



DECK FITTINGS

THESE ARE ONLY A SAMPLE OF SOME TYPES AVAILABLE.
MANY OTHERS IN STOCK.

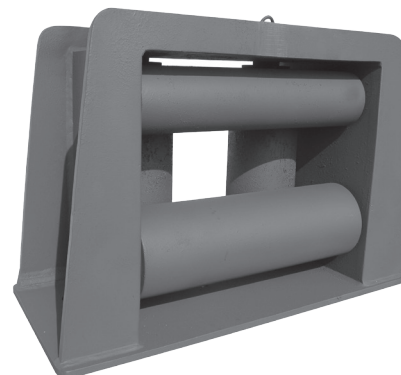
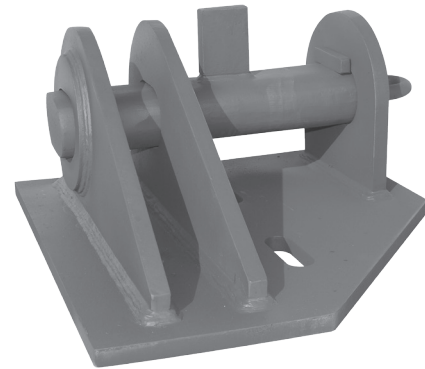
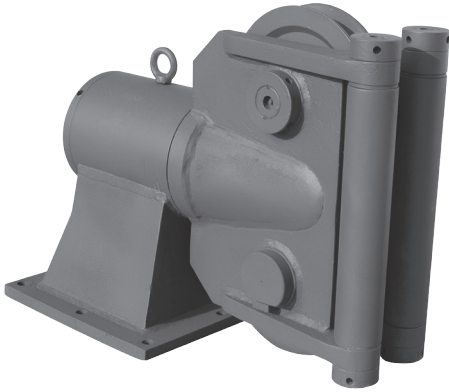
LET US KNOW YOUR REQUIREMENTS!
STOCKS IN THE WEST COAST AND THE GULF.



DECK FITTINGS



DECK FITTINGS



DECK FITTINGS





SINGLE POINT MOORING ARRANGEMENT FOR SHIPS

These requirements are applicable to ships intended to utilize the fittings standardized for single point moorings and include the type, strength and location of the required fittings.

A ship provided with mooring arrangements in accordance with the requirements of this will be eligible to be assigned the Class notation "SPM" (Single Point Mooring).

ARRANGEMENTS

The ship is to be fitted with bow chain stoppers and/or Smit Type Brackets, and bow fairleads. In addition, pedestal roller fairleads may be required for alignment purposes.

TABLE A.

GROUP	DEADWEIGHT IN TONS	CHAIN SIZE (MM)	NO. OF CHAIN STOPPERS	SWL IN KN (TONS)
I	< 100000	54	1	980 (100)
II	100000 < 150000	76	1	1960 (200)
III	150000 < 350000	76	2	1960 (200)
IV	350000	76	2	2450 (250)

BOW CHAIN STOPPERS

The number, chain cable size, and minimum safe working load of bow chain stoppers should be as given in Table A.

Bow chain stoppers should be located between 2.7 m and 3.7 m aft of the bow fairlead and should be positioned so as to give correct alignment with the bow fairlead and the pedestal fairlead or the drum end of the winch or capstan.

The leading edge of the stopper base plate is to be suitably faired to allow unimpeded entry of the combination chafe chain into the stopper.

Details of bow chain stoppers should be submitted for class approval.

SMIT TYPE BRACKETS

Smit type brackets may be fitted in lieu of bow chain stoppers. The required number and safe working load is as given in Table A for bow chain stoppers.

Where fitted, Smit Type Brackets should be located between 2.7 m and 3.7 m aft of the bow fairlead and should be positioned so as to give correct alignment with the bow fairlead and pedestal fairlead or drum end of the winch or capstan.

Adjacent to each Smit Type Bracket a lug with a recommended safe working load of 490 kN (50 tons) should be attached to the doubler plate. The lug should be provided with a hole of sufficient size to accept the pin of a 490 kN (50 ton) SWL shackle and should be used as a securing point for the chafe chain holding stopper. Details of Smit Type Brackets should be submitted for class approval.

BOW FAIRLEADS

One centrally located bow fairlead should be provided for ships up to 150,000 tons deadweight (Groups I and II). Two bow fairleads should be provided for ships larger than 150,000 tons deadweight (Groups III and IV). Bow fairlead opening should be at least 600 x 450 mm for 76 mm chafe chain size. Where more than one bow fairlead is installed the spacing of centers should be between 2 m and 3 m. The fairlead should be a minimum radius equal to 7 times the chain radius.

PEDESTAL ROLLER FAIRLEADS

Pedestal roller fairleads should have a minimum radius equal to ten times the radius of wire mooring ropes with a fiber core, seven times of wire mooring ropes with a steel core or three times the radius of synthetic mooring ropes. The number of pedestal roller fairleads should correspond to the number of bow chain stoppers or Smit Type Brackets.



DECK FITTINGS

MANUAL LOW - PROFILE BARGE WINCH

20 - 90 TON HOLDING CAPACITY

TAKING THE WINCH INDUSTRY BY STORM

BUILT TO LAST LOW-PROFILE TO KEEP THE CABLE LOW ON THE "BITTS" AND THE DECK



STANDARD FEATURES

- Additional tightening power from ratchet lever bar.
- Quick release holding dog, automatically disengages when not in use.
- Spinner knob on hand wheel for fast slack line take-up.
- Steel gear guard provides operator protection; prevents slack cable from fouling gears.
- Foot brakes control and prevent overrunning and birdnesting of wire rope.

OPTIONAL FEATURES:

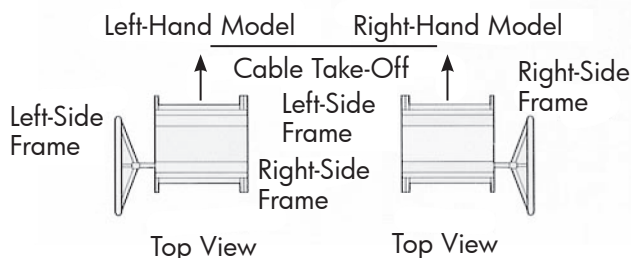
- Wider drums, angle deck brackets, disengaging clutch.
- Wintech Winch Cables

Low-Profile Manual Barge Winch Specifications								Drum Options		
Model No.	Rated Capacities (US Tons)			1st Player	Drum	Shipping Weight (lbs)	Cubic Feet	Capacity (US Tons)	Dimensions (in.)	
	Dog Hold- ing	Tightening		Gear Ratio	Diameter (in.)				Standard Drums	Wider Drums
		Hand	Ratchet							
20 HL	20	3	5	7:1	8-5/8	600	18.0	20 ton	10	17, 24, 36, 48
25 HL	40	5	10	14:1	10-3/4	650	22.0	40 ton	9	17, 35, 51, 69
50 HL	65	7.5	15	20:1	12-3/4	1175	34.0	65 ton	11	20, 41, 61, 82
75 HL	90	10	20	31:1	16	1880	37.0	90 ton	10	20, 40, 61, 81

Note: All models are shown with "L" designating left hand models; for right hand models, substitute "R" for "L" in

20 HL-8 5/8" DRUM DIAMETER					25 HL-10 3/4" DRUM DIAMETER					50 HL-12 3/4" DRUM DIAMETER					75 HL-16" DRUM DIAMETER				
LENGTH (IN.)	DRUM CAPACITY				LENGTH (IN.)	DRUM CAPACITY				LENGTH (IN.)	DRUM CAPACITY				LENGTH (IN.)	DRUM CAPACITY			
	.5/8 IN.	.3/4 IN.	.7/8 IN.	1 IN.		.5/8 IN.	.3/4 IN.	.7/8 IN.	1 IN.		.5/8 IN.	.3/4 IN.	.7/8 IN.	1 IN.		.5/8 IN.	.3/4 IN.	.7/8 IN.	1 IN.
10*	380	275	194	132	9*	248	162	142	88	11*	194	174	110	100	10*	119	108	98	56
17	650	470	330	225	17	479	314	277	174	20	377	338	216	197	20	247	225	207	119
24	915	650	460	317	35	975	643	568	359	41	773	694	445	408	40	523	478	441	254
36	1370	975	690	476	51	1472	971	865	544	61	1168	1051	674	619	61	798	731	675	390
48	1830	1300	920	634	69	1969	1299	1151	729	82	1564	1407	903	830	81	1074	983	909	525

* standard length of drum (drum lengths) are rounded to the nearest inch.



RULE OF THUMB: Right or left hand models are determined by which side of the winch the handwheel is mounted on. As illustrated right, standing behind the winch, facing the cable take-off direction is the proper orientation for determining right or left hand requirements.

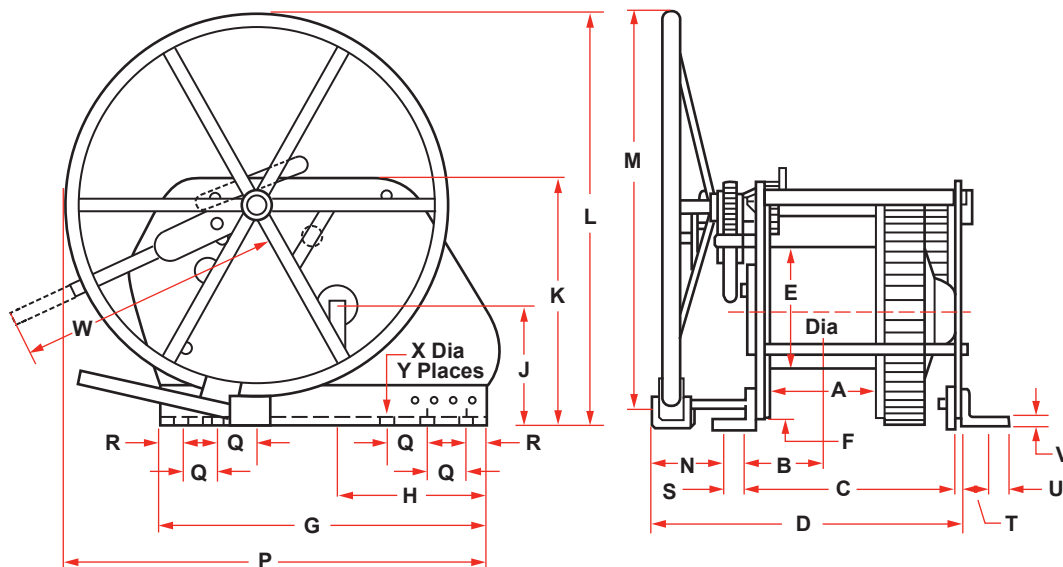




MANUAL LOW - PROFILE BARGE WINCH

20 - 90 TON HOLDING CAPACITY

SUPERIOR VALUE - RELIABILITY / QUALITY
WINCH CABLES AVAILABLE ON ALL MODELS.



MANUAL BARGE WINCH-LOW PROFILE DIMENSIONS

CAPACITY (US TONS)	DIMENSIONS (INCHES)																						
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y
20HL	10	6-1/2	15-7/8	25-7/8	8-5/8	6	23	11-1/2	11-3/4	24	35	32	9-3/8	38	4	3/4	1	1	1	3/8	53-1/2	13/16	8
25HL	9	7-3/8	17-7/8	27-7/8	10-3/4	3-5/8	28	12-1/4	21	21	34-1/2	32	9-3/8	37-1/2	4	3	1	2-1/8	1	1/2	53-1/2	13/16	10
50HL	11	8	20-7/8	30-7/8	12-3/4	4-3/8	33	15	12	25	42-1/2	40	9-1/8	43	4	2	1-3/8	3	1-7/8	3/4	59-1/2	1-1/8	12
75HL	10	8-1/8	21-7/8	31-1/4	1-6	4-1/2	41	16-1/2	14	29	50-1/2	48	9	50-1/2	4	2	1-1/2	3-1/2	1-1/2	1	65-1/2	1-1/8	16

NOTE: Dimensions are subject to change. Please contact factory for certified prints.



DECK FITTINGS

STANDARD UPRIGHT ELECTRIC 40 AND 65 US TON BARGE WINCH



TAKING THE WINCH INDUSTRY BY STORM
LOW DOWNTIME AND MAINTENANCE

STANDARD FEATURES

- Fully reversing crane and hoist duty motors that are totally enclosed.
- Control from pilot house or deck.
- Stall pulls to 40,000 lbs.
- Improved brake holding capacity to 70,000 lbs.
- Drum guard prevents slack cable from fouling gears.
- Hand wheel for operation in the event of power loss.

OPTIONAL FEATURES:

- Flange-mounted ball bearings for power shaft, factory installed.
- Grooved drums
- Drum flange divider
- Remote control packages:
 - NEMA 1; General purpose enclosure
 - NEMA 4; Watertight enclosure
 - NEMA 1 or 4 magnetic reversing starter
 - NEMA 1 or 4 push button station
- Wintech Winch Cables

Wintech electric barge winches are designed to protect operator profits by speeding up tow makeup and breakdown.

ELECTRIC BARGE WINCH-STANDARD SPECIFICATIONS

MODEL NO.	DOG HOLDING CAPACITY (TONS)	CAPACITIES (LBS)			HOLDING (LBS)	LINE SPEED (FPM)			VOLTS	WEIGHT		
		RATED PULL	STALL PULL	HAND PULL	ELECTRIC BRAKE	NO LOAD	RATED PULL	HP	PHASE CYCLE	NET (LBS)	SHIP (LBS)	CU. FT.
301L-RC	40	3200	9000	20000	55000	50	42	5	230/460-3-60	728	785	27.0
311L-RC	40	4200	11500	20000	55000	35	31	5	230/460-3-60	728	785	27.0
321L-RC	40	4800	13000	20000	55000	50	42	7.5	230/460-3-60	859	922	27.0
331L-RC	40	6400	17500	20000	55000	23	21	5	230/460-3-60	728	791	27.0
341L-R	40	6400	17500	20000	55000	35	31	7.5	230/460-3-60	859	1038	27.0
351L-RC	40	8500	23500	20000	55000	17	15	5	230/460-3-60	728	1050	27.0
601L-RC	65	4500	1500	40000	70000	34	30	5	230/460-3-60	1290	1536	34.0
611L-RC	65	6500	22000	40000	70000	34	30	7.5	230/460-3-60	1331	1536	34.0
621L-RC	65	8500	28000	40000	70000	17	15	5	230/460-3-60	1331	1536	34.0
631L-RC	65	12000	40000	40000	70000	17	15	7.5	230/460-3-60	1361	1536	34.0
641L-RC	65	12000	40000	40000	70000	23	20	10	230/460-3-60	1361	1536	34.0

Note: All models are shown with "L" designating left hand models; for right hand models, substitute "R" for "L" in model number.
Capacities are rated on first layer.

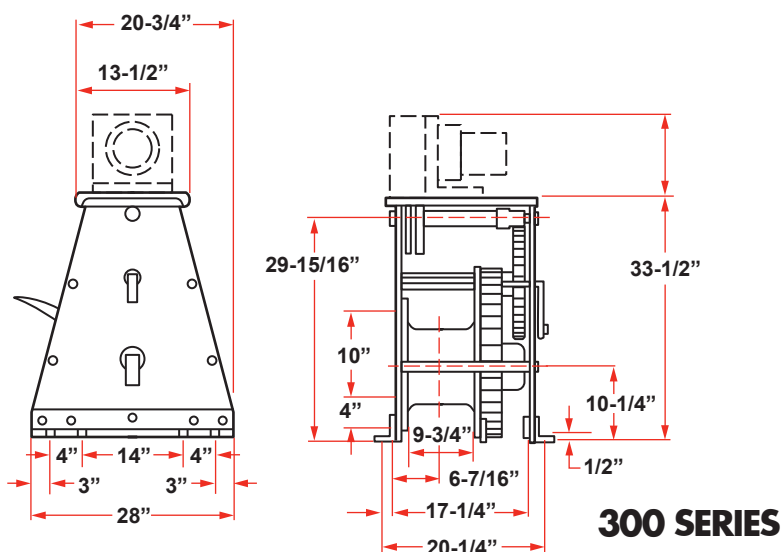
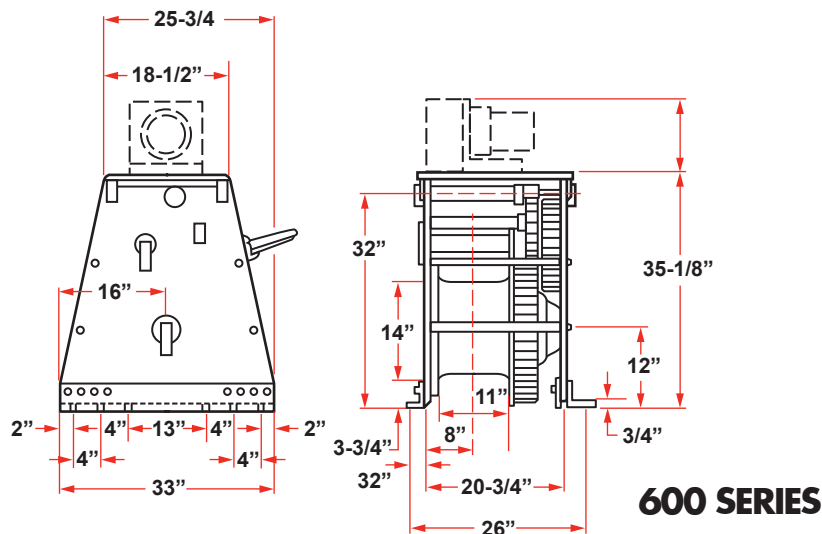
* Stall pull rate at specified voltage with holding dog engaged.

Warning: Before installation see maintenance and operations manual for additional warnings and precautions. This equipment is not to be used for lifting, supporting, or transporting people, or lifting or supporting loads over people.





STANDARD UPRIGHT ELECTRIC 40 AND 65 US TON BARGE WINCH



40 TO STD-10" DRUM DIA.				
LENGTH (INCHES)	DRUM CAPACITY (FT)			
	5/8 IN.	3/4 IN.	7/8 IN.	1 IN.
9*	286	196	130	116
17	559	386	258	232
35	1174	813	546	493
51	1755	1216	818	740
69	2326	1620	1090	986

65 TO STD-14" DRUM DIA.				
LENGTH (INCHES)	DRUM CAPACITY (FT)			
	7/8 IN.	1 IN.	1-1/8 IN.	1-1/4 IN.
11*	210	133	119	67
20	418	265	240	136
41	834	531	481	274
61	1271	810	734	418
82	1686	1075	975	556

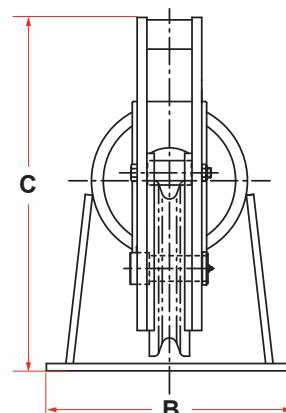
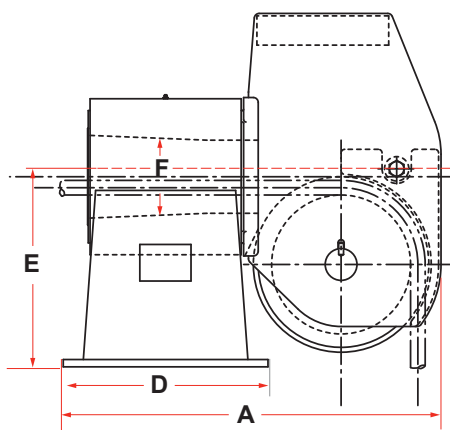


DECK FITTINGS

DECK-MOUNTED BALANCED HEAD FAIRLEADERS



600 SERIES



MODEL NO.	MAX WIRE SIZE	WIRE BREAKING STRENGTH (LBS)	SHEAVE TREAD DIA.	DIMENSIONS (INCHES)						WEIGHT (LBS)
				A	B	C	D	E	F	
MD-610	3/4	58800	8-1/4	23-11/16	16	20-1/8	14-3/4	11	4-1/2	270
MD-612	1	103400	9-3/4	28-3/16	19-1/4	24-5/8	17-3/4	13-1/2	5-5/8	495
MD-614	1-1/4	159800	11-1/4	30-9/16	20	28-1/8	18-1/2	15-1/2	6-5/16	670
MD-618	1-1/2	228000	14-1/4	38-1/8	25-1/4	36-1/4	21	19-1/2	8-1/2	1450
MD-624	2	396000	20	50-1/8	30	44-13/16	27	25-1/2	12	2650
MD-630	2-1/4	494000	24-7/8	56-7/8	40-1/4	60-3/4	27-1/2	31-1/2	13	4800
MD-636	2-1/2	604000	30	63	40	70-1/4	27-1/2	36-1/4	14-1/2	6000
MD-652	3	850000	44	103-1/2	52-3/8	104	44	34-1/2	26-1/2	16500
MD-665	3	850000	55-1/2	115-5/8	52-3/8	117-1/2	44	34-1/2	26-1/2	18800

*Dimensions subject to change without notice

STANDARD FEATURES

- Designed for Breaking Strength of EIPS-IWRC Wire Rope with 90° Wrap on the Sheave and 180° Rotation of Swivelhead
- Cast Steel Sheave with Hardened Rope Groove for Longer Life
- Sealed Grease Lubricated Tapered Roller Bearings in Sheave and Swivelhead
- Weld Down Mounting Base
- Removable Guide Roller
- Epoxy Primer Coating

OPTIONAL FEATURES

- Customized Design to Suit Your Application
- Tail Sheaves / Tail Rollers
- Stainless Steel or Nylon Sheaves
- Bolt Down Mounting Base
- Load Monitoring System
- Three Coat Marine Paint System
- Third Party Certification



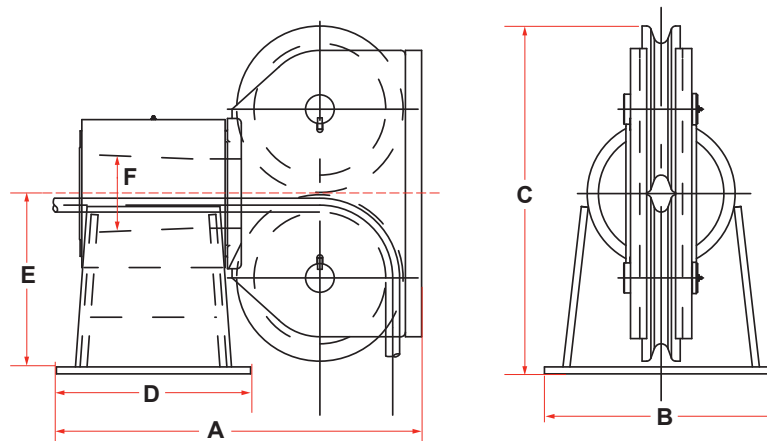


DECK FITTINGS



2600 SERIES

DECK-MOUNTED DOUBLE SHEAVE FAIRLEADERS



MODEL NO.	MAX WIRE SIZE	WIRE BREAKING STRENGTH (LBS)	SHEAVE TREAD DIA.	DIMENSIONS (INCHES)						WEIGHT (LBS)
				A	B	C	D	E	F	
MD-2610	3/4	58800	8-1/4	24-11/16	16	22	14-3/4	11	4-1/2	280
MD-2612	1	103400	9-3/4	29-13/16	19-1/4	25	17-3/4	13-1/2	5-5/8	520
MD-2614	1-1/4	159800	11-1/4	31-9/16	20	29	18-1/2	15-1/2	6-5/16	700
MD-2618	1-1/2	228000	14-1/4	39-1/8	25-1/4	37-5/8	21	19-1/2	8-1/2	1500
MD-2624	2	396000	20	51-1/8	30	49-5/8	27	25-1/2	12	2800
MD-2630	2-1/4	494000	24-7/8	57-7/8	40-1/4	61-5/8	27-1/2	31-1/2	13	5020
MD-2636	2-1/2	604000	30	64	40	72-5/8	27-1/2	36-1/4	14-1/2	6270
MD-2652	3	850000	44	104	52-3/8	105-5/8	44	34-1/2	26-1/2	17200
MD-2665	3	850000	55-1/2	117	52-3/8	130-5/8	44	34-1/2	26-1/2	19650

*Dimensions subject to change without notice

STANDARD FEATURES

- Designed for Breaking Strength of EIPS-IWRC Wire Rope with 90° Wrap on the Sheave and 180° Rotation of Swivelhead
- Cast Steel Sheaves with Hardened Rope Grooves for Longer Life
- Sealed Grease Lubricated Tapered Roller Bearings in Sheaves and Swivelhead
- Weld Down Mounting Base
- Removable Guide Roller
- Epoxy Primer Coating

OPTIONAL FEATURES

- Customized Design to Suit Your Application
- Tail Sheaves / Tail Rollers
- Stainless Steel or Nylon Sheaves
- Bolt Down Mounting Base
- Load Monitoring System
- Three Coat Marine Paint System
- Third Party Certification

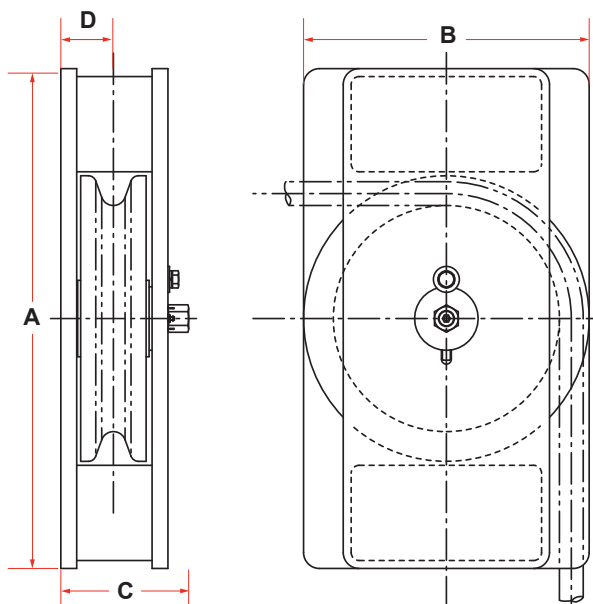


DECK FITTINGS

HORIZONTAL GUIDE SHEAVES



1200 SERIES



MODEL NO.	MAX WIRE SIZE	WIRE BREAKING	SHEAVE TREAD DIA.	DIMENSIONS (INCHES)				WEIGHT (LBS)
		STRENGTH (LBS)		A	B	C	D	
MD-1210	3/4	58800	8-1/2	17	11	5-1/2	2-3/16	85
MD-1212	1	89800	10	19	12	6-1/2	2-3/4	150
MD-1214	1-1/4	159800	11-7/16	21	14	7	2-3/4	200
MD-1218	1-1/2	228000	14-1/4	31-1/2	18	8	3-5/16	450
MD-1224	2	396000	20	43	25	8-1/2	3-5/8	975
MD-1230	2-1/4	494000	24-7/8	45	30-5/8	11-1/2	4-1/8	1500
MD-1236	2-1/2	604000	30	55	37	13	5-3/4	2800
MD-1252	3	850000	44	83-1/2	53	14	6-1/4	6000
MD-1268	3-1/4	1223775	59-1/16	100	70	17	7	8000

*Dimensions subject to change without notice

STANDARD FEATURES

- Designed for Breaking Strength of EIPS-IWRC Wire Rope with 90° Wrap on the Sheave
- Cast Steel Sheave with Hardened Rope Groove for Longer Life
- Sealed Grease Lubricated Bronze Bearings in Sheave
- Weld Down Mounting Base
- Epoxy Primer Coating

OPTIONAL FEATURES

- Customized Design to Suit Your Application
- Multiple Sheaves
- Stainless Steel or Nylon Sheaves
- Bolt Down Mounting Base
- Load Monitoring System
- Three Coat Marine Paint System
- Third Party Certification

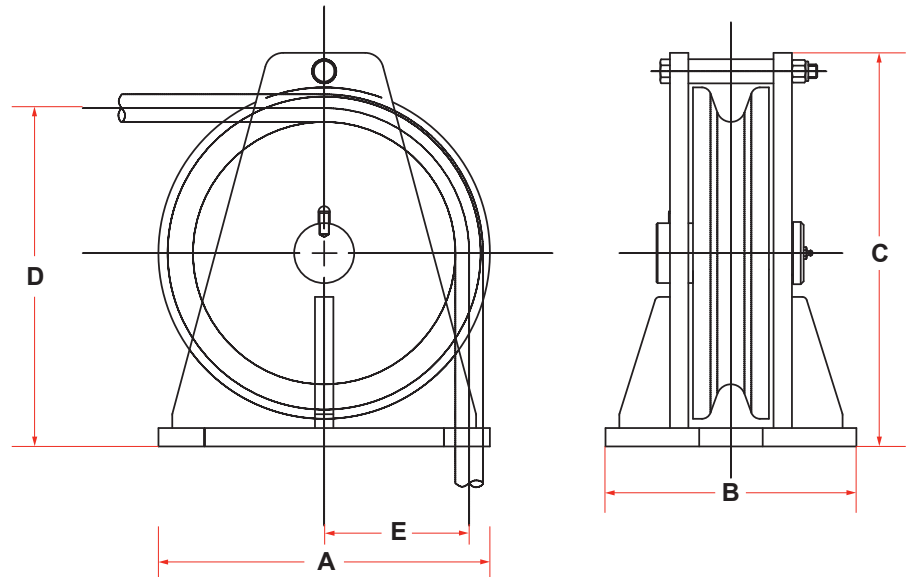




VERTICAL GUIDE SHEAVES



1100 SERIES



MODEL NO.	MAX WIRE SIZE	WIRE BREAKING STRENGTH (LBS)	SHEAVE TREAD DIA.	DIMENSIONS (INCHES)					WEIGHT (LBS)
				A	B	C	D	E	
MD-1110	3/4	58800	8-1/4	11	9	20-1/8	10-1/4	4-1/2	65
MD-1112	1	103400	9-3/4	13	11-1/2	14-3/4	12-1/4	5-3/8	105
MD-1114	1-1/4	159800	11-1/4	16	12	17-1/2	14-1/2	6-1/4	185
MD-1118	1-1/2	228000	14-1/4	18	13-5/8	21-3/8	18-3/8	7-7/8	340
MD-1124	2	396000	20	24	18	29	25-1/4	11	625
MD-1130	2-1/4	494000	24-7/8	30	23	35-3/8	31-1/16	30-15/16	1250
MD-1136	2-1/2	604000	30	36	27	43-1/2	37-3/4	16-1/4	3100
MD-1152	3	850000	44	52	39	60	53	23-1/2	4900
MD-1168	3-1/4	1223775	59-1/16	78-1/16	46	73-5/8	70-3/8	31-1/16	6020

*Dimensions subject to change without notice

STANDARD FEATURES

- Designed for Breaking Strength of EIPS-IWRC Wire Rope with 90° Wrap on the Sheave
- Cast Steel Sheave with Hardened Rope Groove for Longer Life
- Sealed Grease Lubricated Tapered Roller Bearings in Sheave
- Weld Down Mounting Base
- Removable Guide Roller
- Epoxy Primer Coating

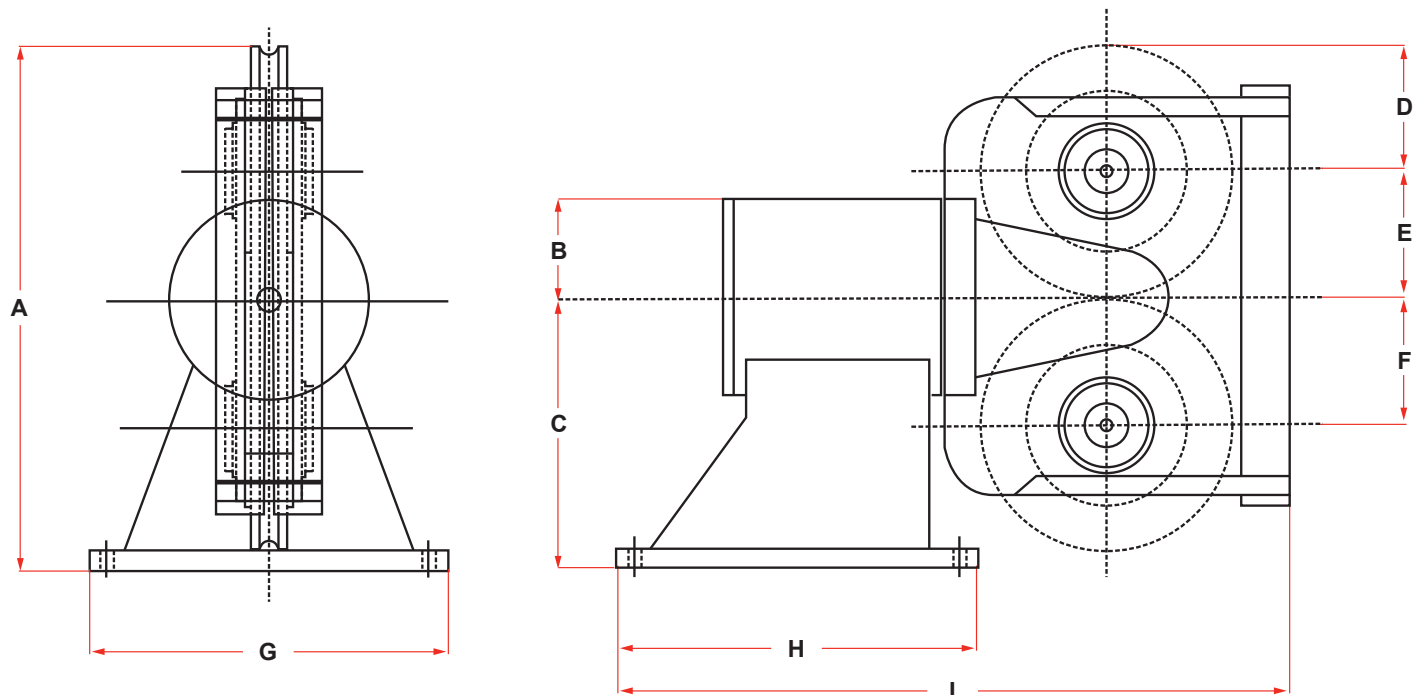
OPTIONAL FEATURES

- Customized Design to Suit Your Application
- Multiple Sheaves
- Stainless Steel or Nylon Sheaves
- Bolt Down Mounting Base
- Load Monitoring System
- Three Coat Marine Paint System
- Third Party Certification



DECK FITTINGS

DOUBLE SHEAVE BALANCED HEAD FAIRLEAD



SIZE (IN)	DIMENSIONS (MM)									WEIGHT (KG)
	A	B	C	D	E	F	G	H	I	
1	531	100	275	127	129	129	365	365	679	195
1-1/4	667	127	365	150	152.5	152.5	660	508	920	495
1-1/2	867	178	459	205	205	205	760	760	1,280	1,080

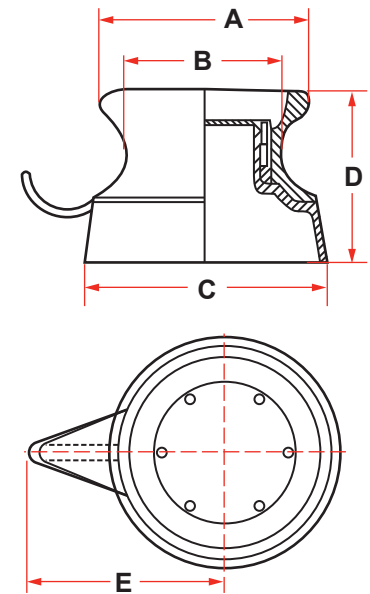




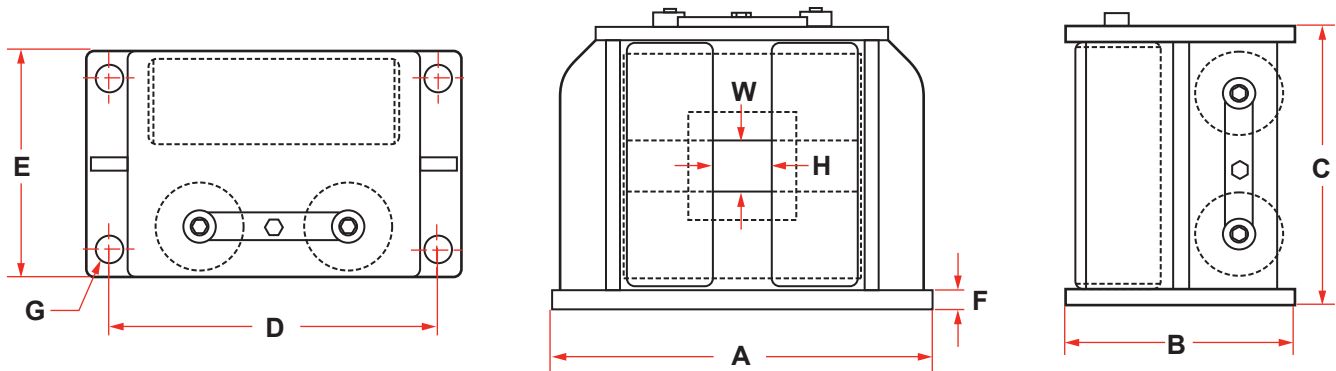
DECK FITTINGS

PEDESTAL FAIRLEADERS

MODEL NO.	MAX WIRE SIZE	WIRE BREAKING STRENGTH (LBS)	DIMENSIONS (INCHES)					WEIGHT (LBS)
			A	B	C	D	E	
PFH-10	3/4	58800	14	10	18	16	15	300
PFH-12	1	103400	16	12	20	16	16	350
PFH-14	1-3/8	192000	19	14	23	16-3/4	19-5/16	480
PFH-16	1-3/8	192000	20-1/2	16	24	18-1/4	19-13/16	600
PFH-18	1-1/2	288000	24	18	28	19	21	890
PFH-24	2	396000	30	24	36	27	24-1/2	1700



ROLLER FAIRLEADERS



MODEL NO.	DIMENSIONS (INCHES)											NO. BOLT HOLES	LBS.
	WIRE ROPER SIZE	VERTICAL ROLLER	HORIZONTAL ROLLER	OPENING W X H	A	B	C	D	E	F	G	ROLLER PIN	
RF-0	5/16 to 3/8	2.25 x 6.50	2.25 x 6.50	2.25 x 2.25	12.000	5.250	8.188	10.250	3.875	0.500	25/32	1.000	52
RF-1	1/2 to 7/8	4 x 11.375	4 x 11.375	2.75 x 2.75	17.500	10.500	13.125	15.000	8.000	0.750	1.063	1.375	235
RF-2	1 to 1-1/4	6 x 15.375	5.00 x 11.00	5.00 x 4.00	26.000	17.000	18.500	22.000	12.500	1.125	1.531	1.500	700
RF-3	1-3/4	8.00 x 22.50	8 x 22.50	6.5 x 6.5	36.750	23.000	27.125	31.000	8.000	1.500	1.813	3.000	2400

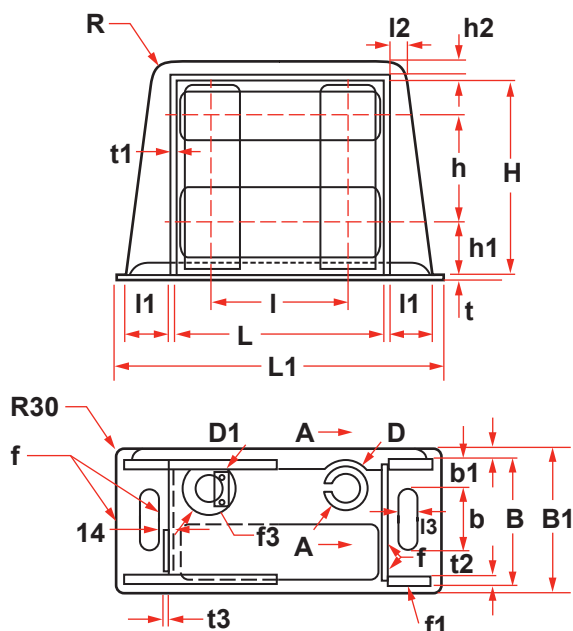
MODEL NO.	DIMENSIONS (MM)											NO. BOLT HOLES	KGS
	WIRE ROPER SIZE	VERTICAL ROLLER	HORIZONTAL ROLLER	OPENING W X H	A	B	C	D	E	F	G	ROLLER PIN	
RF-0	8 to 10	57 x 165	57 x 165	57 x 57	305	133	208	260	98	13	20	25	24
RF-1	12 to 22	102 x 289	102 x 289	70 x 70	444	267	333	381	203	19	27	35	107
RF-2	25 to 32	152 x 391	127 x 279	127 x 102	660	432	470	559	318	29	39	38	318
RF-3	44	203 x 572	203 x 572	165 x 165	933	584	689	787	203	38	46	76	1089

Larger sizes available upon request.

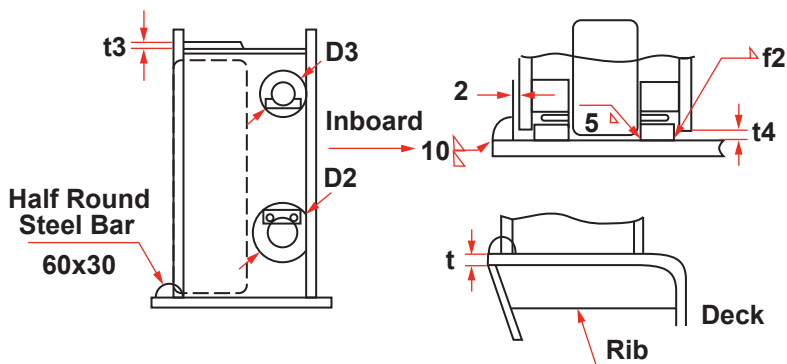


DECK FITTINGS

4-ROLLER FAIRLEAD IMPORT



NOMINAL DIA.	FRAME																		SWL (TON)
	B	B1	B	B1	B2	D	D1	D2	D3	H	H	H1	H2	L	L1	I	I1	I2	
140	310	355	150	69	20	90	140	120	80	480	275	130	40	515	805	335	120	60	12
160	360	405	175	82	22	110	160	140	90	515	290	145	45	570	890	365	135	65	14
180	410	455	200	95	24	135	180	150	100	560	315	155	50	625	950	390	145	70	16
200	460	505	225	108	26	160	200	150	110	590	330	170	60	675	1049	420	160	80	25
250	565	510	280	133	30	200	250	200	130	715	415	195	75	820	1303	520	210	105	38
315	670	715	330	159	34	240	300	200	150	870	520	220	90	980	1562	520	260	130	45



NOMINAL DIA.	FRAME							LEG OF WELD					WIRE ROPE DIA.	OPENING DIA.	REFERENCE MASS (KG)
	I3	I4	R	T	T1	T2	T3	F	F1	F2	F3	F4		LONG X WIDE	
140	50	20	40	12	10	16	6	20	9	6	12	4	18	145 x 195	187
160	50	20	45	14	10	18	9	22	9	7	12	6	22.4	150 x 220	277
180	50	20	50	16	10	20	10	24	9	9	12	8	25	150 x 199	387
200	50	20	60	18	12	22	10	26	10	10	14	8	28	152 x 204	510
250	50	25	75	20	14	26	12	30	10	12	14	10	35.5	199 x 253	900
315	50	25	90	22	16	30	14	34	12	14	16	10	42.5	253 x 302	1232

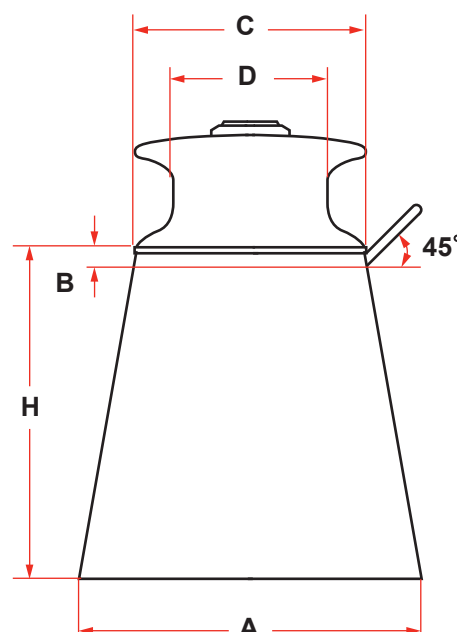




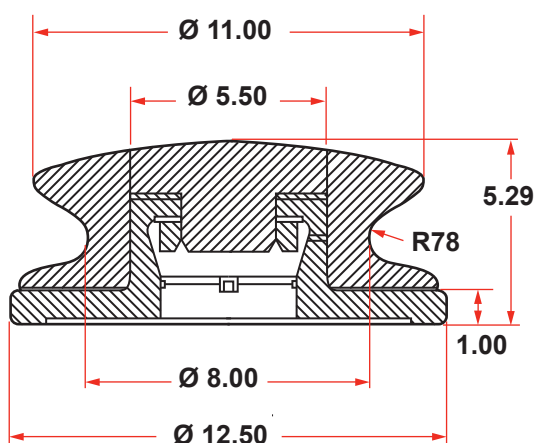
DECK FITTINGS

FAIRLEADERS PEDESTAL TYPE

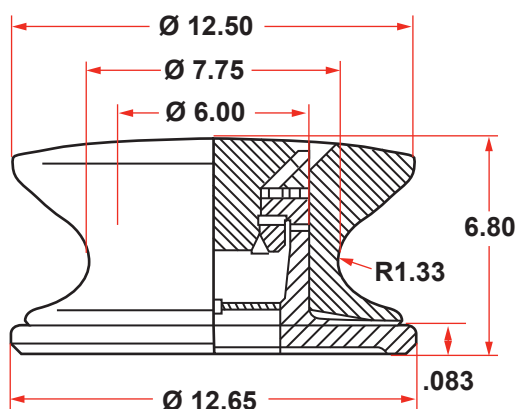
HEIGHT : H	800	1000	1200	1400			
ROLLER DIA : D	A	A	A	A	B	C	WALL THICKNESS
300	715	800	900	1000	25	440	12
350	800	825	950	1120	30	500	12
400	1000	1020	1020	1150	35	560	16
450	1020	1022	1120	1180	35	630	16
500	1020	1120	1180	1250	40	710	16
560	1120	1180	1250	1380	40	800	16



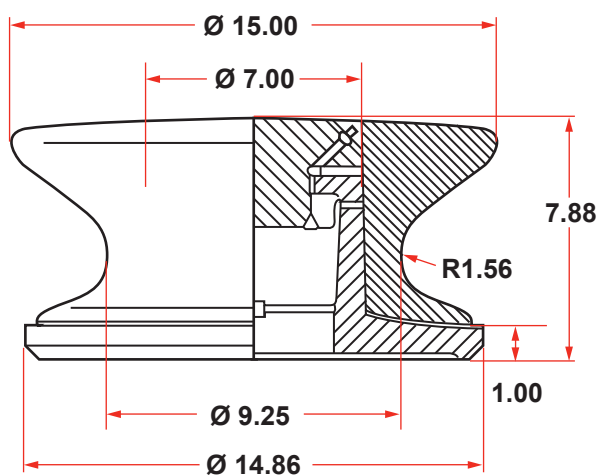
OTHER MODELS ROLLER BUTTONS



MODEL 50



MODEL 75



MODEL 100

ROLLER BUTTONS FREE ROLLING

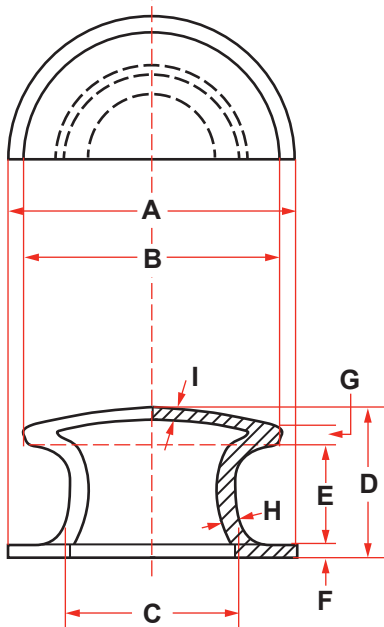
These are the finest high-loaded carrying, free-rolling roller buttons that have ever been designed, and are manufactured in sizes to suit the needs of boats, seagoing tugs and ships. Precision machined parts have working parts coated with an extremely hard coating - 70 Rockwell C-Scale - which is corrosion resistant. The buttons will not freeze up as most do, because they are closed at the top. The air pocket formed on the inside, makes it practically impossible for water to enter the working parts. Before shipment, the roller buttons are completely lubricated and should need only occasional attention after installation and use.

DECK FITTINGS

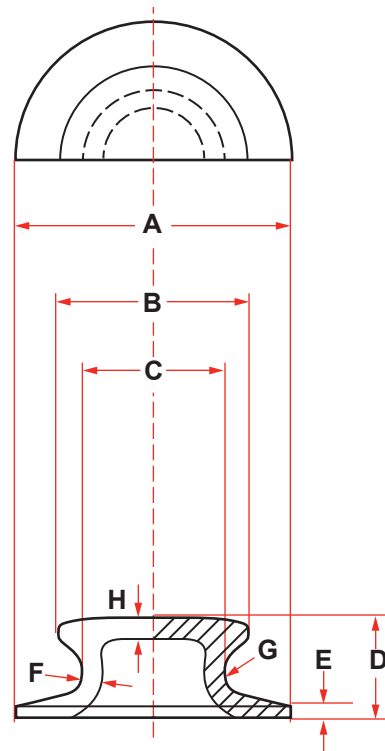


DECK FITTINGS

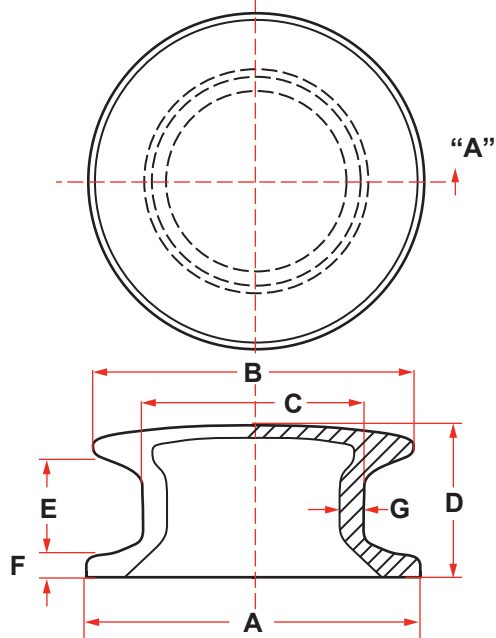
CAST STEEL BUTTON CHOCKS



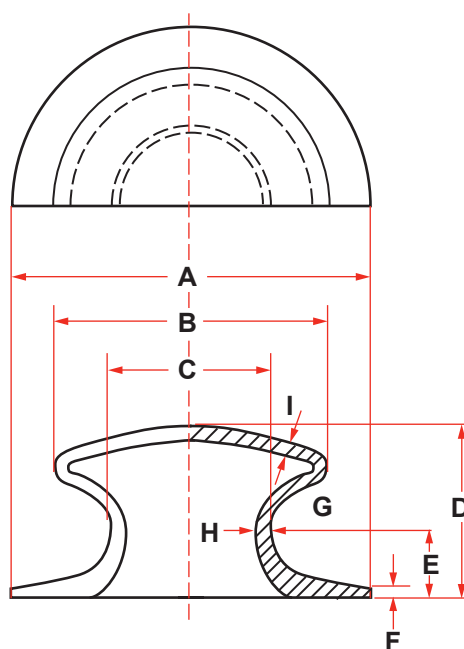
DIMENSIONS (INCHES)										WEIGHT (LBS)
SIZE	A	B	C	D	E	F	G	H	I	
10	17	15	10	8-1/2	5-3/4	5/8	1-1/8	1	1/2	138



DIMENSIONS (INCHES)										WEIGHT (LBS)
SIZE	A	B	C	D	E	F	G	H	I	
6	12	8-1/2	6	4-1/8	1/2	3/4	1-1/2	3/4		38



DIMENSIONS (INCHES)								WEIGHT (LBS)
SIZE	A	B	C	D	E	F	G	
8	13	12-1/2	8-5/8	5-1/4	3-11/16	3/4	7/8	75



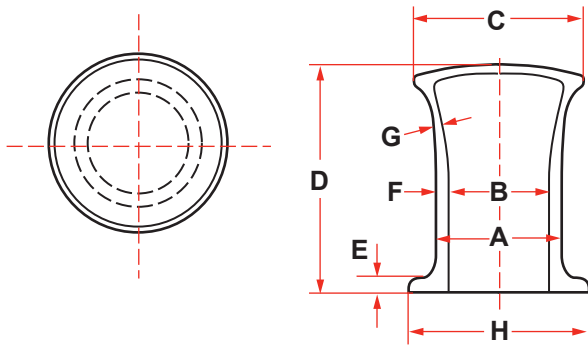
DIMENSIONS (INCHES)										WEIGHT (LBS)
SIZE	A	B	C	D	E	F	G	H	I	
9	20	15-1/2	9	9-1/2	3-1/2	5/8	2-1/2	3/4	1/2	158

DECK FITTINGS



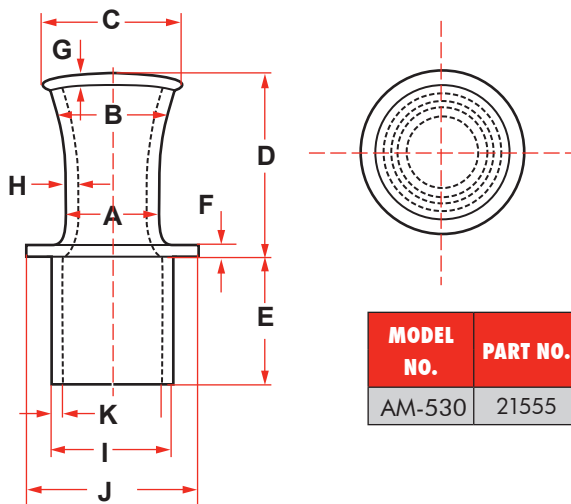


DECK FITTINGS



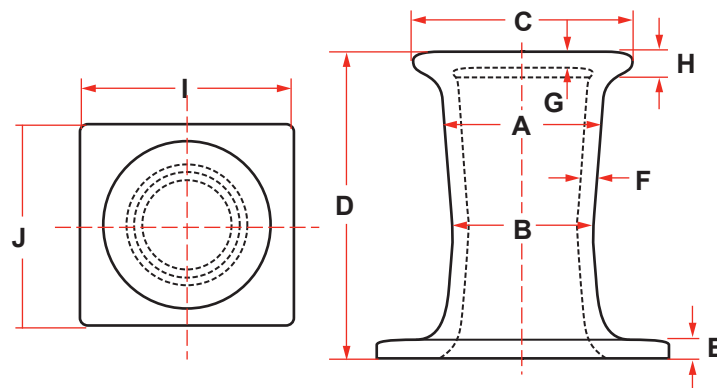
CAST STEEL SINGLE BITT

MODEL NO.	PART NO.	SIZE	DIMENSIONS (INCHES)								WEIGHT (LBS)
			A	B	C	D	E	F	G	H	
DF-SB10	20230	10	10	8	13-1/2	18	1	1	3/4	14	190



CAST STEEL SINGLE BITT THRU DECK

MODEL NO.	PART NO.	SIZE	DIMENSIONS (INCHES)											WEIGHT (LBS)
			A	B	C	D	E	F	G	H	I	J	K	
AM-530	21555	8	8	10-1/2	12	16	11	1	1	1	10-1/4	14	3/4	260



CAST STEEL SINGLE BITT

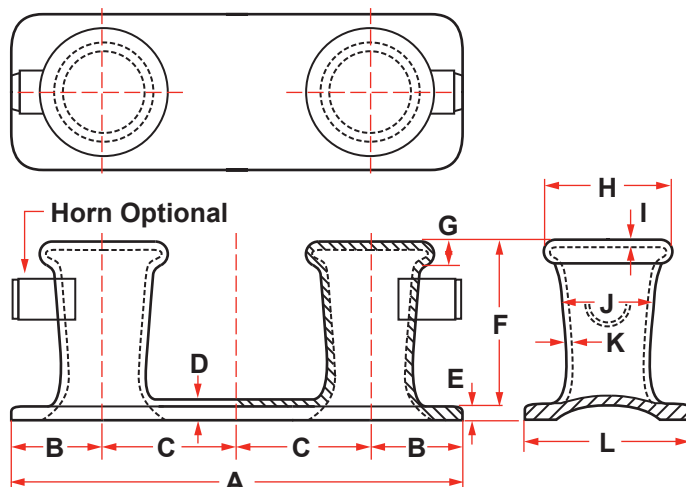
MODEL NO.	PART NO.	SIZE	DIMENSIONS (INCHES)										WEIGHT (LBS)
			A	B	C	D	E	F	G	H	I	J	
AM-588		8	8	7	11	14-3/4	1-1/4	1	3/4	1-1/2	14	14	160



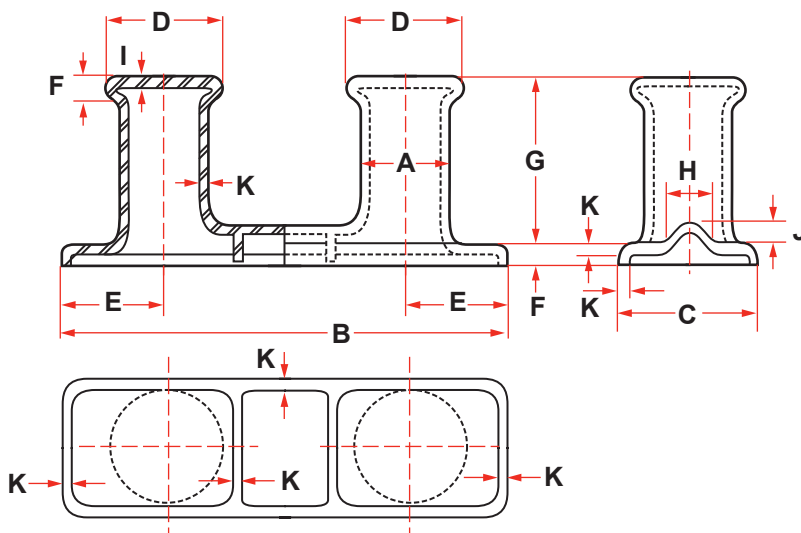
DECK FITTINGS

CAST STEEL DOUBLE BITTS

LARGER SIZES AND
TYPES AVAILABLE
UPON REQUEST



MODEL NO.	SIZE	DIMENSIONS (INCHES)												WEIGHT (LBS)
		A	B	C	D	E	F	G	H	I	J	K	L	
AM-2	8	40	8	12	2	1-1/4	16	2	11	5/8	7	5/8	14	320
AM-2A	w/ Horn													330
AM-40	10	45	9	13-1/2	2-1/4	1-1/4	18	2	13-1/2	3/4	9	1-1/4	15	545
AM-40A	w/ Horn													560



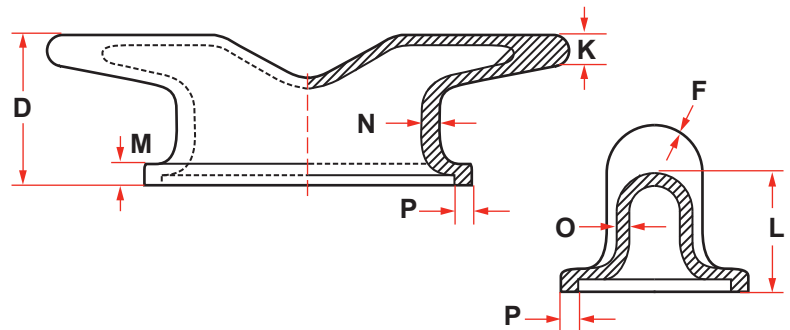
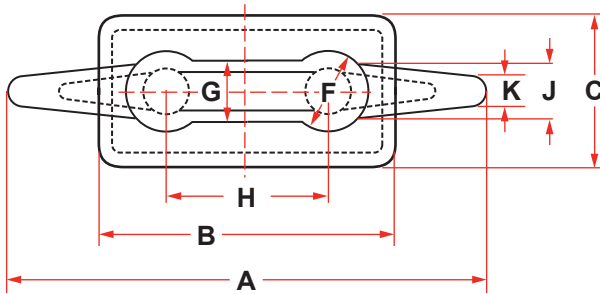
MODEL NO.	SIZE	DIMENSIONS (INCHES)											WEIGHT (LBS)
		A	B	C	D	E	F	G	H	I	J	K	
AM-491	12	12	60	18	15	13-1/2	3	22-1/2	6	1	2	1-1/4	990
AM-498	14	14	66	21	17-1/2	13	3-1/2	26-1/4	7	1	2	1-1/2	1350





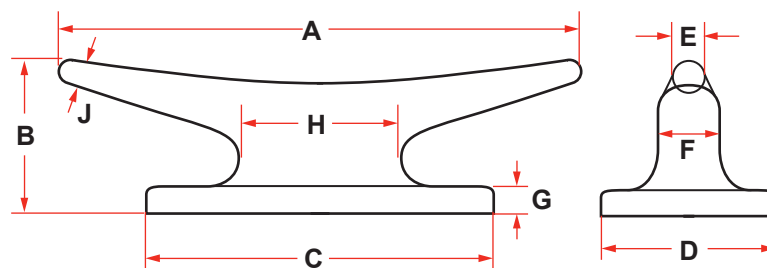
DECK FITTINGS

AMERICAN MARINE STANDARD CLEATS



DIMENSIONS (INCHES)														PATTERN NO.	WEIGHT (LBS)
A	B	C	D	F	G	H	J	K	L	M	N	O	P		
8	6	4-1/2	3	1-1/2	1-1/4	3	1-1/4	1/2	2	1/2	5/8	1/2	1/2	17002	12
10	6-3/4	5	3-1/4	1-3/4	1-3/8	3-1/2	1-3/8	5/8	2-1/4	1/2	5/8	1/2	1/2	17190	14
12	7-1/2	5-1/2	3-1/2	2	1-1/2	4-1/2	1-1/2	3/4	2-1/2	5/8	5/8	1/2	5/8	17295	16
16	10-1/2	7-1/8	5	2-1/2	2	5-1/4	2	7/8	3-1/2	1	7/8	9/16	5/8	17300	32
20	13	6-1/4	6	3-1/2	2-1/2	6-1/2	2-1/4	1-1/8	4-1/2	1-1/8	1	5/8	3/4	4740	48
24	15-1/2	9-1/2	7-1/4	4	3	8	3	1-3/8	5-1/4	1-1/4	1-1/8	11/16	7/8	5353	65
30	19	11-1/4	8	5	3-1/2	10	3-1/2	1-3/4	6-1/2	1-3/8	1-1/4	3/4	1	4732	120
36	22-1/2	12-1/4	10-1/2	6	4-1/2	12	4	2	7-1/2	1-1/2	1-3/8	13/16	1-1/8	4742	193
42	26	13-1/4	12	7	5-1/4	14	4-1/2	2-3/8	8-1/2	1-5/8	1-1/2	7/8	1-1/4	4733	285
48	29-1/2	15-1/4	14	8	6	17	5-1/2	2-3/4	9-1/2	1-3/4	1-5/8	15/16	1-3/8	16632	315
54	33-1/2	16-1/2	15-1/2	9	6-1/2	18	6	3	11	2	1-3/4	1	1-1/2	16690	500

CLEATS

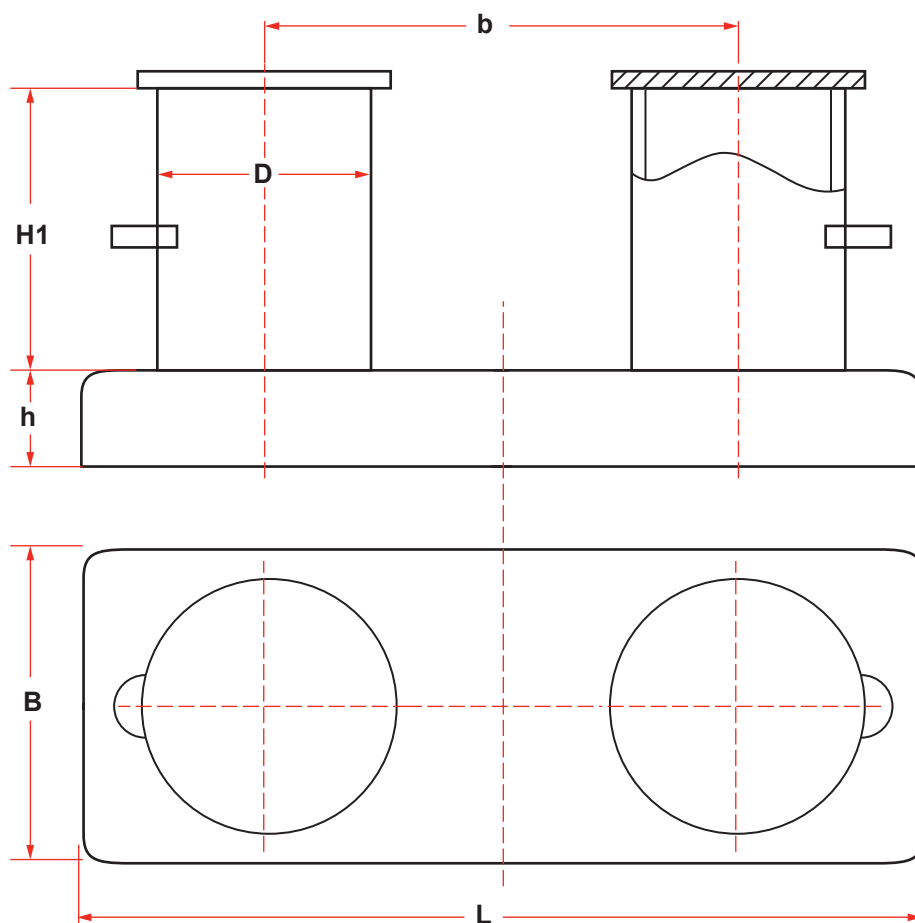


DIMENSIONS (INCHES)								
A	B	C	D	E	F	G	H	J
8	3	5	3	5/8	1-1/4	1/2	3	5/8
12	3-1/2	8	4	5/8	1-3/8	9/16	3-3/4	5/8
14	4	8	4-1/2	3/4	2	3/4	4-1/8	3/4
16	4-1/2	8	5	7/8	2-1/2	7/8	4-1/2	7/8
18	5	9	5-1/2	1	3	7/8	4-7/8	1



DECK FITTINGS

DOUBLE BITTS, FABRICATED 8" TO 20"



NOMINAL DIA.	DIMENSIONS (MM)						MAX B.L. OF ROPE (TON)	MASS (KG)
	D	H1	b	B	L	h		
100	114	150	250	165	445	50	3	19
125	139	190	315	195	540	60	4	29
160	165	250	400	225	670	70	5	45
200	216	300	500	290	860	85	8	80
250	267	380	630	360	1065	100	12	139
315	318	480	800	430	1300	125	20	261
355	355	530	890	480	1475	145	26	361
400	406	600	1000	550	1630	160	32	502
450	457	680	1130	620	1840	170	39	685
500	508	750	1250	690	2040	190	46	911
560	558	830	1380	750	2240	210	56	1208
630	609	940	1570	820	2510	225	70	1600
710	711	1050	1750	960	2840	260	82	2252
800	812	1200	2000	1100	3240	295	100	3071

DECK FITTINGS

310

HOUSTON (713) 644-1183 FAX (713) 644-1185 TOLL FREE 1 (800) 233-8014 EMAIL Sales@AnchorMarineHouston.com

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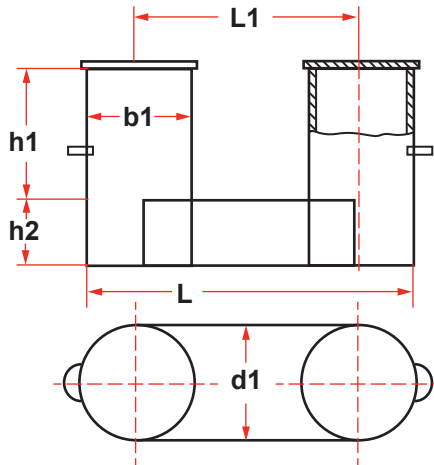
Anchor
MARINE & INDUSTRIAL SUPPLY, INC.



DECK FITTINGS

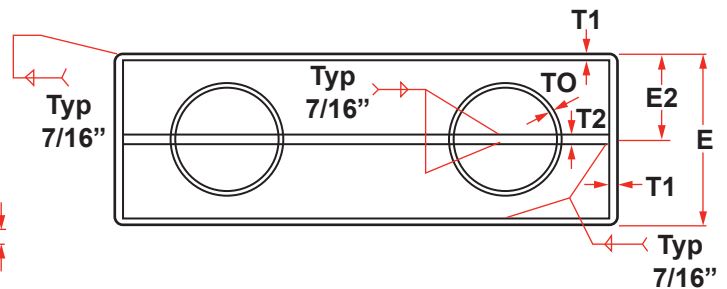
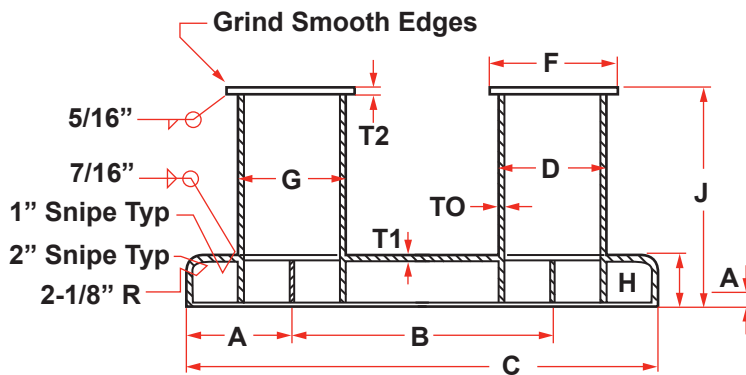
DECK BOLLARDS - DOUBLE BITTS

BOLLARDS DB-138



NOMINAL DIA.	DIMENSIONS IN MM						MAX. B.L. OF ROPE TON	MASS (KG)
	B1	D1	H1	H2	L1	L		
100	114	114	150	75	250	364	4	16
125	140	140	190	80	315	455	4	24
160	168	168	250	90	400	568	5	38
200	219	219	300	100	500	719	8	60
250	273	273	360	125	630	903	12	101
315	324	324	480	150	800	1124	20	197
400	406	406	600	175	1000	1406	32	371
500	508	508	750	200	1250	1758	46	635
630	610	610	940	225	1570	2180	70	1162
710	711	711	1050	250	1750	2461	82	1509
800	813	813	1200	275	2000	2813	100	2081

The bollard suitable for wire or rope with breaking load (tons) when cross belayed on the bollard - for mooring. When belayed on one bitt only approximately 2xBL is valid - for towing. Bollard scantlings per ISO 3913.

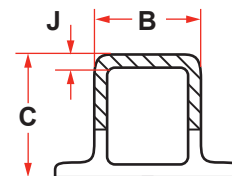
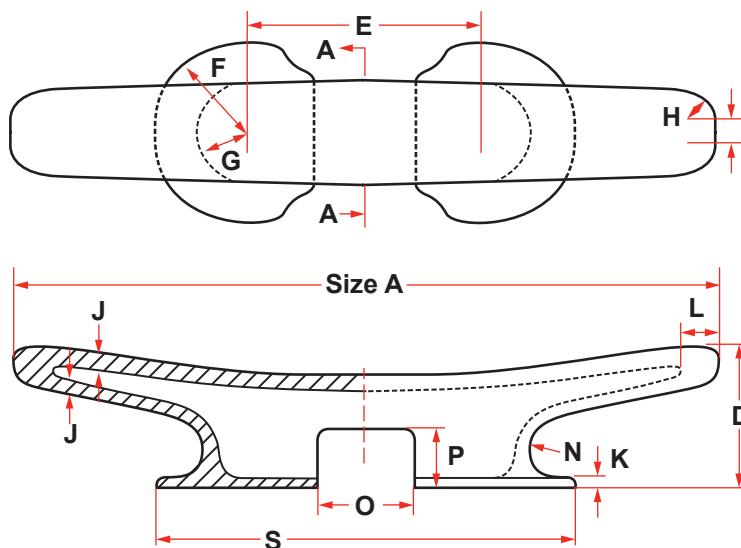


DIMENSIONS (INCHES)											
DRAWING	BARREL	PIPE CHD.	A	B	C	D	E	F	G	H	J
S 1051F	10	120	8-5/8	22	39-1/4	10-3/4	17-1/4	14	11	7	24
S 1052F	12	80	12-3/4	31-1/2	57	12-3/4	19	15-3/4	13	7	27
S 1123F	14	80	14-1/4	35-1/2	64	14	21-1/2	17	14-1/4	7-1/2	30
S 1124F	16	80	15-3/4	39-1/2	71	16	24	19	16-1/4	8	33
S 1128F	18	80	17-3/4	44-1/2	80	18	27	21-1/2	18-1/4	8-1/2	36
S 1345F	20	80	19-7/8	49-1/4	89	20	30	24	20-1/4	9	40
S 1346F	24	80	25	66	116	24	38	31	24-1/4	10	54



DECK FITTINGS

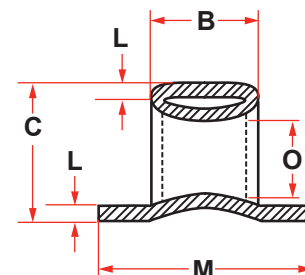
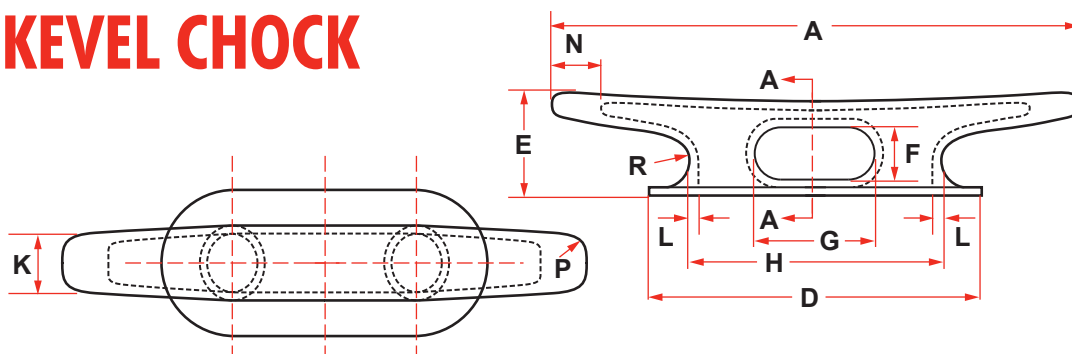
KEVEL



MATERIAL CAST STEEL

DIMENSIONS (INCHES)																
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	S
30	4	5	6-1/8	10	4	2	1-1/4	3/4	1/2	3/8	1-3/4	3/4	1	4	2-1/4	18
36	5	5-7/8	7-1/8	12	5	2-1/2	1-1/2	1	9/16	1/2	2-1/8	7/8	1-1/2	5	2-3/4	22
42	6	7	8-1/2	14	6	3	1-7/8	1-1/4	5/8	5/8	2-1/2	1	2	6	3-1/4	26
48	7	9	10	16	7	3-1/2	2	1-1/2	3/4	3/4	4	1-1/4	2-1/2	7	4	30
60	7	9	13	20	9	4-1/2	2	1-3/4	3/4	3/4	4	1-1/4	2-1/2	9	4	38

KEVEL CHOCK



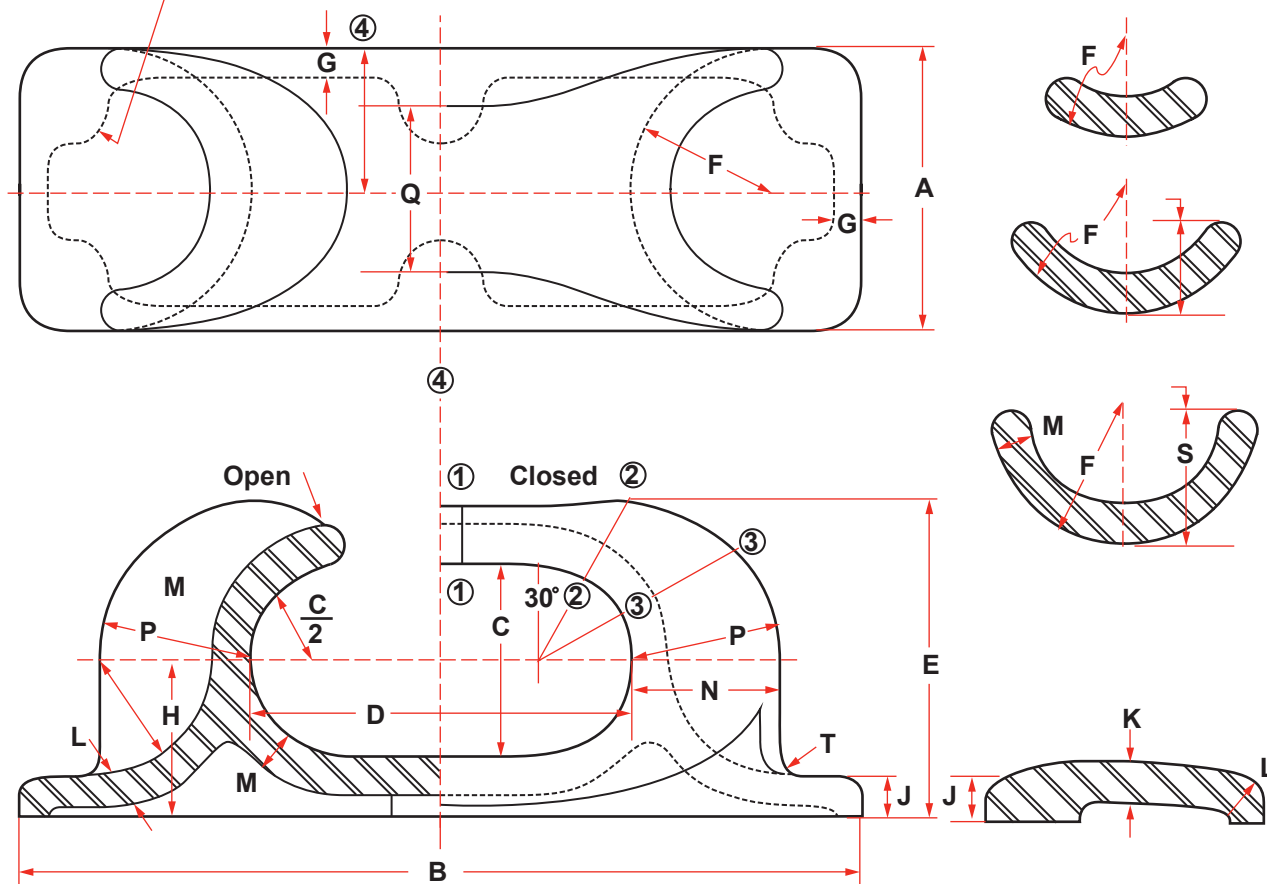
DIMENSIONS (INCHES)															
A	B	C	D	E	F	G	H	K	L	M	N	O	P	R	T
24	3	4-1/2	17	6	1-1/2	5-1/2	11	1-1/2	1/2	8	2	1-1/2	1-1/8	1	3/4
30	4	5-5/8	20-1/4	7	2-3/8	6-7/8	14	3-1/4	1/2	9-1/2	2	2-3/8	1-1/4	1-3/8	7/8
36	5	6-3/4	23-1/2	8	3-1/4	8-1/4	17	4	9/16	11	2-1/2	3-1/4	1-1/2	1-3/4	1
42	6	7-7/8	26-3/4	9	4-1/8	9-5/8	20	4-3/4	5/8	12-1/2	2-3/4	4-1/8	1-7/8	2-1/8	1-1/8
48	7	9	30	10	5	11	23	5-1/2	3/4	14	4	5	2	2-1/2	1-1/4





DECK MOUNT PLAIN CHOCK

Pads for Bolting to Wooden Dock Omitted Unless Specified on Order.

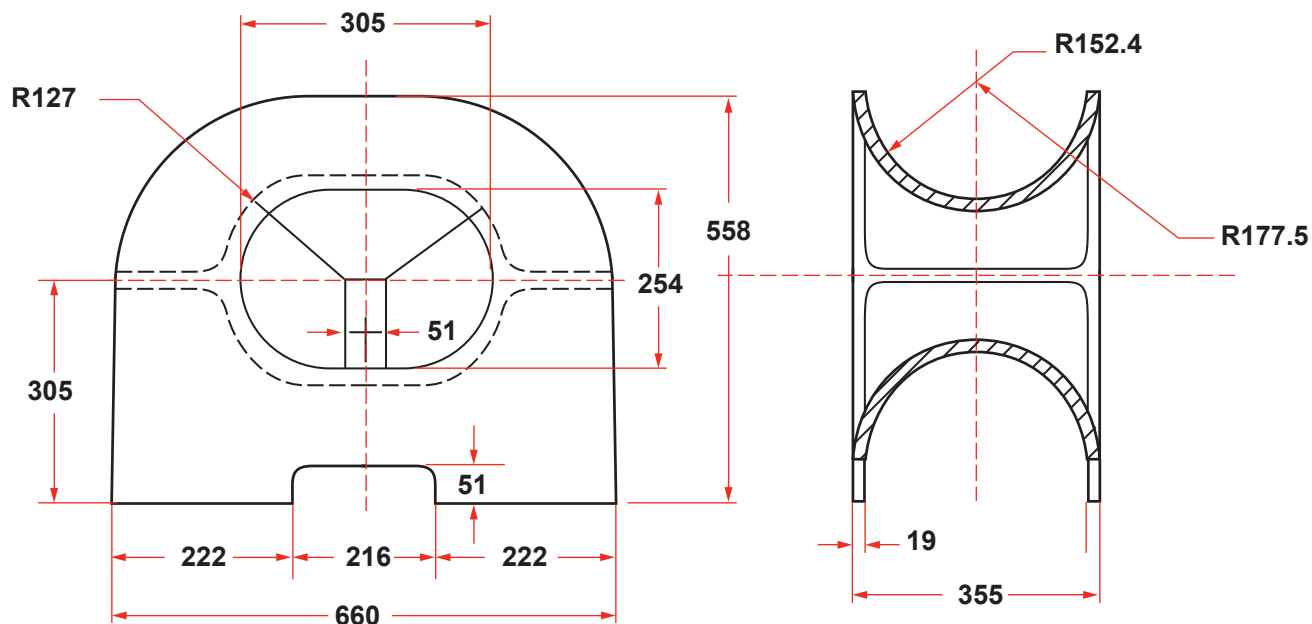


SIZE	DIMENSIONS (INCHES)																
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T
6	19-3/4	4	8	6-3/4	3	3/4	3-3/8	1	1-3/8	3/4	1	3-1/4	3-3/8	3-1/2	1-7/8	2-7/8	3/8
7	22-3/8	4-3/8	9-1/4	7-7/8	3-1/2	3/4	3-15/16	1-3/16	1-3/8	7/8	1-1/8	3-13/16	3-15/16	4-1/8	2-3/16	3-15/16	3/8
8	25-1/4	5-3/8	10-3/4	9	4	7/8	4-1/2	1-5/16	1-13/16	1	1-1/4	4-3/8	4-1/2	4-3/4	2-9/16	3-3/4	1/2
9	27-3/4	6	12	10-1/8	4-1/2	7/8	5-1/16	1-1/2	2-1/16	1-1/8	1-3/8	4-7/8	5-1/16	5-1/4	2-7/8	4-1/4	1/2
10	30-3/8	6-5/8	13-1/4	11-1/8	5	1	5-1/2	1-9/16	2-3/16	1-1/4	1-1/2	5-7/16	5-3/8	5-7/8	3-3/16	4-3/4	5/8
11	33-1/4	7-3/8	14-3/4	12-1/4	5-1/2	1	6-1/16	1-11/16	2-3/8	1-3/8	1-5/8	6	6-3/16	6-1/2	3-1/2	5-1/4	5/8
12	36	8	16	13-3/8	6	1-1/4	6-5/8	1-7/8	2-5/8	1-1/2	1-3/4	6-1/2	6-3/4	7	3-7/8	5-3/4	3/4
14	42	9-3/8	18-3/4	15-5/8	7	1-1/4	7-3/4	2-3/16	3-1/16	1-3/4	2	7-5/8	7-7/8	8-1/4	4-1/2	6-11/16	7/8
18	54	12	24	20	9	1-1/2	9-7/8	2-3/4	3-7/8	2-1/4	2-1/2	10-1/8	10-1/8	10-1/2	5-3/4	8-5/8	1-1/8

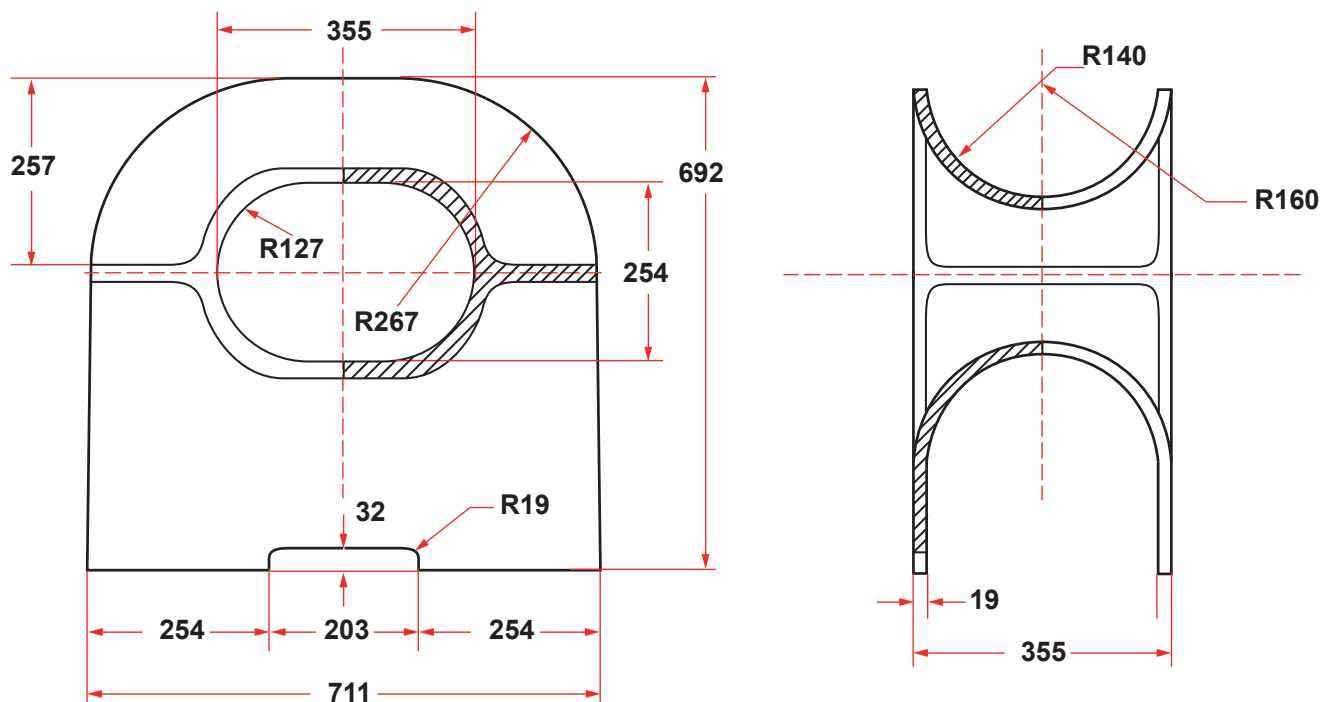


DECK FITTINGS

CHOCKS - DECK MOUNTED, SIZE 10" X 12"



CHOCKS - DECK MOUNTED, SIZE 10" X 14"

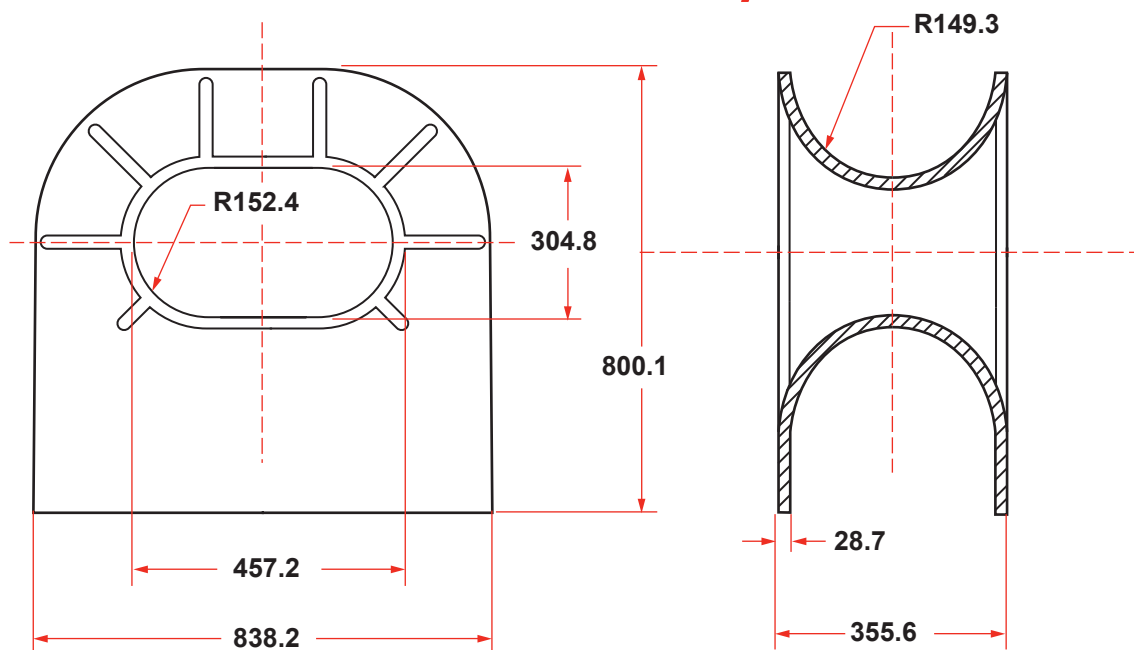


DECK FITTINGS

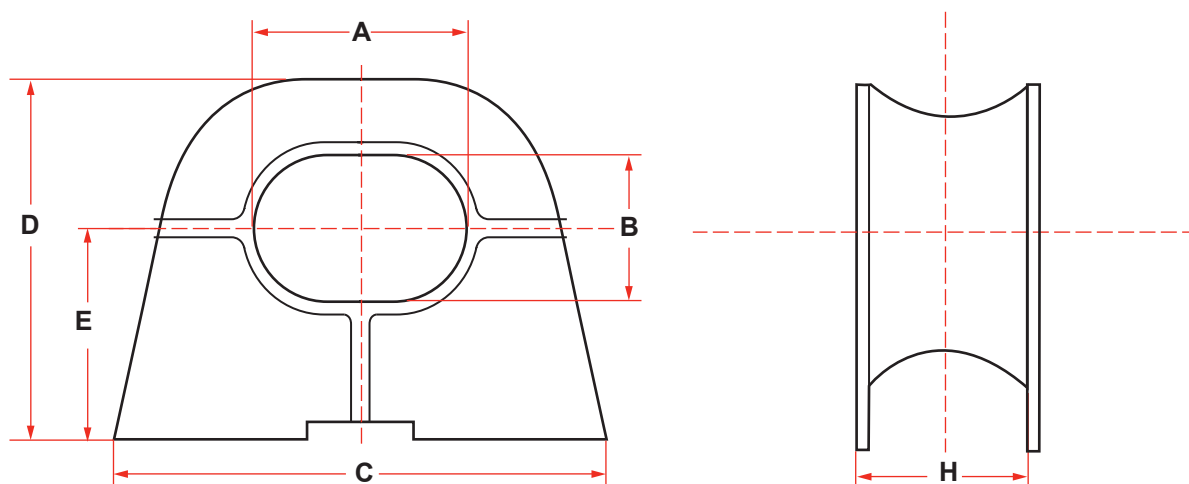




CHOCKS - DECK MOUNTED, SIZE 12" X 18"



CHOCKS - DECK MOUNTED, TYPE EU SIZES 10" X 12" - 18" X 24"

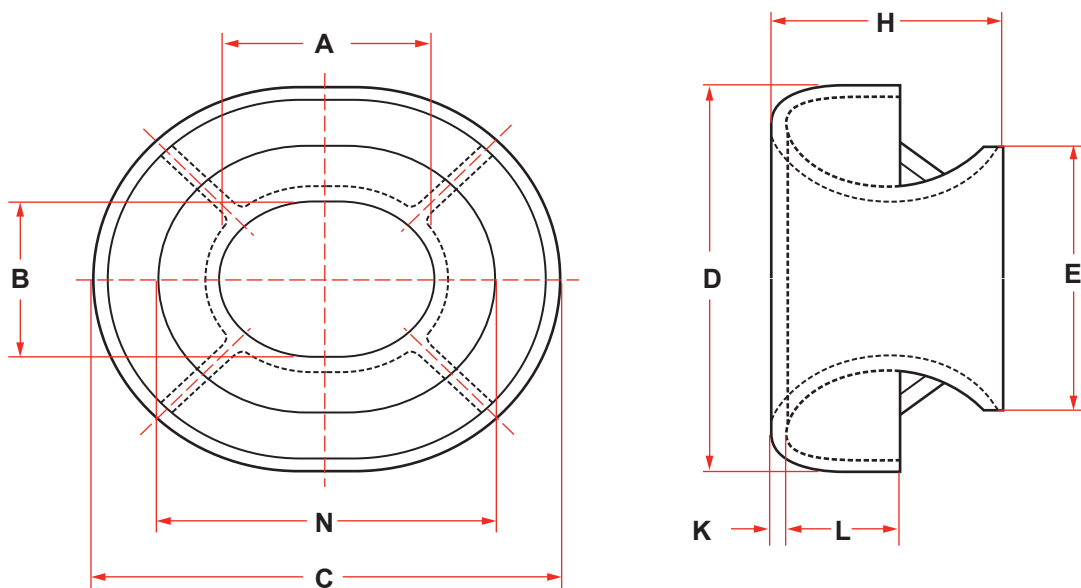


DIMENSIONS (MM)							MASS (KG)
NOMINAL SIZE	A	B	C	D	E	H	
315 x 250	315	250	815	620	365	380	230
425 x 280	425	280	1075	785	450	500	378
600 x 315	600	315	1360	865	507	560	598
600 x 450	600	450	1360	1000	575	560	655
600 x 450	600	450	1560	1200	675	760	780



DECK FITTINGS

BULWARK MOUNTED PANAMA CHOCK



DIMENSIONS (MM)								MASS (KG)
A X B	C	D	E	H	K	L	N	
315 X 250	695	630	432	342	22	168	497	198
425 X 280	925	780	516	450	26	224	661	358
600 X 315	1160	875	571	504	30	250	866	547
600 X 450	1160	1010	706	504	30	250	866	629
600 X 450	1360	1160	1060	504	30	250	1260	813

DECK FITTINGS

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HOUSTON (713) 644-1183 FAX (713) 644-1185 TOLL FREE 1 (800) 233-8014 EMAIL Sales@AnchorMarineHouston.com

WWW.ANCHORMARINEHOUSTON.COM

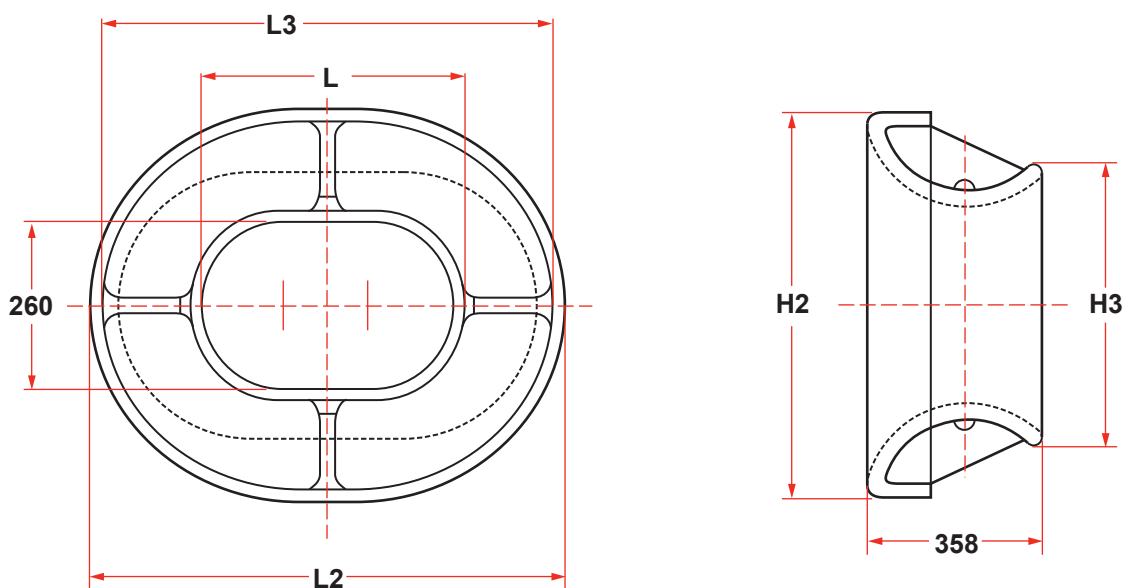


Anchor
MARINE & INDUSTRIAL SUPPLY, INC.



DECK FITTINGS

BULWARK MOUNTED PANAMA CHOCK



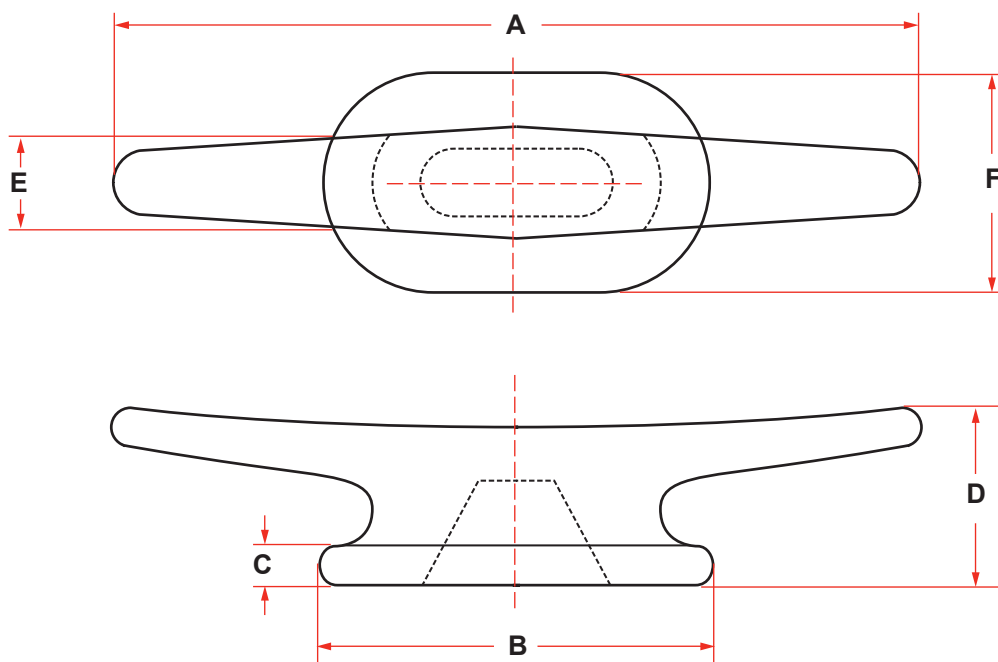
DIMENSIONS (MM)						MASS (KG)
NOMINAL SIZE	L	L2	L3	H2	H3	
310	310	734	652	684	462	276
360	360	788	701	688	464	305
400	400	832	750	692	470	344
450	450	888	802	696	474	385
500	500	940	854	700	478	422

DECK FITTINGS



DECK FITTINGS

WELD ON STEEL CLEATS



ASTM A27 GRADE 70-36 CAST STEEL

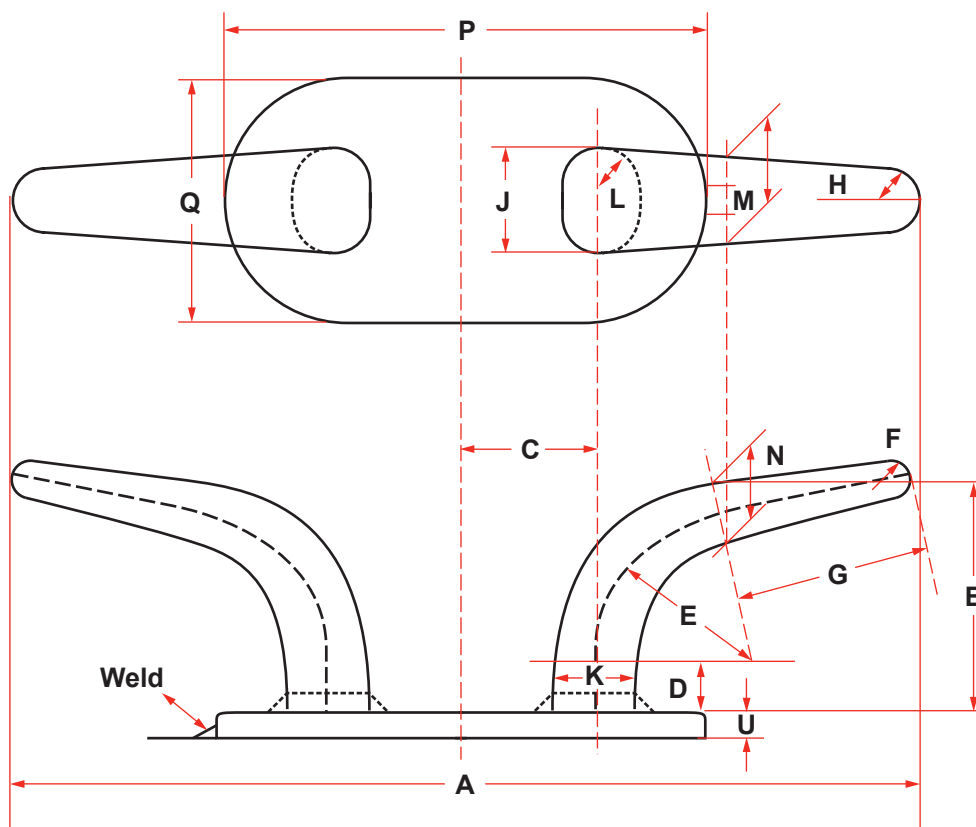
CLEAT SIZE (INCHES)	DIMENSIONS (MM)						WEIGHT (LBS)
	A	B	C	D	E	F	
8	8.00	4.40	0.35	1.70	1.25	2.14	3.00
10	10.00	5.13	0.40	2.24	1.42	2.53	4.30
12	12.00	5.55	0.55	2.75	1.70	3.50	8.00
14	14.00	7.00	0.53	3.20	2.13	4.00	13.00
16	16.00	8.25	0.75	3.50	2.13	4.50	17.00
18	18.00	9.25	0.85	4.26	2.63	4.75	24.00

DECK FITTINGS





HORN CLEATS - STEEL

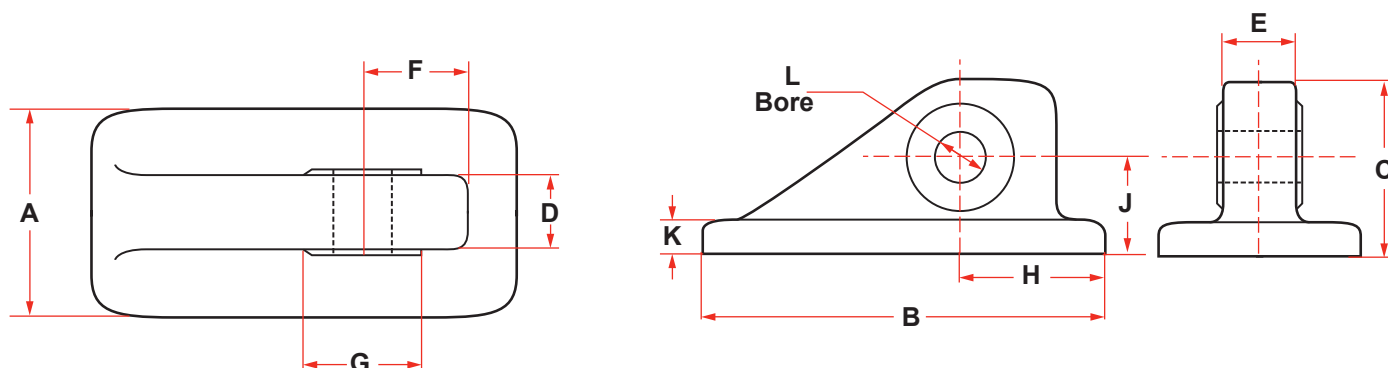


DIMENSIONS (INCHES)															
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	U
8	2	1	1/2	1-1/4	5/32	1-15/16	5/32	11/16	11/16	-	9/16	9/16	4	2	1/4
10	2-5/8	1-1/2	1/2	1-3/4	3/16	2-5/32	3/8	1-1/4	7/8	7/16	1-1/6	11/16	5-3/8	2-3/4	5/16
12	3-1/4	1-3/4	3/4	2	3/16	2-23/32	7/16	1-5/8	1-1/8	9/16	1-3/8	7/8	6-3/8	3-1/4	3/8
16	4	2-5/8	1	2-1/2	1/4	3-7/8	9/16	2	1-1/4	5/8	1-3/4	1	8-1/4	4	1/2
18	4-1/2	2-5/8	1-1/8	2-3/8	5/16	4-11/16	5/8	2-1/2	1-1/2	3/4	2-1/8	1-1/8	9-1/8	5	5/8
20	5	2-3/4	1-1/4	2-5/8	5/16	5-3/8	3/4	2-3/4	1-5/8	13/16	2-3/8	1-1/4	9-7/8	5-1/2	5/8

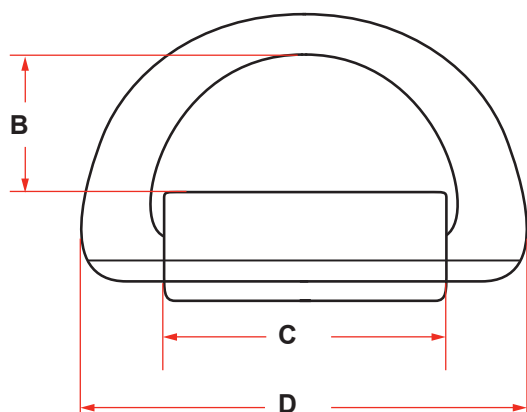


DECK FITTINGS

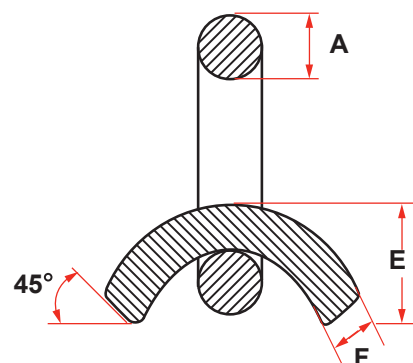
TOWING PAD EYE



DIMENSIONS (INCHES)											
Chain Size	A	B	C	D	E	F	G	H	J	K	L
3/4	5	10	4-3/4	3/4	1	1-3/4	1-7/8	2-1/4	2-3/4	3/4	15/16
1	5	10	5-1/4	1-3/16	1-7/16	1-3/4	2-3/8	2-3/4	3	3/4	1-3/16
1-1/4	6	12	6	1-17/32	1-25/32	2-1/2	3	3-3/4	3-1/2	1	1-7/16
1-1/2	6	12	6-3/4	1-7/8	2-1/8	3	3-5/8	4-1/2	3-7/8	1	1-11/16
2	8	16	8-1/2	2-3/4	3	4-1/4	5	5-3/4	5	1-1/2	2-5/16
2-1/2	10	20	9-3/4	3-5/8	3-7/8	5	6	8	5-3/4	1-3/4	2-13/16
3	12	24	10-1/2	4-1/2	4-3/4	5-5/8	6-1/2	9	6	2	3-5/16



D-RING

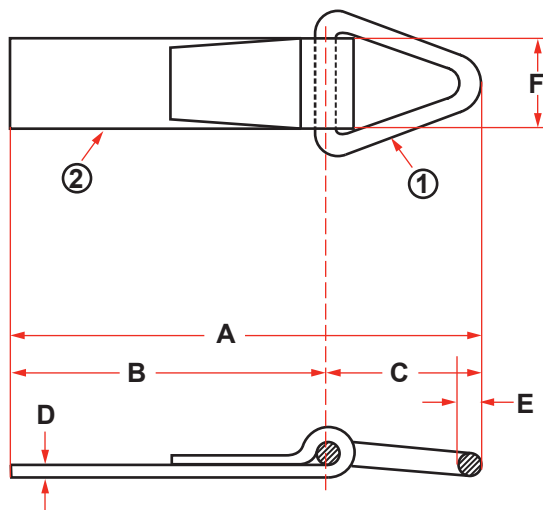


DIMENSIONS (MM)							
Tons	A	B	C	D	E	F	Weight (Kg)
7	12.7	44.5	60.3	95.3	22.4	6.5	.45
36	22	66	125	208	36	12	2.4
41	23	79.4	127	203.2	44.5	12.7	3.5
50	25.4	67.2	127	222.3	51.9	16	4.7





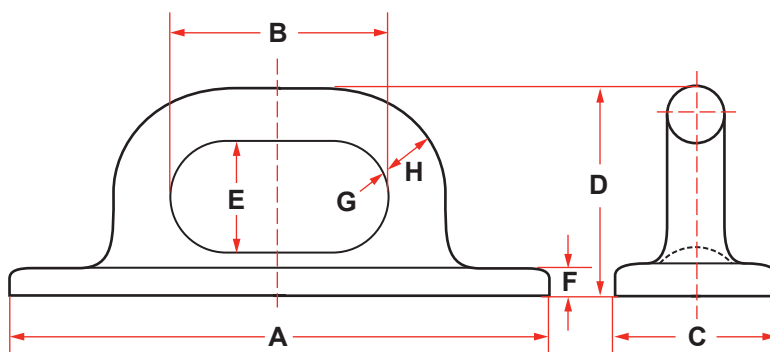
RATCHET STRAP



PIECE NO.	DESCRIPTION	PART NO.	MATERIAL
1	Ratchet Strap Ring	75736	Mild Steel
2	Ratchet Strap Plate	75744	Mild Steel

MODEL NO.	A	B	C	D	E	F	WEIGHT (LBS)
DF-80	35-5/8	24	9-7/8	3/4	1-3/4	7	83

CAST STEEL D-RING



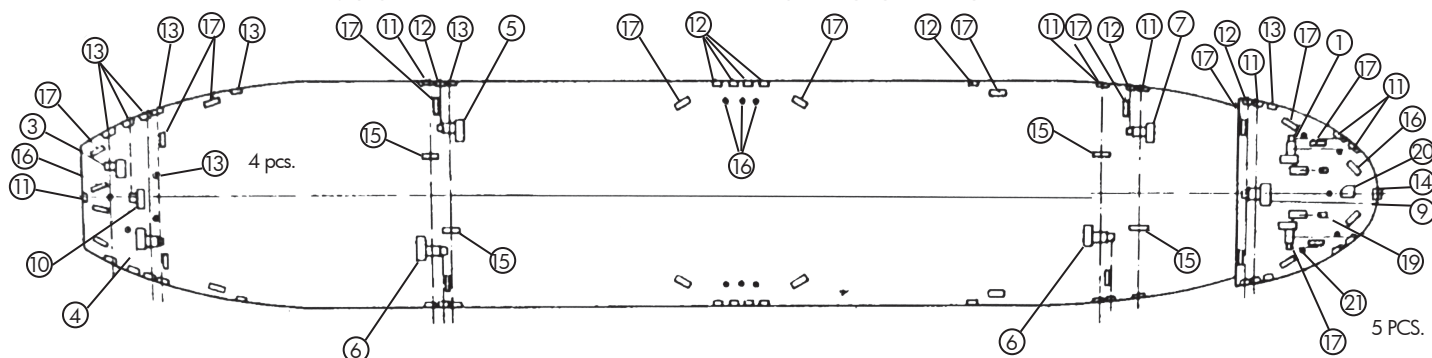
MODEL NO.	A	B	C	D	E	F	G	H	WEIGHT (LBS)
DF-196	20	8	6	7-5/8	4	1	2	2-1/8	55



DECK FITTINGS

MOORING FITTING ARRANGEMENT

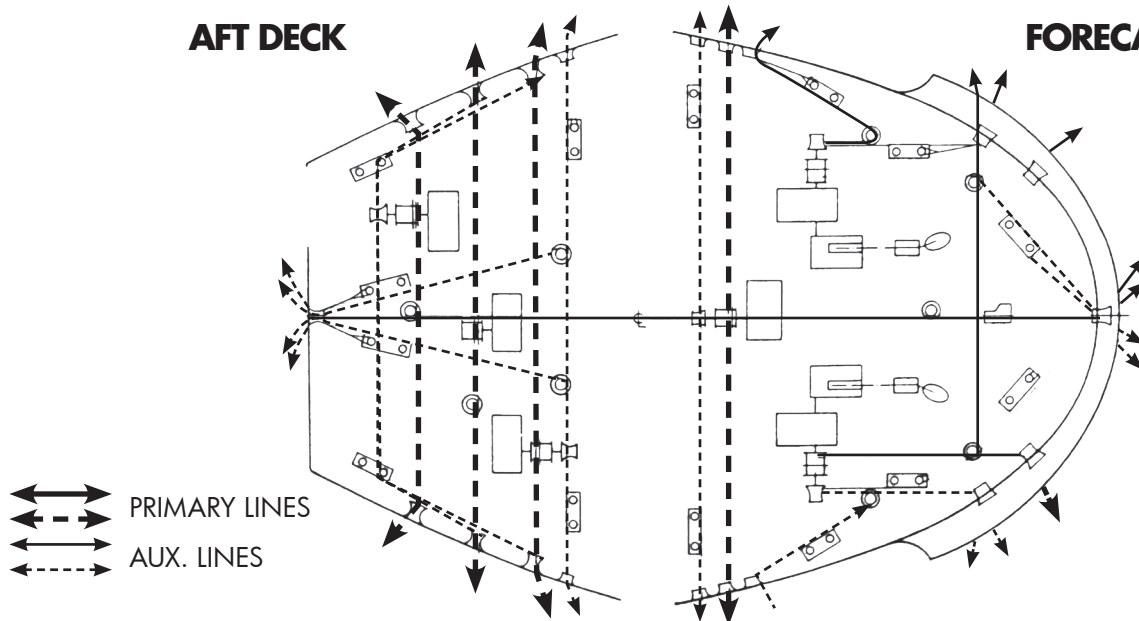
350 KDWT TANKER WITH 10 MOORING WIRES



ITEM	DESCRIPTION
1, 2	Combined Anchor Windlass/Mooring Winch
3 - 9	Single Drum Mooring Winch with Warping Head
10	Single Drum Mooring Winch without Warping Head
11	Panama type Fairlead, 500 x 350 mm opening deck mounted
12	Closed Fairlead, 400 x 250 mm opening deck mounted
13	Panama type Fairlead, 350 x 250 mm opening bulwark mounted
14	Panama type Fairlead, 600 x 450 mm opening bulwark mounted
15	Overhead Roller Fairlead
16	Vertical Bollard, 450 mm diameter
17	Vertical Bollard, 350 mm diameter
18	Cruciform Bollard, 300 mm diameter
19	Chain Stopper for Anchors
20	Bow Stopper
21	Pedestal Fairlead

AFT DECK

FORECASTLE DECK



 PRIMARY LINES
 AUX. LINES

