersea Hydro-Link/Chain
- ▶ Line Pulling
- ▶ Foundation Drilling
- ▶ Insulated
- ▶ Custom Designs
- ▶ Working Loads To 600 Tons +

Other MILLER Products

- ▶ Hook Blocks
- ▶ Overhaul Balls
- ▶ Sheaves
- ▶ Forged Hooks
- ▶ Insulated Links

Miller Products
 100A Sturbridge Rd.
 Charlton, MA 01507 USA
 T. 1-508-248-3941
 1-800-733-7071
 F. 1-508-248-0639
 E-mail: info@millerproducts.net



SWIVELS- HYDRO-LINK & HYDRO-LINK/HP

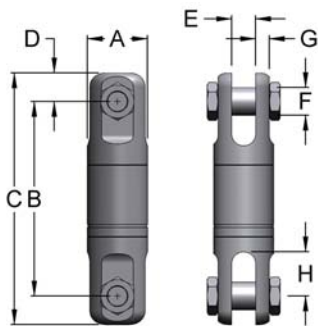
- Miller Hydro-Link swivels are machined from a special non-magnetic, austenitic stainless steel alloy of exceptionally high strength and corrosion resistance which maintains good mechanical properties at elevated and sub-zero temperatures.
- **Available in two configurations, standard Hydro-Link and high pressure Hydro-Link/HP**



- **Hydro-Link** swivels are intended for use with cable and chain in non-submerged corrosive environments such as sea air or harsh industrial environments
- **Hydro-Link/HP** high pressure swivels contain special pressure compensating seals and oil-filled cavities for reliable operation to depths of 10,000 feet
- Working Load Limits from 0.75 to 600 tons
- Angular contact bearing design extends the life of the wire rope, and maximizes efficiency, reliability and service life
- Stainless steel parts are passivated for added corrosion resistance
- Design Factor of 5 to 1 minimum for swivels 35 tons and below
- Design Factor of 4 to 1 minimum for swivels 45 tons and above
- Proof Load is 2 x WLL
- Models 8.5 tons and up include lubrication fitting
- Special designs available

SWIVELS- HYDRO LINK, STAINLESS STEEL

CLEVIS TO CLEVIS - TYPE 151, STAINLESS STEEL

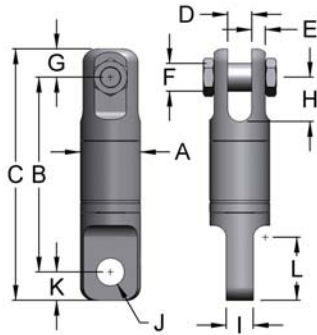


WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	Weight Lbs.
0.75	BB-151	1/4	1.31	3.5	4.38	.44	0.31	.38	.22	0.56	0.93
1.5	B-151	3/8	1.63	4.06	5.44	.69	0.5	.5	.31	0.78	2
3	C-151	1/2	2.00	6.25	8.09	.94	0.75	.75	.38	1.19	4.5
5	D-151	5/8	2.50	7.94	10.09	1.13	1	.88	.56	1.56	9.5
8.5	EE-151	3/4	2.88	9.63	12.31	1.34	1.56	1.19	.53	2.09	15.25
10	G-151	7/8	4.00	14	17.5	1.75	1.75	1.5	.81	3.5	40
15	GG-151	1	4.00	14	17.5	1.75	1.75	1.5	.81	3.5	40
25	H-151	1 1/4	5.00	15.94	20.69	2.38	2	2	1.13	3.69	78
35	HH-151	1 1/2	5.00	15.94	20.69	2.38	2	2	1.13	3.69	78
45	I-151		6.00	20.06	26.06	3.00	2.5	2.25	1.25	4	146
50	J-151		7.00	20.94	27.94	3.50	3	2.5	1.50	4.5	207
60	JJ-151		7.00	20.94	27.94	3.50	3	2.5	1.50	4.5	207
75	K-151		8.00	24	32	4.00	3.5	3	1.75	5	300
100	KK-151		10.00	32.38	43.38	5.50	4.06	4	2.00	6.75	692

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1

SWIVELS- HYDRO LINK, STAINLESS STEEL

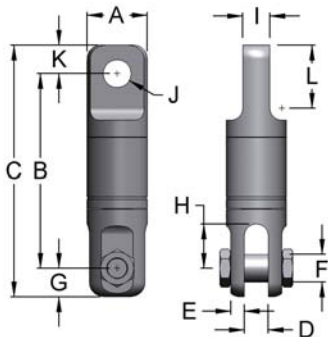
CLEVIS TO EYE - TYPE 152, STAINLESS STEEL



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	I	J	K	L	Weight Lbs.
0.75	BB-152	1/4	1.31	3.56	4.44	.31	0.22	.38	.44	0.56	.31	.38	.44	0.94	0.94
1.5	B-152	3/8	1.63	4.13	5.38	.50	0.31	.5	.69	0.78	.50	.66	.63	1.34	1.94
3	C-152	1/2	2.00	6.19	8.13	.75	0.38	.75	.94	1.19	.75	.91	1	1.94	4.25
5	D-152	5/8	2.50	7.88	10.19	1.00	0.56	.88	1.13	1.56	1.00	1.28	1.19	2.5	8.94
8.5	EE-152	3/4	2.88	9.5	12.34	1.56	0.53	1.19	1.34	2.19	1.25	1.41	1.5	3.13	15.25
10	G-152	7/8	4.00	13.94	17.5	1.75	0.81	1.5	1.75	3.5	1.72	1.66	1.81	4.66	39
15	GG-152	1	4.00	13.63	17.5	1.75	0.81	1.5	1.75	3.5	1.94	2.03	2.13	4.91	40
25	H-152	1 1/4	5.00	15.94	20.69	2.00	1.13	2.03	2.38	3.69	2.25	2.31	2.38	5.25	75
35	HH-152	1 1/2	5.00	15.94	20.69	2.00	1.13	2.03	2.38	3.69	2.25	2.31	2.38	5.25	75
45	I-152		6.00	20.06	26.06	2.50	1.25	2.25	3.00	4	2.50	2.53	3	7	139
50	J-152		7.00	20.94	27.94	3.00	1.5	2.5	3.50	4.5	2.94	2.88	3.5	7	205
60	JJ-152		7.00	20.94	27.94	3.00	1.5	2.5	3.50	4.5	2.94	2.88	3.5	7	205
75	K-152		8.00	24	32	3.50	1.75	3	4.00	5	3.50	3.38	4	8.13	305
100	KK-152		10.00	32.88	43.88	4.06	2	4	5.50	6.75	4.50	4.03	5.5	11.38	647

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1

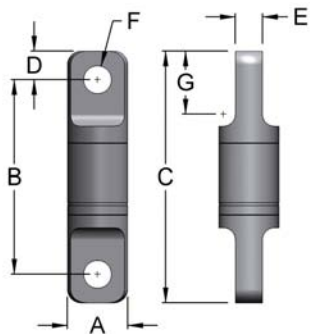
EYE TO CLEVIS - TYPE 251, STAINLESS STEEL



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	I	J	K	L	Weight Lbs.
0.75	BB-251	1/4	1.31	3.63	4.5	.31	0.22	.38	.44	0.44	.31	.39	.44	0.94	0.94
1.5	B-251	3/8	1.63	4.13	5.44	.50	0.31	.5	.69	0.78	.50	.66	.63	1.34	1.88
3	C-251	1/2	2.00	6.19	8.13	.75	0.38	.75	.94	1.19	.75	.91	1	1.94	4.31
5	D-251	5/8	2.50	7.88	10.19	1.00	0.56	.88	1.13	1.56	1.00	1.28	1.19	2.5	9.06
8.5	EE-251	3/4	2.88	9.5	12.34	1.56	0.53	1.19	1.34	2.19	1.25	1.41	1.5	3.13	14.75
10	G-251	7/8	4.00	13.94	17.5	1.75	0.81	1.5	1.75	3.5	1.72	1.66	1.81	4.66	39
15	GG-251	1	4.00	13.63	17.5	1.75	0.81	1.5	1.75	3.5	1.94	2.03	2.13	4.91	40
25	H-251	1 1/4	5.00	15.94	20.69	2.00	1.13	2	2.38	3.69	2.25	2.31	2.38	5.25	75
35	HH-251	1 1/2	5.00	15.94	20.69	2.00	1.13	2	2.38	3.69	2.25	2.31	2.38	5.25	75
45	I-251		6.00	20.06	26.06	2.50	1.25	2.25	3.00	4	2.50	2.53	3	7	139
50	J-251		7.00	20.94	27.94	3.00	1.5	2.5	3.50	4.5	2.94	2.88	3.5	7	211
60	JJ-251		7.00	20.94	27.94	3.00	1.5	2.5	3.50	4.5	2.94	2.88	3.5	7	211
75	K-251		8.00	24	32	3.50	1.75	3	4.00	5	3.50	3.38	4	8.13	305
100	KK-251		10.00	32.88	43.88	4.06	2	4	5.50	6.75	4.50	4.03	5.5	11.38	678

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1

EYE TO EYE - TYPE 252, STAINLESS STEEL



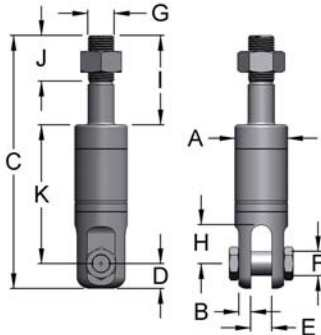
WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	Weight Lbs.
0.75	BB-252	1/4	1.31	3.81	4.69	.44	0.31	.39	.94	0.93
1.5	B-252	3/8	1.63	4.13	5.38	.63	0.5	.66	1.34	1.87
3	C-252	1/2	2.00	6.13	8.13	1.00	0.75	.91	1.94	4.06
5	D-252	5/8	2.50	7.81	10.19	1.19	1	1.28	2.50	8.5
8.5	EE-252	3/4	2.88	9.31	12.31	1.50	1.25	1.41	3.13	14.75
10	G-252	7/8	4.00	13.88	17.5	1.81	1.72	1.63	4.66	37
15	GG-252	1	4.00	13.25	17.5	2.13	1.94	2.03	4.91	39
25	H-252	1 1/4	5.00	15.94	20.69	2.38	2.25	2.31	5.25	72
35	HH-252	1 1/2	5.00	15.94	20.69	2.38	2.25	2.31	5.25	72
45	I-252		6.00	20.06	26.06	3.00	2.5	2.53	7.00	132
50	J-252		7.00	20.94	27.94	3.50	2.94	2.88	7.00	209
60	JJ-252		7.00	20.94	27.94	3.50	2.94	2.88	7.00	209
75	K-252		8.00	24	32	4.00	3.5	3.38	8.13	311
100	KK-252		10.00	32.88	43.41	5.50	4.5	4.03	11.38	653

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1



SWIVELS- HYDRO LINK, STAINLESS STEEL

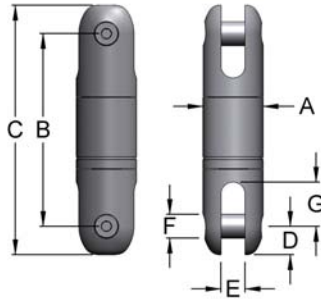
STUD TO CLEVIS - TYPE 351, STAINLESS STEEL



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	I	J	K	Weight Lbs.
0.75	BB-351	1/4	1.31	0.22	5.63	.44	0.31	.38	.63	0.56	2.00	1.50	3.19	1.06
1.5	B-351	3/8	1.63	0.31	6.06	.69	0.5	.5	.75	0.78	2.00	1.50	3.75	1.87
3	C-351	1/2	2.00	0.38	9.19	.94	0.75	.75	.88	1.19	3.00	2.63	5.25	4.5
5	D-351	5/8	2.50	0.56	11.19	1.13	1	.88	1.25	1.56	3.50	3.13	6.56	9.75
8.5	EE-351	3/4	2.88	0.53	13.03	1.56	1.56	1.19	1.50	2.19	4.00	3.00	7.69	14.5
10	G-351	7/8	4.00	0.81	17.44	1.75	1.75	1.5	2.00	3.5	5.50	3.00	10.19	37
15	GG-351	1	4.00	0.81	17.44	1.75	1.75	1.5	2.00	3.5	5.50	3.00	10.19	37
25	H-351	1 1/4	5.00	1.13	23.31	2.38	2	2	2.50	3.69	8.50	4.25	12.44	78
35	HH-351	1 1/2	5.00	1.13	23.31	2.38	2	2	2.50	3.69	8.50	4.25	10.44	78
45	I-351		6.00	1.25	25.56	3.00	2.5	2.25	3.00	4	8.00	4.00	14.56	131
50	J-351		7.00	1.5	28.44	3.50	3	2.5	3.25	4.5	8.00	4.00	16.94	198
60	JJ-351		7.00	1.5	28.44	3.50	3	2.5	3.25	4.5	8.00	4.00	16.94	198
75	K-351		8.00	1.75	33.5	4.00	3.5	3	3.75	5	10.00	5.00	19.5	271
100	KK-351		10.00	2	51.13	5.50	4.06	4	6.25	6.75	20.50	7.25	25.13	648

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1

BULLET NOSE TO BULLET NOSE - TYPE 454, STAINLESS STEEL

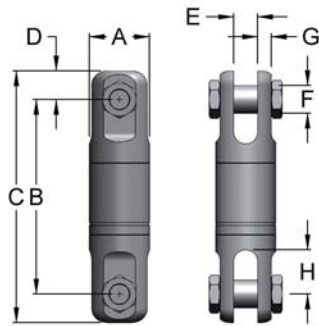


WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	Weight Lbs.
0.75	BB-454	1/4	1.31	3.56	4.44	.44	0.31	.38	.56	1.12
1.5	B-454	3/8	1.63	4.06	5.19	.56	0.5	.44	.81	1.81
3	C-454	1/2	2.00	5.44	7.06	.81	0.75	.63	.94	3.87
5	D-454	5/8	2.50	7.88	10.19	1.13	1	.88	1.56	8.06
8.5	EE-454	3/4	3.00	9.81	12.31	1.25	1.28	1	2.13	14.5
10	G-454	7/8	4.00	13.25	16.75	1.75	1.75	1.5	3.25	40
15	GG-454	1	4.00	13.25	16.75	1.75	1.75	1.5	3.25	40
25	H-454	1 1/4	5.00	15.91	20.66	2.38	2	2	3.69	84
35	HH-454	1 1/2	5.00	15.91	20.66	2.38	2	2	3.69	84

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1

SWIVELS- HYDRO LINK\HP, HIGH PRESSURE, STAINLESS STEEL

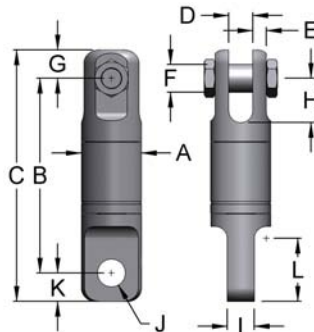
CLEVIS TO CLEVIS - TYPE 151HP, STAINLESS STEEL



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	Weight Lbs.
0.75	BB-151HP	1/4	1.31	3.69	5.56	.44	0.31	.38	.22	0.56	1
1.5	B-151HP	3/8	1.63	5	6.38	.69	0.5	.5	.31	0.78	2
3	C-151HP	1/2	2.00	5.44	9.31	.94	0.75	.75	.38	1.19	5
5	D-151HP	5/8	2.50	9.19	11.44	1.13	1	.88	.56	1.56	10
8.5	EE-151HP	3/4	3.00	10.38	13.06	1.34	1.56	1.19	.53	2.03	15
15	GG-151HP	1	4.00	15.5	19	1.75	1.75	1.5	.81	3.5	43
35	HH-151HP	1 1/2	5.00	18.19	22.94	2.38	2	2	1.13	3.69	85
45	I-151HP		6.00	22.56	28.56	3.00	2.5	2.25	1.25	4	156
60	JJ-151HP		7.00	24	31	3.50	3	2.5	1.50	4.5	229
75	K-151HP		8.00	27	35	4.00	3.5	3	1.75	5	328
100	KK-151HP		10.00	36.5	47.5	5.50	4.06	4	2.00	6.75	747

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1

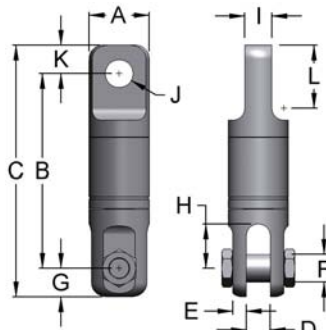
CLEVIS TO EYE - TYPE 152HP, STAINLESS STEEL



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	I	J	K	L	Weight Lbs.
0.75	BB-152HP	1/4	1.31	4.75	5.56	.31	0.22	.375	.44	0.56	.31	.38	.44	0.94	1
1.5	B-152HP	3/8	1.63	5	6.31	.50	0.31	.5	.68	0.78	.50	.66	.63	1.34	2
3	C-152HP	1/2	2.00	7.31	9.31	.75	0.38	.75	.94	1.19	.75	.91	1	1.94	5
5	D-152HP	5/8	2.50	9.13	11.44	1.00	0.56	.88	1.13	1.56	1.00	1.28	1.19	2.5	11
8.5	EE-152HP	3/4	3.00	10.25	13.09	1.56	0.53	1.06	1.34	2.09	1.25	1.41	1.5	3.13	16
15	GG-152HP	1	4.00	15.25	19.13	1.75	0.81	1.5	1.75	3.5	2.00	2.03	2.13	4.91	43
35	HH-152HP	1 1/2	5.00	18.19	22.94	2.00	1.13	2.03	2.38	3.69	2.25	2.31	2.38	5.25	82
45	I-152HP		6.00	22.56	28.56	2.50	1.25	2.25	3.00	4	2.50	2.53	3	7	149
60	JJ-152HP		7.00	24	31	3.00	1.5	2.5	3.50	4.5	3.50	2.88	3.5	7	226
75	K-152HP		8.00	27	35	3.50	1.75	3	4.00	5	3.50	3.38	4	8.13	333
100	KK-152HP		10.00	36.5	47.5	4.06	2	4	5.50	6.75	4.50	4.03	5.5	11.38	698

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1

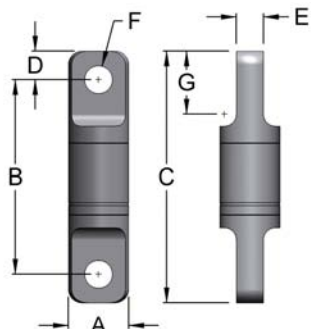
EYE TO CLEVIS - TYPE 251HP, STAINLESS STEEL



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	I	J	K	L	Weight Lbs.
0.75	BB-251HP	1/4	1.31	4.69	5.56	.31	0.22	.38	.44	0.56	.31	.39	.44	0.94	1
1.5	B-251HP	3/8	1.63	5	6.31	.50	0.31	.5	.68	0.78	.50	.66	.63	1.34	2
3	C-251HP	1/2	2.00	7.31	9.31	.75	0.38	.75	.94	1.19	.75	.91	1	1.94	5
5	D-251HP	5/8	2.50	9.13	11.44	1.00	0.56	.88	1.13	1.56	1.00	1.28	1.19	2.5	10
8.5	EE-251HP	3/4	3.00	10.25	13.09	1.56	0.53	1.19	1.34	2.09	1.25	1.41	1.5	3.13	16
15	GG-251HP	1	4.00	15.25	19.13	1.75	0.81	1.5	1.75	3.5	2.00	2.03	2.13	4.91	43
35	HH-251HP	1 1/2	5.00	18.19	22.94	2.00	1.13	2	2.38	3.69	2.25	2.31	2.38	5.25	80
45	I-251HP		6.00	22.56	28.56	2.50	1.25	2.25	3.00	4	2.50	2.53	3	7	149
60	JJ-251HP		7.00	24	31	3.00	1.5	2.5	3.50	4.5	3.50	2.88	3.5	7	233
75	K-251HP		8.00	27	35	3.50	1.75	3	4.00	5	3.50	3.03	4	8.25	333
100	KK-251HP		10.00	36.5	47.5	4.06	2	4	5.50	6.75	4.50	4.03	5.5	11.38	731

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1

EYE TO EYE - TYPE 252HP, STAINLESS STEEL



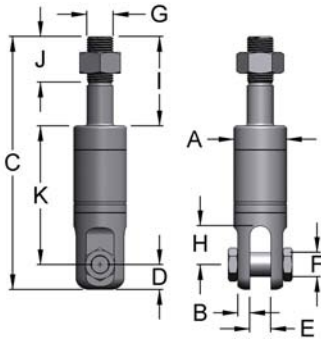
WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	Weight Lbs.
0.75	BB-252HP	1/4	1.31	4.94	5.88	.44	0.31	.39	.94	1
1.5	B-252HP	3/8	1.63	5	6.25	.69	0.5	.66	1.34	2
3	C-252HP	1/2	2.00	7.31	9.31	1.00	0.75	.91	1.94	5
5	D-252HP	5/8	2.50	9.06	11.44	1.19	1	1.28	2.50	10
8.5	EE-252HP	3/4	3.00	10.13	13.06	1.50	1.25	1.41	3.13	16
15	GG-252HP	1	4.00	15.13	19.38	2.13	2	2.03	4.91	43
35	HH-252HP	1 1/2	5.00	18.19	22.94	2.38	2.25	2.31	5.25	79
45	I-252HP		6.00	22.56	28.56	3.00	2.5	2.53	7.00	142
60	JJ-252HP		7.00	24	31	3.50	3.5	2.88	7.00	231
75	K-252HP		8.00	27	35	4.00	3.5	3.38	8.25	340
100	KK-252HP		10.00	36.5	47.5	5.50	4.5	4.03	11.38	704

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1



SWIVELS- HYDRO LINK\HP, HIGH PRESSURE, STAINLESS STEEL

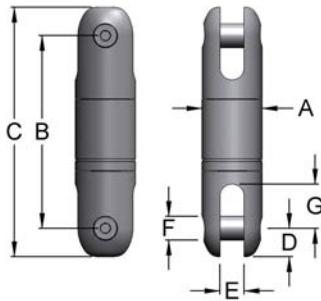
STUD TO CLEVIS - TYPE 351HP, STAINLESS STEEL



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	H	I	J	K	Weight Lbs.
0.75	BB-351HP	1/4	1.31	0.22	5.81	.44	0.31	.38	.63	0.56	2.00	1.50	4.38	1
1.5	B-351HP	3/8	1.63	0.31	7	.69	0.5	.5	.75	0.78	2.00	1.50	4.31	2
3	C-351HP	1/2	2.00	0.38	10.44	.88	0.75	.75	.88	1.19	3.00	2.63	5.25	5
5	D-351HP	5/8	2.50	0.56	11.19	1.13	1	.88	1.25	1.56	3.50	3.13	6.56	11
8.5	EE-351HP	3/4	3.00	0.53	13.78	1.34	1.56	1.19	1.50	2.09	4.00	3.00	8.44	15
15	GG-351HP	1	4.00	0.81	18.69	1.75	1.75	1.5	2.00	3.5	5.50	3.00	11.44	40
35	HH-351HP	1 1/2	5.00	1.13	25.56	2.38	2	2	2.50	3.69	8.50	4.25	14.69	84
45	I-351HP		6.00	1.25	28	3.00	2.5	2.25	3.00	4	8.00	4.00	17	141
60	JJ-351HP		7.00	1.5	31.5	3.50	3	2.5	3.25	4.5	8.00	4.00	20	219
75	K-351HP		8.00	1.75	36.5	4.00	3.5	3	3.75	5	10.00	5.00	22.5	295
100	KK-351HP		10.00	2	54.75	5.50	4.06	4	6.25	6.75	20.50	7.25	28.75	699

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1

BULLET NOSE TO BULLET NOSE - TYPE 454HP, STAINLESS STEEL



WLL* Tons	Model Number	Rope Size	A	B	C	D	E	F	G	Weight Lbs.
0.75	BB-454HP	1/4	1.31	4.88	5.63	.44	0.31	.38	.56	1
1.5	B-454HP	3/8	1.63	5	6.25	.56	0.5	.44	.81	2
3	C-454HP	1/2	2.00	6.5	8.13	.81	0.75	.63	.94	4
5	D-454HP	5/8	2.50	9.25	11.38	1.13	1	.88	1.56	9
8.5	EE-454HP	3/4	3.00	10.56	13.13	1.25	1.28	1	2.13	16
15	GG-454HP	1	4.00	15	18.5	1.75	1.75	1.5	3.25	42
35	HH-454HP	1 1/2	5.00	18.16	22.91	2.38	2	2	3.69	87

* Design factors for WLL=35T and below are 5:1; for 45T and above 4:1