

# DCL PROPRIETARY PRODUCTS

DCL PROPRIETARY  
PRODUCTS

<b>ORIGINAL “PEE WEE®” Sockets.....</b>	<b>B1</b>
<b>WORKHORSE “PEE WEE®” Sockets.....</b>	<b>B2</b>
<b>Spelter Sockets (Closed).....</b>	<b>B3</b>
<b>Spelter Sockets (Open) .....</b>	<b>B4</b>
<b>Wedge Sockets.....</b>	<b>B5</b>
<b>Thimbles (Hawser) .....</b>	<b>B6</b>
<b>Thimbles (Rope) .....</b>	<b>B7</b>
<b>WORKHORSE SRC &amp; SRT .....</b>	<b>B8</b>
<b>Shackles (Forged Towing).....</b>	<b>B9</b>
<b>Shackles (Safety Chain).....</b>	<b>B10</b>
<b>Sliding Choker Hooks (Single Rope Slings).....</b>	<b>B11</b>
<b>Sliding Choker Hooks (Braided Slings).....</b>	<b>B12</b>
<b>Hooks (Sorting).....</b>	<b>B13</b>
<b>Hooks (Anchor Line) .....</b>	<b>B14</b>
<b>Hooks (ROV) .....</b>	<b>B15</b>

# Mooring Sockets



DCL PROPRIETARY PRODUCTS

Read important warnings and information - Caution: When attaching spelter sockets to wire rope it is important to follow standard procedures as described by the Wire Rope Technical Board. Brooming and cleaning of wire rope is important. When resin is used, follow manufactures assembly instructions.

## The ***ORIGINAL*** “PEE WEE®” Mooring Sockets

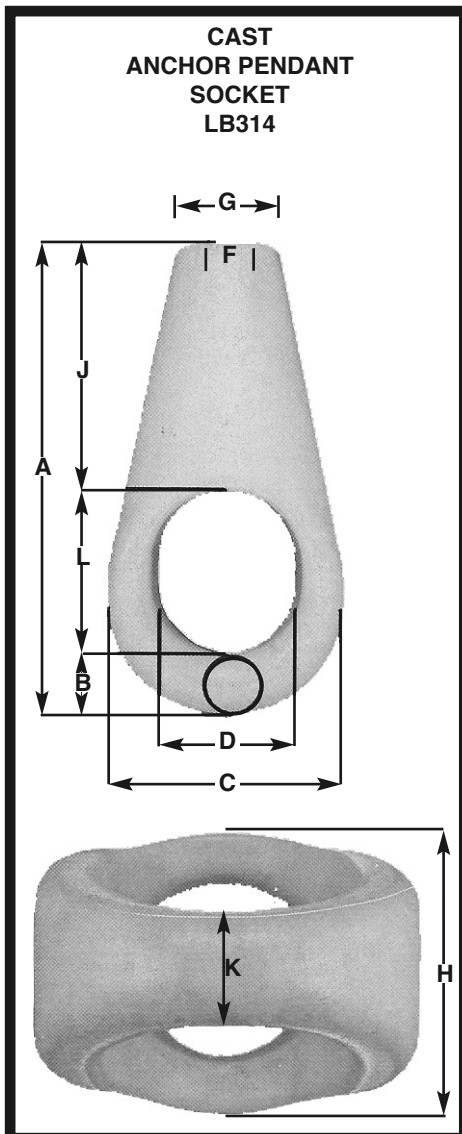
PAT. #290-339  
GALVANIZED

The LBNO “PEE WEE®” Anchor Pendant Sockets are an original design by DCL patented in 1987 that many others have attempted to replicate. The “PEE WEE®” socket’s superiority is derived from its design, metallurgy, weight, casting and heat treatment processes, quality controls and an array of testing procedures. Over twenty years of outstanding on-the-job performance by exploration companies, drilling contractors and anchor handling crews has earned the “PEE WEE®” socket worldwide recognition as “THE PERFORMANCE FITTING”.

All **ORIGINAL** “PEE WEE®” Sockets are delivered with:

- Alloy Steel
- Individual heat treatment serialization - Traceable
- Test bar analysis - Traceable
- 100% visual inspection - Traceable
- MPI test - Traceable
- Pulled two times SWL of highest grade wire - Traceable
- Fitted for “RFID” chips as required
- Spelter socket terminations have an efficiency rating of 100%, based on the catalog strength of wire rope. Ratings are based on recommended use with 6 x 7, 6 x 19, or 6 x 37, IPS or XIP (EIP), XXIP (EEIP), RRL, FC, or IWRC wire rope.

### ALLOY CAST STEEL



Wire Rope Diam.	DIMENSION IN INCHES										Weight Pounds Each Galv.	MBL (Short Tons)
	A	B	C	D	F	G	H	J	K	L		
2 - 2 1/8	15 1/2	2	8	4 5/16	2 1/4	3 3/4	6 1/2	8 1/4	2 1/16	5 1/4	63	NA
2 1/4 - 2 3/8	17 1/4	2 3/8	8 5/8	5 1/4	2 1/2	4 1/16	7	9	2 3/8	5 7/8	73	365
2 1/2 - 2 5/8	20	2 3/4	11	5 3/4	2 3/4	4 3/4	9 3/4	10 1/8	2 3/4	7 1/4	156	381
2 3/4 - 2 7/8	21	3	12	6 3/4	3 1/8	5 1/8	10 1/2	11	3 1/8	7	200	412
3 - 3 1/8	22 7/8	3 1/8	13 1/8	6 3/4	3 3/8	5 3/8	10 7/8	11	3 3/8	8 3/4	230	525
3 1/4 - 3 1/2	26	3 3/4	14 3/4	8 3/4	3 7/8	6 3/8	12 3/4	13 1/2	3 5/8	9 1/4	346	1177
3 3/4 - 4	28 3/4	4	16 1/2	9	4 3/8	7 3/8	14	15	4	10	482	1180
4 1/4 - 4 1/2	31 1/2	4 1/2	19	10	4 5/8	7 3/4	16	15 1/2	5 1/16	11 1/2	600	NA
4 3/4 - 5	34 1/4	5	19 1/2	12	5 3/8	8 3/16	16 1/2	17	5 1/4	12 1/4	700	NA

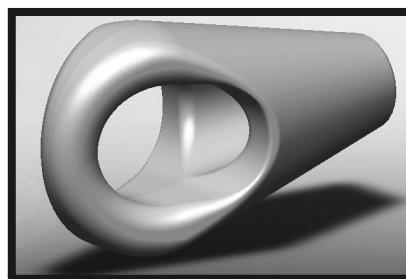
Dimensions in accordance with Standard Foundry Practice



www.dcl-usa.com • email: sales@dcl-usa.com • Fax (504) 947-8557 • 1-800-228-7660

# Mooring Sockets

## The *WORKHORSE* “PEE WEE®” Mooring Sockets



DCL PROPRIETARY  
PRODUCTS

<b><u>Specifications, Quality Control and Testing</u></b>	<b>ORIGINAL LBNO “PEE WEE®”</b>	<b>WORKHORSE LBNO “PEE WEE®”</b>
<b>1) A148 115-95 Alloy Steel - High tensile strength for tough material - 120,000 PSI UTS</b>	YES	YES
<b>2) Fitted for “RFID” chips as required.</b>	YES	YES
<b>3) Serialization of each socket traceable back to individual and unique heat.</b>	YES	YES
<b>4) Test bar analysis of chemistry and physical properties against ASTM A148 Grade 115-95 Alloy Steel Specifications - Traceable.</b> > Test bar is poured from each heat and is cast and heat treated with the sockets representing each unique pour to confirm quality of heat treatment.	YES	YES
<b>5) 100% Visual Inspection for irregularities of each socket to MSS - SP 55 Standard - Traceable.</b>	YES	YES
<b>6) Magnetic Particle Inspection (MPI) testing of each socket - Traceable.</b> > Specification: No relevant indications; Level 3 for surface quality and maximum linear indication 1/8”.	YES	YES
<b>7) Pulled two times SWL of highest grade corresponding wire size - Traceable.</b>	YES	YES
<b>8) Heat Test Log Analysis - Traceable.</b> > Square test piece is cast and heat treated with each socket. Test Square is then broken off from socket to analyze metal grain structure and to verify proper heat treatment of socket. Analysis and Test Coupons are traceable.		YES
<b>9) Charpy Impact Testing - Traceable.</b> > 2” Test Bar (Keel Block) per heat is used to test metal at low temperature (-40 degree F). Analysis and Test Coupons are traceable (100% BHN).		YES
<b>10) Equivalent Round Testing - Traceable.</b> > Larger sample Test Bar is poured from each heat and cast and heat treated with the sockets representing each unique pour to confirm quality of heat treatment against ASTM specifications.		YES
<b>11) Weld Mapping - Traceable.</b> > Any welding performed on socket at manufacturing is recorded by serial number and stored. Welding is sometimes used to correct any imperfections found in MPI and visual inspection processes.		YES
<b>12) NDT X-Ray 1 out of every 25 sockets - Traceable.</b>		YES
<b>13) Proof Testing of Sockets - Traceable.</b> > 2 Sockets per each 50 unit lot tested to MBL/Break (i.e. 100 unit lot has 4 sockets tested to break).		YES

# Spelter Sockets (Closed)

DCL PROPRIETARY  
PRODUCTS

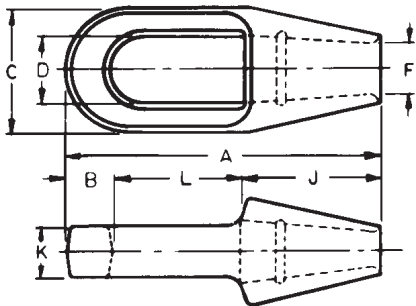
## SOCKETS Standard Closed Spelter Sockets



### CLOSED SPELTER SOCKETS GALVANIZED



LB - 305



LBNO Standard Type Closed Spelter Sockets illustrate perfectly the principle of all LBNO wire rope fittings. They are designed to fit the rope properly and to develop the full strength of the wire rope. LBNO Sockets have grooves in the socket basket for superior strength and holding power when pouring with zinc. LBNO Sockets comply with both Federal and International Standards to allow for use with resin pour.

When ordering Always Specify **LBNO Quality Closed Spelter Sockets**. All of these advantages have been demonstrated over and over again, by outstanding on-the-job performance.

**Caution:** When attaching spelter sockets to wire rope it is important to follow standard procedures as described by the Wire Rope Technical Board. Brooming and cleaning of wire rope is important. When resin is used follow manufacturers assembly instructions.

CLOSED SPELTER SOCKETS STANDARD-GALVANIZED					CAST ALLOY STEEL HEAT TREATED				
Wire Rope Diameter Inches	DIMENSION IN INCHES								Weight Pounds Each
	A	B	C	D	F	J	K	L	
1-1/2	14-1/8	2	5-3/8	3-1/8	1-5/8	6	2-1/2	6-1/8	29
1-5/8	15-3/4	2-1/8	5-3/4	3-1/4	1-3/4	6-1/2	2-3/4	6-3/4	39-1/2
1-3/4-1-7/8	17-1/2	2-3/16	6-3/4	3-17/32	2	7-1/2	3	7-13/16	56-1/2
2-2-1/8	19-3/4	2-7/16	7-5/8	3-25/32	2-1/4	8-1/2	3-1/4	8-13/16	82
2-1/4-2-3/8	21-5/8	2-7/8	8-1/2	4-9/32	2-1/2	9	3-5/8	9-3/4	103-1/2
2-1/2-2-5/8	23-1/2	3-1/8	9-1/2	4-25/32	2-7/8	9-3/4	4	10-5/8	143-1/2
2-3/4-2-7/8	25-1/2	5-1/2	10-3/4	5-1/2	3-3/16	11	4-7/8	11-5/8	226
3-3-1/8	27	3-1/4	11-1/2	6	3-5/8	12	5-1/4	11-3/4	259
3-1/2-3-5/8	31	4	13	6-3/4	3-7/8	14	6-1/4	13	415
3-3/4-4	33-1/4	4-1/4	14-1/4	7-1/4	4-1/4	15	7	14	540

Dimensions are in accordance with Standard Foundry Practice.

# Spelter Sockets (Open)

## SOCKETS

### Standard Open

### Spelter Sockets



DCL PROPRIETARY  
PRODUCTS

LBNO Standard Type Open Spelter Sockets illustrate perfectly the principle of all LBNO wire rope fittings. They are designed to fit the rope properly and to develop the full strength of the wire rope. LBNO Sockets have grooves in the socket basket for superior strength and holding power when pouring with zinc. LBNO Sockets comply with both Federal and International Standards to allow for use with resin pour.

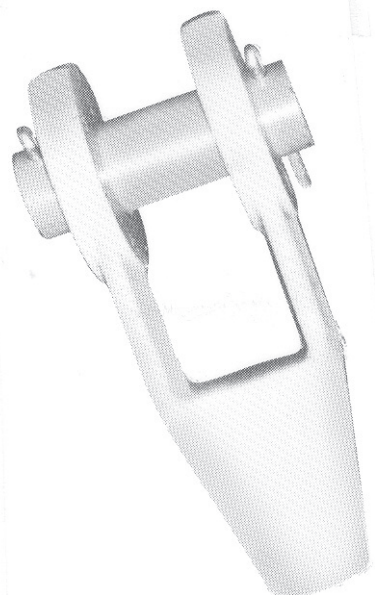
When ordering Always Specify **LBNO Quality Open Spelter Sockets**. All of these advantages have been demonstrated over and over again, by outstanding on-the-job performance.

**Caution:** When attaching spelter sockets to wire rope it is important to follow standard procedures as described by the Wire Rope Technical Board Brooming and cleaning of wire rope is important. When resin is used follow manufacturers assembly instructions.

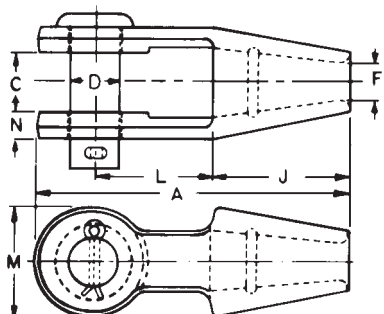
OPEN SPELTER SOCKETS STANDARD-GALVANIZED									CAST STEEL HEAT TREATED
Wire Rope Diameter Inches	DIMENSION IN INCHES								Weight Pounds Each
	A	C	D	F	J	L	M	N	
1-1/2	15-1/8	3	2-3/4	1-5/8	6	6-3/8	5-3/8	1-3/16	42.5
1-5/8	16-1/4	3	3	1-3/4	6-1/2	6-1/2	5-3/4	1-5/16	57
1-3/4-1-7/8	18-1/4	3-1/2	3-1/2	2	7-1/2	7	6-1/2	1-9/16	81-1/2
2-2-1/8	21-1/2	4	3-3/4	2-1/4	8-1/2	9	9	1-13/16	114
2-1/4-2-3/8	23-1/2	4-1/2	4-1/4	2-1/2	9	10	7-3/4	2-1/8	162
2-1/2-2-5/8	25-1/2	5	4-3/4	2-7/8	9-3/4	10-3/4	8-1/2	2-3/8	228
2-3/4-2-7/8	27-1/2	5-1/2	5	3-3/16	11	16-1/4	9	3-1/4	338
3-3-1/8	29	5-3/4	5-1/4	3-5/8	12	11-1/4	9-1/2	3	365
3-1/2-3-5/8	33-1/4	6-3/4	6	3-7/8	14	12-1/2	10-3/4	3-1/4	546
3-3/4-4	36-1/4	7-1/2	7	4-1/4	15	13-1/2	12-1/2	3-1/2	729
4-1/2	44-7/8	9-1/4	8-1/2	4-7/8	18-1/2	16-3/4	15-1/2	4-3/8	1550

Dimensions are in accordance with Standard Foundry Practice.

### OPEN SPELTER SOCKETS GALVANIZED



LB - 304



# Wedge Sockets

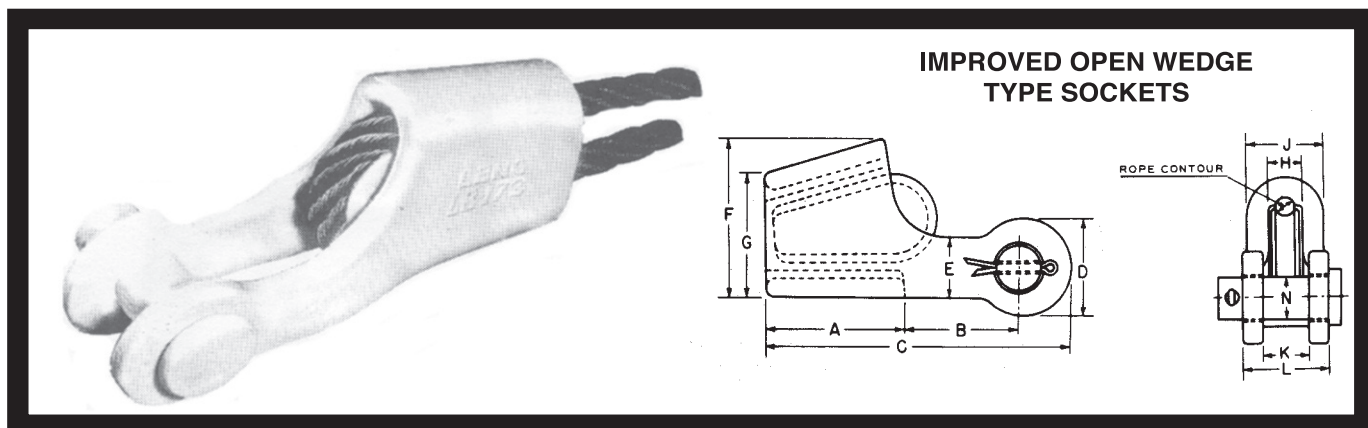
DCL PROPRIETARY  
PRODUCTS

## SOCKETS Wedge Sockets



LBNO improved wedge sockets eliminate the pinching and flattening action on the wire rope which is common to many other wedge sockets. LBNO Wedge Sockets grip the wire rope firmly without crushing or overstressing. The secret of this superior gripping power lies in the contour of the ropeway which has been engineered to match that of the wire rope, resulting in three important features: Longer wire rope service life; superior strength in the connection between rope and socket; and, greater safety and protection for both men and equipment. LBNO sockets are complete with flat round-headed pins with cotter keys. Threaded pins and nuts can also be furnished.

When ordering Always Specify **LBNO Quality Wedge Sockets**. All of these advantages have been demonstrated over and over again, by outstanding on-the-job performance.



IMPROVED OPEN WEDGE TYPE SOCKETS														CAST STEEL HEAT TREATED	
LBNO* Socket Number Complete	LBNO** Wedge Number	Rope Diameter Inches	DIMENSION IN INCHES											PIN N	Weight Pounds Each Complete
			A	B	C	D	E	F	G	H	J	K	L		
LB-172	LB-172-W	$\frac{5}{16}$ & $\frac{3}{8}$	$2\frac{9}{16}$	$2\frac{1}{16}$	$5\frac{9}{16}$	$1\frac{3}{4}$	$1\frac{1}{8}$	$2\frac{13}{16}$	$2\frac{1}{4}$	$\frac{5}{8}$	$1\frac{3}{8}$	$\frac{7}{8}$	$1\frac{5}{8}$	$1\frac{3}{16}$	1.2
LB-173	LB-173-W	$\frac{7}{16}$ & $\frac{1}{2}$	$3\frac{1}{4}$	$2\frac{7}{16}$	$6\frac{3}{4}$	2	$1\frac{1}{4}$	$3\frac{7}{16}$	$2\frac{11}{16}$	$\frac{3}{4}$	$1\frac{1}{2}$	1	$1\frac{3}{4}$	1	5
LB-174	LB-174-W	$\frac{9}{16}$ & $\frac{5}{8}$	$4\frac{1}{8}$	$3\frac{1}{8}$	$8\frac{5}{8}$	$2\frac{1}{2}$	$1\frac{1}{2}$	$4\frac{1}{4}$	$3\frac{5}{16}$	1	$1\frac{7}{8}$	$1\frac{1}{4}$	$2\frac{1}{8}$	$1\frac{3}{16}$	$9\frac{1}{2}$
LB-175	LB-175-W	$\frac{3}{4}$	$5\frac{1}{2}$	$3\frac{7}{8}$	11	3	$1\frac{7}{8}$	$5\frac{3}{16}$	$3\frac{7}{8}$	$1\frac{1}{4}$	$2\frac{3}{8}$	$1\frac{1}{2}$	$2\frac{5}{8}$	$1\frac{3}{8}$	$18\frac{1}{2}$
LB-176	LB-176-W	$\frac{7}{8}$ & 1	$6\frac{3}{8}$	$5\frac{5}{16}$	$13\frac{7}{8}$	4	$2\frac{1}{2}$	$6\frac{5}{8}$	$5\frac{3}{16}$	$1\frac{5}{8}$	$3\frac{1}{8}$	2	$3\frac{1}{2}$	2	37
LB-177	LB-177-W	$1\frac{1}{8}$ & $1\frac{1}{4}$	7	$6\frac{3}{16}$	16	5	$2\frac{7}{8}$	$7\frac{1}{2}$	$5\frac{7}{8}$	2	$3\frac{5}{8}$	$2\frac{1}{2}$	$4\frac{1}{8}$	$2\frac{1}{2}$	$59\frac{1}{2}$
LB-178	LB-178-W	$1\frac{3}{8}$ & $1\frac{1}{2}$	$7\frac{3}{4}$	$7\frac{1}{16}$	$18\frac{1}{8}$	$5\frac{3}{4}$	$3\frac{1}{4}$	$8\frac{3}{4}$	$6\frac{7}{8}$	$2\frac{3}{8}$	$4\frac{1}{4}$	3	$4\frac{7}{8}$	$2\frac{3}{4}$	94
LB-179	LB-179-W	$1\frac{5}{8}$ & $1\frac{3}{4}$	9	$7\frac{3}{4}$	$20\frac{7}{8}$	$7\frac{1}{4}$	$3\frac{3}{4}$	$9\frac{7}{8}$	$7\frac{13}{16}$	$2\frac{1}{2}$	$4\frac{1}{2}$	$3\frac{1}{2}$	$6\frac{1}{4}$	$3\frac{1}{2}$	$136\frac{1}{2}$
LB-180	LB-180-W	2 & $2\frac{1}{4}$	11	10	$25\frac{5}{8}$	8	$4\frac{1}{2}$	$13\frac{1}{8}$	$10\frac{3}{4}$	3	$5\frac{1}{4}$	4	$6\frac{1}{2}$	$3\frac{3}{4}$	$241\frac{1}{2}$

\*\*Includes Wedge Pin and Cotter Keys

\*\*Wedge Only.

Dimensions are in accordance with Standard Foundry Practice.





# Thimbles (Hawser)

DCL PROPRIETARY  
PRODUCTS

## THIMBLE Heavy Duty Hawser Thimble



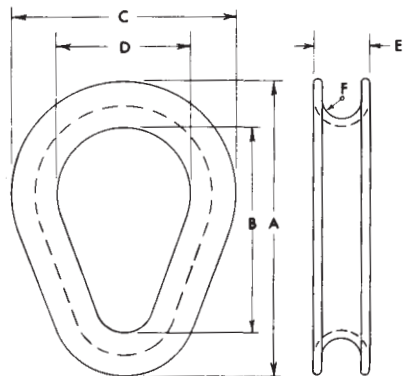
LBNO Cast steel extra Heavy Duty Hawser Thimbles are designed for wire rope anchoring systems on offshore rigs and are often furnished for marine use on towing hawsers, as well as many industrial and construction applications. LBNO Hawser Thimbles prevent the wire rope eye from mashing together and wearing excessively. They have smooth, even grooves, and maximum high strengths at critical points. The generous inside dimensions allow for the Hawser Thimble to fit onto large shackles and crane hooks.

When ordering Always Specify **LBNO Quality Hawser Thimbles**. All of these advantages have been demonstrated over and over again, by outstanding on-the-job performance.

HAWSER THIMBLE GALVANIZED				CAST ALLOY STEEL				
LBNO Number	Rope Diam. Inches	DIMENSION IN INCHES						Weight Pounds Each
		A	B	C	D	E	F	
LB-237	$\frac{5}{8}$ - $\frac{3}{4}$	$6\frac{7}{8}$	$4\frac{1}{2}$	5	3	$1\frac{3}{16}$	$1\frac{3}{32}$	$3\frac{1}{2}$
LB-238	$\frac{7}{8}$ - 1	$8\frac{5}{8}$	$5\frac{3}{4}$	$6\frac{1}{4}$	$3\frac{3}{4}$	$1\frac{7}{16}$	$1\frac{7}{32}$	6
LB-239	$1\frac{1}{8}$ - $1\frac{1}{4}$	$10\frac{1}{8}$	$6\frac{3}{4}$	$7\frac{1}{4}$	$4\frac{1}{4}$	$1\frac{11}{16}$	$2\frac{1}{32}$	$9\frac{1}{2}$
LB-241	$1\frac{3}{8}$ - $1\frac{1}{2}$	$12\frac{1}{8}$	8	$8\frac{3}{4}$	5	$2\frac{3}{16}$	$2\frac{5}{32}$	$18\frac{1}{2}$
LB-242	$1\frac{5}{8}$ - $1\frac{3}{4}$	$12\frac{3}{4}$	8	$9\frac{1}{4}$	5	$2\frac{7}{16}$	$1\frac{5}{16}$	24
LB-243	2	$14\frac{3}{4}$	$9\frac{1}{2}$	$10\frac{3}{4}$	6	$2\frac{11}{16}$	$1\frac{1}{16}$	$33\frac{1}{2}$
LB-244	$2\frac{1}{8}$ - $2\frac{1}{4}$	$17\frac{1}{8}$	11	$12\frac{1}{2}$	7	$3\frac{1}{8}$	$1\frac{3}{16}$	$53\frac{1}{2}$
LB-245	$2\frac{1}{2}$	$19\frac{1}{4}$	$12\frac{3}{4}$	$14\frac{1}{4}$	$8\frac{1}{4}$	$3\frac{7}{8}$	$1\frac{3}{8}$	$81\frac{1}{2}$
LB-246	3	$24\frac{1}{2}$	15	17	$9\frac{3}{8}$	$4\frac{15}{16}$	$1\frac{5}{8}$	$136\frac{1}{2}$
LB-247	$3\frac{1}{2}$	30	$19\frac{1}{2}$	20	$11\frac{1}{2}$	$5\frac{1}{2}$	$1\frac{7}{8}$	$216\frac{1}{2}$

Dimensions are in accordance with Standard Foundry Practice.

### HEAVY DUTY HAWSER THIMBLE



# Thimbles (Rope)

DCL PROPRIETARY  
PRODUCTS

## THIMBLE Rope Thimbles



LBNO new dimension "LIGHTER WEIGHT" heavy duty Rope Thimble is an improved design for the marine towing industry use. Light enough for ease of handling, but with maximum high strength at critical points. The generous inside dimensions allow for these thimbles to fit our LBNO Marine Towing Shackles, or any large regular shackle.

When ordering Always Specify **LBNO Quality Rope Thimbles**. All of these advantages have been demonstrated over and over again, by outstanding on-the-job performance.

ROPE THIMBLE		HIGH STRENGTH STEEL – SELF-COLORED & GALVANIZED –						
Rope Diameter Inches	Rope Circumferences Inches	DIMENSION IN INCHES						Weight Pounds Each
		A	B	C	D	E	W	
1 - 1 <sup>1</sup> / <sub>4</sub>	3 - 3 <sup>3</sup> / <sub>4</sub>	2	3 <sup>1</sup> / <sub>2</sub>	5 <sup>3</sup> / <sub>8</sub>	1 <sup>9</sup> / <sub>16</sub>	1 <sup>7</sup> / <sub>16</sub>	1 <sup>15</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>2</sub>
1 <sup>5</sup> / <sub>16</sub> - 1 <sup>5</sup> / <sub>8</sub>	4 & 5	3 <sup>3</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>8</sub>	7 <sup>7</sup> / <sub>8</sub>	1 <sup>13</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>4</sub>	5 <sup>1</sup> / <sub>2</sub>
2 & 2 <sup>1</sup> / <sub>4</sub>	6 & 7	3 <sup>1</sup> / <sub>8</sub>	6	9 <sup>1</sup> / <sub>4</sub>	2 <sup>3</sup> / <sub>4</sub>	2 <sup>3</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>8</sub>	11
2 <sup>5</sup> / <sub>8</sub>	8	4 <sup>1</sup> / <sub>4</sub>	6 <sup>1</sup> / <sub>2</sub>	11	3 <sup>1</sup> / <sub>8</sub>	3	3 <sup>3</sup> / <sub>4</sub>	20 <sup>1</sup> / <sub>2</sub>
3	9	4 <sup>3</sup> / <sub>4</sub>	7 <sup>5</sup> / <sub>8</sub>	12	3 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>4</sub>	4	26
3 <sup>1</sup> / <sub>4</sub>	10	5	8 <sup>1</sup> / <sub>2</sub>	13 <sup>1</sup> / <sub>2</sub>	3 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>4</sub>	35 <sup>1</sup> / <sub>2</sub>
3 <sup>5</sup> / <sub>8</sub> - 4	11 - 12	6 <sup>1</sup> / <sub>8</sub>	9 <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>	5 <sup>3</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>2</sub>	5 <sup>1</sup> / <sub>2</sub>	48
4 <sup>1</sup> / <sub>4</sub> - 4 <sup>5</sup> / <sub>8</sub>	13 - 14	6	10	17	5 <sup>3</sup> / <sub>4</sub>	5 <sup>1</sup> / <sub>4</sub>	6	56 <sup>1</sup> / <sub>2</sub>
5 - 5 <sup>1</sup> / <sub>4</sub>	15 - 16	6 <sup>7</sup> / <sub>16</sub>	11	18 <sup>1</sup> / <sub>2</sub>	6 <sup>1</sup> / <sub>2</sub>	5 <sup>3</sup> / <sub>4</sub>	6 <sup>5</sup> / <sub>8</sub>	64
5 <sup>5</sup> / <sub>8</sub> - 6	17 - 18	10	11 <sup>7</sup> / <sub>8</sub>	24	6 <sup>1</sup> / <sub>2</sub>	6 <sup>1</sup> / <sub>8</sub>	7	80
6 <sup>1</sup> / <sub>4</sub> - 6 <sup>5</sup> / <sub>8</sub>	19 - 20	12	16 <sup>1</sup> / <sub>4</sub>	27	8	7 <sup>3</sup> / <sub>4</sub>	9	270
7 - 7 <sup>1</sup> / <sub>4</sub>	21 - 22	13 <sup>7</sup> / <sub>8</sub>	19 <sup>3</sup> / <sub>4</sub>	33 <sup>3</sup> / <sub>4</sub>	9 <sup>1</sup> / <sub>4</sub>	8 <sup>1</sup> / <sub>2</sub>	10 <sup>1</sup> / <sub>4</sub>	378

\*NOTE: Can be made of Stainless Steel.

\*NOTE: Dimensions are approximate in accordance with Standard Foundry Practice.

\*NOTE: "D" Dimension is larger than "E" Dimension to allow for the larger diameter of the rope after splicing.



**WORKHORSE SRC & SRT****Synthetic Rope Connector  
For Deepwater Moorings*****WORKHORSE SRC***

- MBL exceeds corresponding diameter mooring ropes
- Takes freeboard load
- Won't damage rope on spool
- Fits open-link chain, connecting links, Pee Wee Sockets, and itself
- Independently stopped-off  
(No Chinese fingers)
- Easy handling on deck
- Inserts into existing eyes

**DCL PROPRIETARY  
PRODUCTS****Detachable  
Synthetic Rope Thimble*****WORKHORSE SRT***

- MBL exceeds corresponding diameter Dyneema rope
- Inserts into existing eyes
- Detachable ears

# Shackles (Forged Towing)

DCL PROPRIETARY  
PRODUCTS

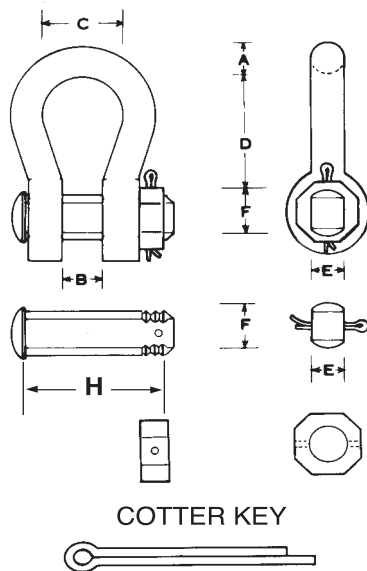
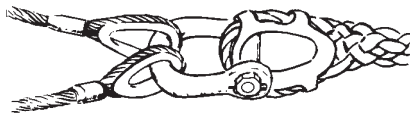
## SHACKLES Forged Marine Towing Shackle With Safety Nut and Cotter Pin



### FORGED MARINE TOWING SHACKLE WITH SAFETY NUT & COTTER PIN



LB 301



COTTER KEY

LBNO Towing Shackles are primarily designed for the marine towing industry. The wide throat opening and more than generous inside dimensions will allow for the passage of heavy duty hawser thimbles, in addition to the large synthetic rope thimbles normally used in the towing industry. In order to accomplish this with standard shackles, a much larger than needed shackle must be used, thus creating a weight problem in handling for the workmen.

The LBNO shackle is equipped with an oval shaped pin which is stronger than round pins and less likely to deform. The tapered end of the pin is carefully threaded the full width of the nut, eliminating the common problem of galled threads. All pins come with a safety nut secured by a cotter key to prevent backing off due to vibration.

When ordering Always Specify **LBNO Quality Shackles**. All of these advantages have been demonstrated over and over again, by outstanding on-the-job performance.

U.S. PATENT NUMBER 3656293  
CANADIAN PATENT NUMBER 939881

Rated Capacity Tons	MARINE SAFETY ANCHOR TOWING SHACKLES GALVANIZED							CAST HIGH STRENGTH ALLOY STEEL	
	DIMENSION IN INCHES								
	A Size Inches	B Jaw Width	C Width Bow	D Inside Length	E Pin	F Pin	H Pin Lgt.	Weight Pounds Each	
30	1 3/4	5 1/8	7	9 3/4	2	2 1/2	11	53	
40	2	5 3/4	7 1/2	10	2 1/8	2 7/8	13	74	
55	2 1/2	6 1/4	8	10 1/2	2 5/8	3 3/8	15	117 1/2	
80	3	7 1/2	9 3/4	13	3 1/4	4 1/8	18	212	

- MINIMUM ULTIMATE STRENGTH - 5 times rated capacity.
- Design Rated Capacity Permanently Marked on Every Shackle.
- Average Proof Load is Twice Rated Capacity.
- All shackles furnished proof tested with certificates.



# Shackles (Safety Chain)

## SHACKLES Safety Chain Shackles

DCL PROPRIETARY  
PRODUCTS

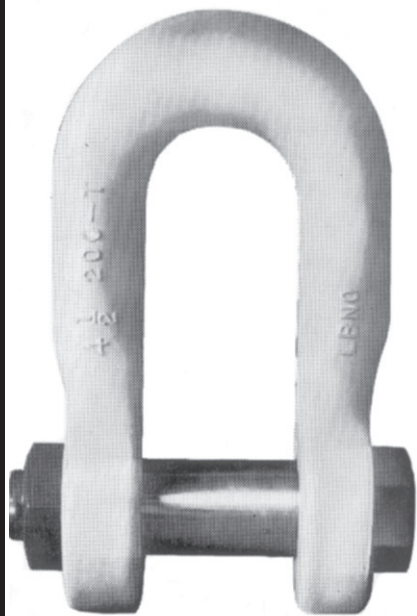
LBNO Safety Chain heavy duty Lifting Shackles are designed for extreme lifting applications. Notice how much greater the "G" dimensions are when compared to most standard shackles. This advantage eliminates any bending at this critical point, and provides the shackle with greater strength. LBNO Shackles are cast with a special high quality alloy steel to assure maximum strength. The tapered end of the alloy pin is carefully threaded the full width of the nut, eliminating the common problem of galled threads. All pins come with a safety nut secured by a cotter key to prevent backing off due to vibration.

When ordering Always Specify **LBNO Quality Shackles**. All of these advantages have been demonstrated over and over again, by outstanding on-the-job performance.

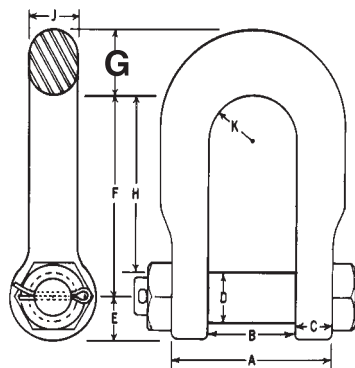
SAFETY CHAIN HEAVY DUTY LIFTING SHACKLE								CAST HIGH STRENGTH ALLOY STEEL				
Rated Capacity	DIMENSION IN INCHES											Weight LBS. - Ea.
	Size Inches	A	Jaw Width B	C	Pin D	E	F	G	H	J	K	
80	3	9	5	2	3-1/2	3-1/4	10-1/2	4-1/2	8-7/8	3	2-1/2	121
110	3-1/2	10-3/4	5-3/4	2-1/2	3-15/16	4	12-1/2	5	10-5/8	3-1/2	2-7/8	203
150	4	12-1/4	6-1/4	3	4-5/8	4-1/2	14-1/2	5-1/2	12-1/4	4	3-1/8	282
200	4-1/2	14-1/4	7-1/4	3-1/2	4-13/16	5-1/4	18	6	15-1/2	4-1/2	3-5/8	437
300	5	16-1/4	8-1/4	4	6	6	22-1/2	6	19-1/2	5	4-1/8	677

- MINIMUM ULTIMATE STRENGTH - 4 times rated capacity.
- Design Rated Capacity Permanently Marked on Every Shackle.
- Shackles can be furnished proof tested with certificate per requirements.
- Charges for proof testing and certification available on request.

### SAFETY CHAIN HEAVY DUTY LIFTING SHACKLES



LB 300



# Sliding Choker Hooks (Single Rope Slings)

DCL PROPRIETARY  
PRODUCTS

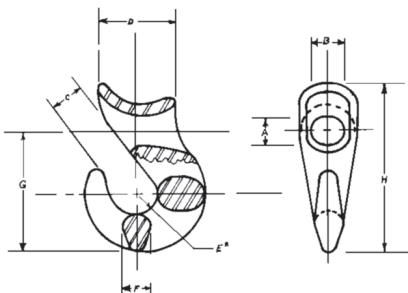
## HOOKS Sliding Choker Hooks Single Rope Slings



### SINGLE ROPE SLINGS



**LB 308**



LBNO (LB-308) Sliding Choker Hooks are designed standard round ropes. It's wide flaring eye and ample throat opening greatly increases the bearing surface on the rope, prevents cutting, damaging kinks, and substantially increases rope life. The throat opening is designed to accommodate heavy duty wire rope thimbles of the same size as the hook.

When ordering Always Specify **LBNO Quality Sliding Choker Hooks**. All of these advantages have been demonstrated over and over again, by outstanding on-the-job performance.

SLIDING CHOKER HOOKS REGULAR SLIDING HOOKS										CAST ALLOY STEEL
Rope Diam. Inches	LBNO Hook Size	DIMENSIONS IN INCHES								Weight Pounds Each
		A	B	C	D	E <sup>R</sup>	F	G	H	
1/2	1/2	3/4	3/4	1	2-1/8	1/2	3/4	3-5/8	4-13/16	2
5/8	5/8	7/8	7/8	1-1/4	2-3/4	6/16	15/16	4-7/16	5-15/16	3-1/2
3/4	3/4	1	1	1-1/4	3-1/8	11/16	1-1/4	4-11/16	6-7/16	4-1/2
7/8-1	7/8-1	1-1/4	1-1/4	1-7/16	4-1/4	7/8	1-9/16	6-1/16	8-1/8	9-1/2

**CAUTION: NEVER EXCEED THE RATED CAPACITY.**

\* All Choker Hooks manufactured by DCL, used in any other way than the Choker Configuration, will not be warranted.

# Sliding Choker Hooks (Braided Slings)

## HOOKS Sliding Choker Hooks Braided Slings



DCL PROPRIETARY  
PRODUCTS

LBNO (LB-309) Sliding Choker Hooks are designed for BRAIDED WIRE ROPE slings and has a large eye dimension to accommodate braided rope. The wide flaring eye and throat greatly increases the bearing surface on the rope, prevents cutting, damaging kinks, and substantially increases rope life. The throat opening is designed to accommodate heavy duty wire rope thimbles of the same size as the hook.

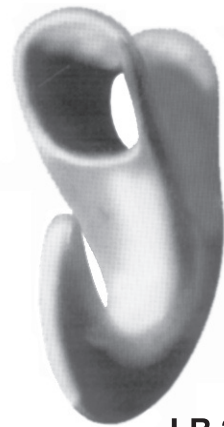
When ordering Always Specify **LBNO Quality Sliding Choker Hooks**. All of these advantages have been demonstrated over and over again, by outstanding on-the-job performance.

SLIDING CHOKER HOOKS											
BRAIDED SLIDING HOOKS											CAST ALLOY STEEL
8 Part Braided	6 Part Braided	LBNO Hook No.	A	DIMENSIONS IN INCHES							Wt. Lbs. Ea.
				B	C	D	E	F	G	H	
1/8	3/16	2	13/16	15/16	7/8	2-1/8	17/32	3/4	3 11/32	4-11/16	2
3/16		3	1	1-1/8	1-1/8	2-3/4	5/8	15/16	3-31/32	5-5/8	3.4
1/4	1/4	4	1-7/8	1-7/16	1-3/16	3	5/8	1-1/8	4-5/8	6-1/4	4.8
5/16	5/16	5	1-3/4	1-3/4	1-7/16	3-1/8	3/4	1-3/8	5-1/16	7-3/16	7

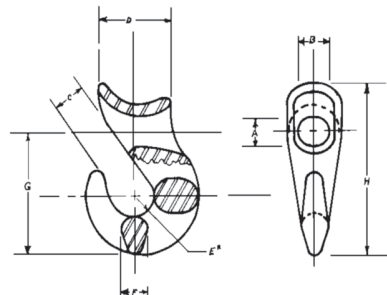
**CAUTION: NEVER EXCEED THE RATED CAPACITY.**

\* All Choker Hooks manufactured by DCL, used in any other way than the Choker Configuration, will not be warranted.

### BRAIDED SLINGS



**LB 309**





# Hooks (Sorting)

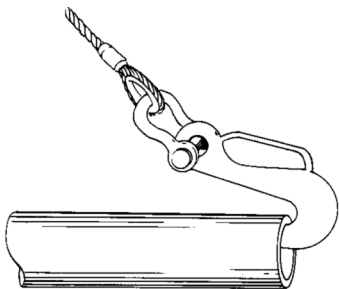
DCL PROPRIETARY  
PRODUCTS

## HOOKS Sorting Hooks



### SORTING OR SHAKE HOUT HOOK WITH SAFETY HANDLE

**LB 310**



LBNO Sorting Hooks are designed with safety handles to help eliminate the hazard of crushed hands. The generous deep throat dimensions allow for efficient handling of pipe or flat steel plate. The long tapered point allows for easy grabbing of steel beams, links, rings, eye bolts and/or lifting holes.

When ordering Always Specify **LBNO Quality Sorting Hooks**. All of these advantages have been demonstrated over and over again, by outstanding on-the-job performance..

SORTING OR SHAKE OUT HOOK WITH SAFETY HANDLE	CAST ALLOY STEEL HEAT TREATED
SPECIFICATIONS	
Design Rated Capacity at Bottom of Hook	7 1/2 Ton
Rated Capacity at Tip	2 Ton
Overall Length	9 3/4"
Opening at Top of Hook	2 13/16"
I. D. of Eye	1 1/4"
Radius at Bottom of hook	5/8"
Weight Pounds Each	8 Lbs.

**CAUTION: NEVER EXCEED THE RATED CAPACITY.**

# Hooks (Anchor Line)

## HOOKS Anchor Line Hooks



DCL PROPRIETARY  
PRODUCTS

LBNO Anchor Line Trip Hooks were primarily designed for the marine industry. They are most useful in retrieving or setting anchors around marine pipe-laying and construction barges. When retrieving, an extra strong hook is necessary to snag the loop or eye of the anchor buoy cable for it to be wound on the drum of a work boat. When setting anchors, the work boat reaches the desired distance for the barge, and with anchor off of the ocean floor, the work boat begins to release the winch line. When the anchor hook reaches approximately half-way from the stern of the boat, the small hook of the hold back line is inserted into the bottom hole of the anchor line hook. When slackening the winch line further, the hold back line will tighten, causing the anchor line hook to trip or release automatically from the loop of the buoy cable.

When ordering Always Specify **LBNO Quality Anchor Line Hooks**. All of these advantages have been demonstrated over and over again, by outstanding on-the-job performance.

MARINE ANCHOR LINE OR CARGO HOOK		CAST HIGH STRENGTH ALLOY STEEL			
Rated Capacity Tons*	DIMENSION IN INCHES				Weight Pounds Each
	A Eye Dimension	B Throat Opening	C Overall Length	D Diameter of Hole	
15	1 1/2	2 1/4	13 1/2	1 1/4	18
20	1 9/16	2 7/8	13 1/2	1 1/4	27
25	2	3 3/8	17 1/4	1 1/2	49

PATENTED

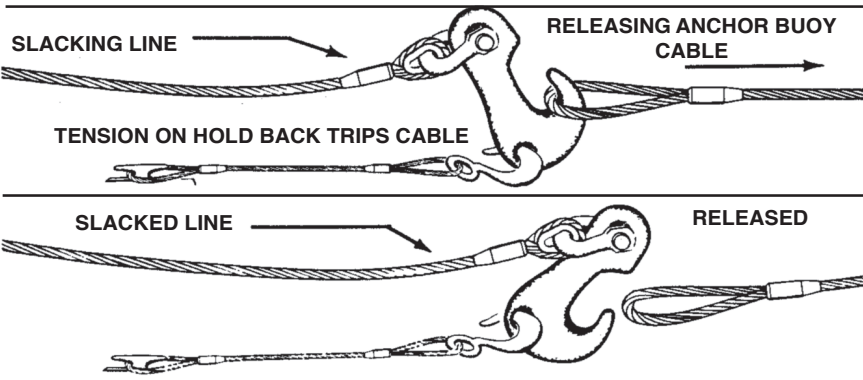
- Designed rated Capacity permanently marked on every hook.
- Average proof load is twice the designed rated capacity.

WINCH LINE

PULLING ANCHOR BUOY CABLE

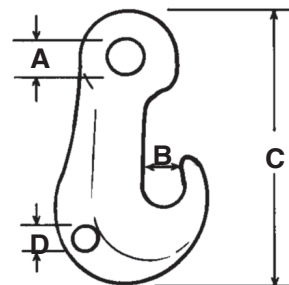


**CAUTION: NEVER EXCEED THE RATED CAPACITY.**

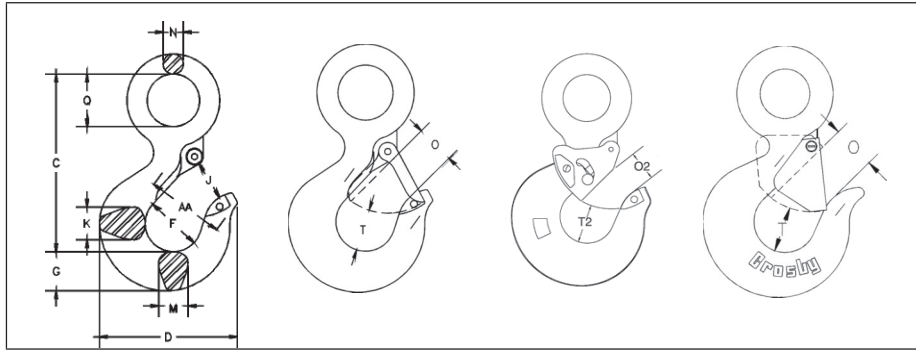
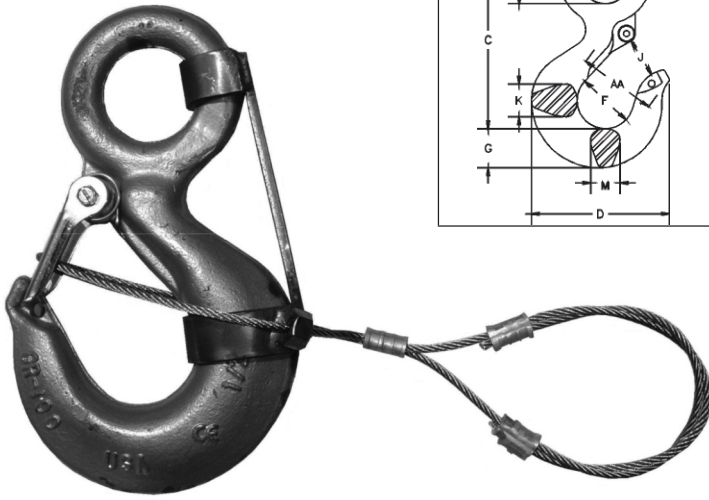


### ANCHOR LINE HOOK CARGO HOOK

LB 311



# Hooks (ROV)

DCL PROPRIETARY  
PRODUCTS

**LARGER SIZES  
AVAILABLE AS  
REQUIRED.**

DCL ROV Hooks are designed for ease, reliability, and safe operation in installation and retrieval of subsea equipment. The entire ROV Friendly mechanism is manufactured from stainless steel. Hooks are constructed from alloy steel. ROV Hooks can be proof tested and load certified to 2 1/2 times the Working Load Limit (WLL).

Tons	C	D	F	G	J	K	M	N	O	O2	Q	T	T2	AA
5	5.77	4.81	2.00	1.44	1.47	1.31	1.31	0.72	1.36	1.00	1.56	1.53	1.50	2.50
7	7.37	6.27	2.50	1.81	1.75	1.66	1.66	0.90	1.61	1.31	2.00	1.96	1.88	3.00
11	9.07	7.45	3.00	2.25	2.29	1.88	1.63	1.11	2.08	1.18	2.44	2.47	2.25	4.00
15	10.08	8.30	3.25	2.59	2.50	2.19	1.94	1.27	2.27	2.00	2.84	2.62	2.31	4.00
22	12.53	10.30	4.25	3.00	3.30	2.69	2.38	1.56	3.02	2.75	3.50	2.83	2.56	5.00
30	14.06	13.62	5.00	3.62	4.00	3.00	3.00	1.75	3.25	0.00	3.50	3.44	0.00	6.50
37	18.19	14.06	5.38	4.56	4.25	4.00	3.19	2.00	3.00	0.00	4.50	3.88	0.00	7.00
45	20.12	15.44	6.00	5.06	4.75	4.50	3.25	2.18	3.38	0.00	4.94	4.75	0.00	8.00
60	23.72	18.50	7.00	6.00	5.75	5.50	3.91	2.53	4.12	0.00	5.69	5.69	0.00	10.00