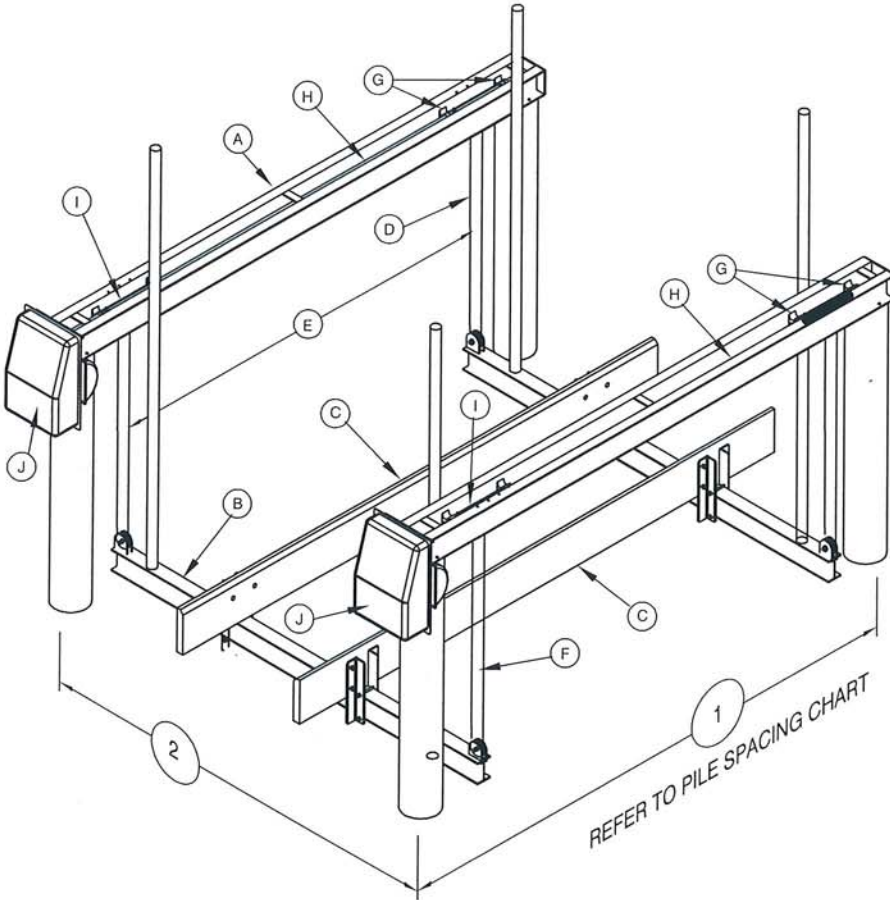


GOLDEN ENGINEERED 4 POST, 2 MOTOR BOAT LIFTS

PILE SPACING CHART
The boat center of gravity needs to be set in the center of the top beam

Lift Capacity		"1" Dimension		"2" Dimension		Recommended Pile Diameters	
Lb.	Kg.	Ft.	M	Ft.	M	In.	Mm
4,500	2041	11	3.35	10	3.0	8	203.2
7,000	3175	12	3.66	12	3.66	10	254
10,000	4540			12.5	3.81		
14,000	6350			14	4.27		
16,000	7257	14	4.27	16	4.88	12	304.8
20,000	9072	16	4.88				
24,000	10,886						



STRUCTURAL ENGINEERING REVIEW

THIS CONSTRUCTION HAS BEEN DESIGNED AS A MAIN WIND FORCE RESISTING SYSTEM, WITH CALCULATED GRAVITY AND WIND LOADS IN COMPLIANCE WITH THE FLORIDA BUILDING CODE 2007, WITH 2009 SUPPLEMENTS, SECTION 1609, ADM 2005, AND ASCE 7-05 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" TO WITHSTAND THE WIND LOADS ASSOCIATED WITH A BASIC WIND SPEED OF 150 MPH, EXPOSURE "C". ARNOLD/SANDERS CONSULTING ENGINEERS HAS NO CONTROL OF THE MANUFACTURING, PERFORMANCE, OR INSTALLATION OF THIS PRODUCT. THESE GENERIC PLANS WERE ENGINEERED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES AND DATA PROVIDED BY THE MANUFACTURER.

J.L. Sanders
3-31-10

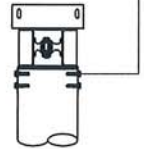
Arnold/Sanders Consulting Engineers, Inc.
Certificate of Authorization 9451
16681 McGregor Blvd, Suite 102, Ft. Myers, FL 33908
239-267-3666 Fax: 239-267-2771

J.L. SANDERS
Reg. Florida No. 60361

Date:

SIGNATURE NOT VALID WITHOUT RAISED SEAL

STAINLESS STEEL PILING MOUNT BRACKET, 4-3/8" STAINLESS STEEL LAG SCREWS USED TO CONNECT THE BRACKETS TO THE PILING AND 2-3/8" CARRIAGE BOLTS USED TO CONNECT THE BRACKETS TO THE LIFT CHANNELS



NOTE: THIS STRUCTURE WILL WITHSTAND WIND LOADS ASSOCIATED WITH BASIC WIND SPEEDS OF 150MPH CALCULATED PER F.B.C. 2007 AND ASCE 7-05. BOATS SHALL NOT BE STORED ON LIFT DURING HIGH WIND EVENTS

IN GENERAL, PILING PENETRATION TO BE 10' INTO THE SAND BOTTOM OR 5' INTO THE ROCK STRATA. SUB-SURFACE CONDITIONS CAN VARY GREATLY, THE CONTRACTOR SHALL VERIFY ALL PILE CAPACITIES. ALL PILINGS TO BE 2.5 C.C.A. PRESSURE TREATED WOOD.

(A) (B) (C) (D) (E) (F) (G) (H) (I) (J)

LIFT CAPACITY		TOP BEAM CHANNEL 2 EACH		CRADLE I-BEAM 2 EACH		BUNK BOARDS (PT)	CABLE SIZE		CABLE SPREAD		GUIDE POST HGTH	BRGS	DRIVE SHAFT	WINDER DIA	MOTOR HP VOLTAGE	INCHES OF LIFT PER MIN	RECOM PILING SIZES			
Lbs	Kg	INCHES	MM	INCHES	MM		INCHES	MM	IN	MM										
4,500#	2041 kg	4 H x .15 2 W x .23 140" OAL	101.6h x 3.8mm 50.8w x 5.8mm 3.6m OAL	6 H x .19 4 W x .29 120" LGTH	152.4h x 4.8mm 101.6w x 7.4mm 3.05m OAL	2x6x144 ROUGH SAWN CARPENTED 50.8 MM x 203.2 MM x 3.71m	4 - 5/16" x15' ST ST 1 PART	4 - 7.9mmØ x4.6m ST ST 1 PART	98"	2.5m	80" 2M	8 - 2" (50.8 MM) EXTRUDED 6061-T6 ALUM.	1-15/16" DIA. (23.8 MM) SCH 40 GALV PIPE	2-3/8" DIA (9.5 MM) SCH 80 ALUM PIPE	2 - 3/4 HP 120V/20A 240V/10A	27"	8" DIA 203.2 mm			
7,000#	3175 kg	5 H x .15 2.25 W x .28 x 153" OAL	127h x 3.8mm 57.2w x 7.1mm x 3.9 m AOL	6 H x .19 4 W x .29 144" LGTH	152.4h x 4.8mm 101.6w x 7.4mm 3.8 m OAL		4 - 5/16" x30' ST ST 2 PART	4 - 7.94mmØ x9.2m ST ST 2 PART	110"	2.8m								2 - 1 HP 120V/20A 240V/10A	685.8mm	10" DIA 254 mm
10,000#	4536 kg	6 H x .17 2.5 W x .29 x 153" OAL	152.4hx4.3mm 63.5wx7.4mm 3.9m OAL	8 H x .23 5 W x .35 150" LGTH	203.2hx 5.8mm 127w x 8.9mm 3.8 m OAL		4 - 5/16" x45' ST ST 3 PART	4 - 7.94mmØ x13.7m ST ST 3 PART	122"	3.1m								2 - 3/4 HP 120V/20A 240V/10A	317.5mm	12" DIA 304.8 mm
14,000#	6350 kg	7 H x .17 2.75 W x .29 x 153" OAL	177.8hx4.3mm 69.9wx7.4mm 3.9 m OAL	8 H x .25 5 W x .41 150" LGTH	203.4h x 6.4mm 127w x 10.4mm 3.8 m OAL		4 - 5/16" x15' ST ST 1 PART	4 - 7.9mmØ x4.6m ST ST 1 PART	98"	2.5m								80" 2M	8 - 2" (50.8 MM) EXTRUDED 6061-T6 ALUM.	1-15/16" DIA. (23.8 MM) SCH 40 GALV PIPE
16,000#	7257 kg	8 H x .19 3 W x .35 x 153" OAL	203.2hx4.8mm 76.2wx8.9mm 3.9 m OAL	10 H x .25 6 W x .41 168" LGTH	254hx 6.4mm 152.4wx10.4mm 4.9 m OAL	3x10x192 ROUGH SAWN CARPENTED 76 MM x 254 MM x 4.91m	4 - 5/16" x45' ST ST 3 PART	4 - 7.94mmØ x13.7m ST ST 3 PART	122"	3.1m	120" 3.1M	8 - 2" (50.8 MM) EXTRUDED 6061-T6 ALUM.	1-15/16" DIA. (23.8 MM) SCH 80 GALV PIPE	2 - 1 HP 120V/20A 240V/10A	9"	228.6mm	12" DIA 304.8 mm			
20,000#	9071 kg	8 H x .25 3.75 W x .41 x 177" OAL	203.2hx6.4mm 95.3wx10.4mm 4.5 m OAL	10 H x .25 6 W x .41 192" LGTH	254hx6.4mm 152.4wx10.4mm 4.9 m OAL		4 - 5/16" x45' ST ST 3 PART	4 - 7.94mmØ x13.7m ST ST 3 PART	122"	3.1m	120" 3.1M	8 - 2" (50.8 MM) EXTRUDED 6061-T6 ALUM.	1-15/16" DIA. (23.8 MM) SCH 80 GALV PIPE	2 - 1 HP 120V/20A 240V/10A	9"	228.6mm	12" DIA 304.8 mm			
24,000#	10886 kg	8 H x .25 3.75 W x .41 x 201" OAL	203.2hx6.4mm 95.3wx10.4mm 5.1 m OAL	10 H x .29 6 W x .50 192" LGTH	254hx7.4mm 152.4wx12.7mm 4.9 m OAL		4 - 5/16" x45' ST ST 3 PART	4 - 7.94mmØ x13.7m ST ST 3 PART	134"	3.4m	120" 3.1M	8 - 2" (50.8 MM) EXTRUDED 6061-T6 ALUM.	1-15/16" DIA. (23.8 MM) SCH 80 GALV PIPE	2 - 1 HP 120V/20A 240V/10A	9"	228.6mm	12" DIA 304.8 mm			