

FORTRESS
MARINE ANCHORS

The World's Best Anchor

STRONGER. FASTER. LIGHTER.



FORTRESS® | The World's Best Anchor

ENGINEERED FOR PERFORMANCE

SUPERIOR PERFORMANCE

For over two decades, the much lighter Fortress® has out-performed substantially heavier steel anchors in holding power tests conducted around the world. In the US Navy tests, not only did the Fortress® anchors out-perform heavier steel anchors, they were also able to withstand pull loads that averaged over 200x their own weight ... and without incurring serious damage, which was noted in the test report summary:

“ The fact that Fortress® anchors incurred no significant structural damage at such high holding ratios suggests that the anchors have been extensively engineered from both the hydrodynamic and structural standpoints.”

SUPERIOR DESIGN

Fortress® anchors are constructed using a high-tensile, corrosion-resistant, aluminum magnesium alloy that is precision-machined into interlocking components with no welds to weaken the metal. This results in a lighter, easy to handle anchor with superior holding power.

The anchors have been designed to be easily disassembled for compact storage, or as a spare and/or a storm anchor.



All Fortress® anchors are precision-machined for sharpness and quick penetration into common sea bottoms, which insures faster setting performance.



Fortress® and Guardian® anchors also include precision “Mud Palms” to aid setting in all bottom conditions and to solve the anchoring problems found in very soft mud. The Mud Palms are a set of plates that bolt on to anchor creating a “lift” to the crown of the anchor which causes the flukes to point more directly into the sea bed. This helps the anchor set faster in any bottom.



SUPERIOR WARRANTY

Fortress® anchors offer a Lifetime Parts Replacement Warranty. In the unlikely event of damaging an anchor part, Fortress® will replace the damaged part for free, only pay for shipping and handling.

**154' (47m)
US COAST GUARD
FAST RESPONSE
CUTTER**



The United States Coast Guard has approved the Fortress® FX-125 (69 lbs / 31 kg) as the primary anchor for their 154 foot Fast Response Cutter which displaces 353 long tons (791,000 lbs / 359,000 kg)



FORTRESS®

In test after test, from coast to coast and from around the world, no anchor in history has been called “The World’s Best Anchor” by more boaters and respected marine experts than Fortress®.

THE ONLY ANCHOR WITH THESE EXCLUSIVE FEATURES

- >> Highest rating in over 20 independent tests worldwide
- >> Superior holding power at a fraction of the weight
- >> Easily assembles and disassembles for convenient storage
- >> Adjustable fluke angles for outstanding holding power: 32° for common bottoms, 45° for soft mud
- >> High-tech, rustproof aluminum alloy
- >> Lifetime Parts Replacement Warranty
- >> 90-day money back guarantee
- >> Tough anodized finish
- >> Approved by American Bureau of Shipping (ABS)
- >> Models FX-85 & FX-125 certified by Det Norske Veritas (DNV) as Super High Holding Power™ anchors
- >> Used by the U.S. Navy and U.S. Coast Guard



MADE IN THE USA

STRONGER | Tested Best Around the World

In test after test, no other anchor set faster or matched the holding power of Fortress®.



The 70 ft. (21 meters) commercial tug "Hercules" turned Biscayne Bay white, but couldn't pull out a Fortress® anchor during the Miami Sand Bottom tests.

Fortress Real World Tests Were Independently Verified By Leading Marine Experts...



"The tests were professionally conducted. I couldn't improve on them."

Robert Danforth Ogg
co-inventor of the Danforth anchor



"I was impressed by the honest and ethical way these tests were run."

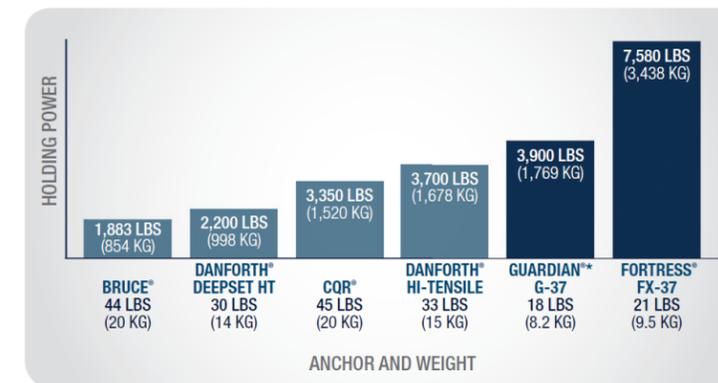
E.S. Maloney
Author, "Chapman's Piloting & Seamanship"



"These were real world tests and they were fair for every anchor tested."

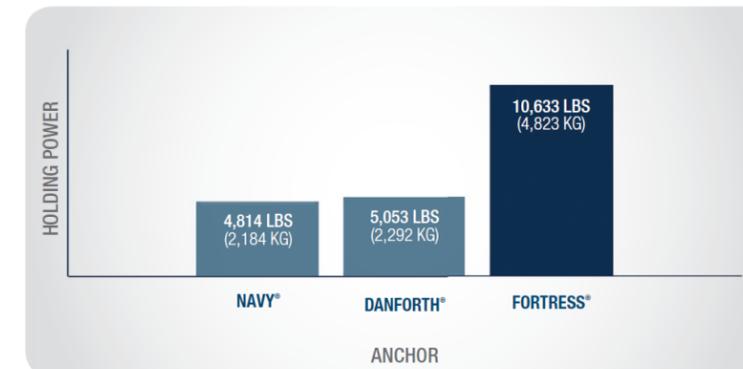
Robert Taylor
U.S. Navy Anchor Expert

Sand Bottom Test



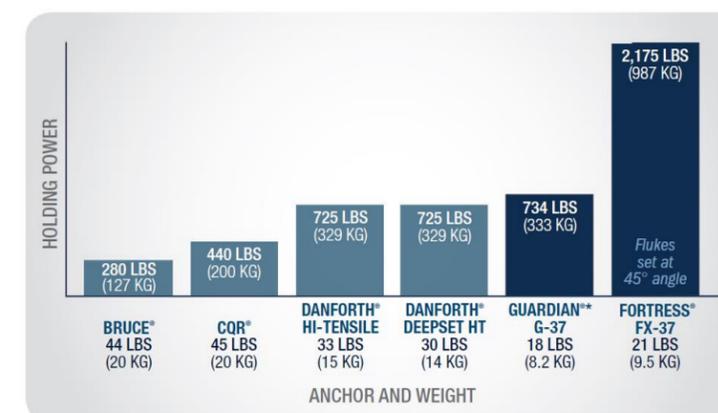
Biscayne Bay, FL, Feb. 1990 *Guardian® test same location, Aug. 1991

U.S. Navy Anchor Test



Chesapeake Bay, VA, May 1989 – Little Creek Naval Base, Norfolk, VA

Soft Mud Bottom Test



San Francisco Bay, CA, April 1990 *Guardian® tested same location, Aug. 1991

LIGHTER | Weigh Your Options

SUPERIOR HOLDING POWER AT A FRACTION OF THE WEIGHT

COMPARE THE DIFFERENCE IN WEIGHT

All four of these anchors have similar holding power for MegaYachts up to 150 feet (46 meters).



DANFORTH®



POOLE®



NAVY®



COMPARE THE DIFFERENCE IN WEIGHT

All four of these anchors have similar holding power for Yachts up to 50 feet (15 meters).



DANFORTH®



CQR®



BRUCE®



EXPERTS AGREE | The World's Best Anchors



"The Fortress anchors had far greater holding power than any other anchor tested."

Official U.S. Navy Anchor Test Report



"The Fortress Anchor outperforms other anchors of comparable size."

Cruising World Magazine



"The Fortress set very quickly during our tests. It outperformed all the other anchors by a significant margin."

Yachting Monthly Magazine (UK)



"Fortress makes it practical for boat owners to carry a large storm anchor they might previously had no room for."

Motor Boating & Sailing Magazine



"I've used a Fortress as my primary anchor in sand and mud bottoms for more than 20 years. I have found the Fortress to be thoroughly dependable."

Elbert S. Maloney, Author "Chapman's Piloting & Seamanship"



"Fortress carries the 'form, not weight' theory to its logical conclusion."

Power and Motoryacht Magazine



"Fortress represents the best in anchor technology."

Yachting Magazine



"With its light weight, quick setting and retrieval, enormous holding power at a variety of scopes, and easy stowability, the Fortress ranked high among all the anchors we tested."

Sail Magazine



"Be assured that on the combination of anchors and the clay type bottom we tested in the published test, the Fortress anchor performed absolutely best."

PAKRYSS, (Sweden)



"After almost a full year of heavy-duty cruising, there is no way I would revert to the old heavy steel anchors again." "

300 Day Cruising Test"

Multihulls Magazine



"We tested the lightweight Fortress FX-23, and the results were remarkable!"

Bateaux Magazine (France)



"The Fortress is the best fluke type anchor we have ever tested."

Pontoon & Deckboat Magazine



"The Fortress FX-23 attained far superior holding power than its much heavier opponents."

Neptune Yachting Magazine (France)



"Fortress anchors have at least twice the holding power of the other types tested."

Practical Boat Owner Magazine (UK)



"The Fortress FX-16 holding-power is excellent in all conditions."

Trailer Boats Magazine



"The Fortress is hard to beat. We continue to be impressed."

Practical Sailor Magazine



"The perfect anchor? We like Fortress!"

Powerboat Reports Magazine



"We were astonished by its holding power of more than 3 tonnes, equivalent to the cable load of a 12m yacht in a hurricane."

Voiles et Voiliers (France)



"The Fortress FX-7 wins again on our second test with impressive performance."

Nautica (Brazil), tested in '96 and '10

Guardian

The Guardian® anchor comes in eight sizes capable of anchoring boats between 12 ft (4 m) and 72 ft (22 m).



*North American Fishing Club
Field Tested Seal of Approval*

THE SAFER, MORE AFFORDABLE ALTERNATIVE TO STEEL ANCHORS

Benefiting from years of Fortress® Anchor Research and Development, Guardian® offers excellent quality, performance and economy. Guardian® is made from the same high tensile, corrosion resistant aluminum magnesium alloy and manufacturing precision as Fortress®.

The use of slightly smaller extrusion profiles and the elimination of some of Fortress®' extra features, such as anodizing, adjustable fluke angles, and several machining steps has resulted in a very affordable alternative to those heavy, rust-prone steel anchors.

THE GUARDIAN® ADVANTAGE

	Guardian®	Steel Anchors
>> Fortress® High-Tech Alloy	YES	NO
>> Easy to Manage Weight	YES	NO
>> Disassembles for storage	YES	NO
>> Rustproof/Non-magnetic	YES	NO
>> No Welds to Fail	YES	NO
>> Replaceable Part	YES	NO

As strong as steel, but half the weight, anchors are second to Fortress® in holding power tests. They make an excellent spare or storm anchor and feature a full One Year Parts Replacement Warranty.



MADE IN THE USA

COMMANDO

SMALL CRAFT ANCHOR SYSTEM



Perfect for Inflatables, Bass Boats, Personal Watercraft,
Runabouts, Tenders, Ski Boats, and more.

ANCHOR | ROPE | CHAIN | SHACKLE ALL IN A STURDY STORAGE BAG

Originally developed for military raiding craft, the Commando offers a no-nonsense solution to the problems of anchor storage and deployment on small boats. This complete anchoring system, including the disassembled high-tech aluminum alloy Guardian® G-5 anchor, can be assembled quickly without tools.

The lightweight Commando system weighs only 8.5 lbs. (4 kg) and fits inside the rugged Dupont™ Cordura® storage bag that can be attached permanently to the boat.

SYSTEM INCLUDES

- >> Guardian® G-5 anchor / Weight: 2.5 lbs. (1.1 kg)
- >> 150 ft. (46 m) of 1/4" braided nylon rope
- >> 6 ft. (2 m) of 3/16" high tensile galvanized steel chain
- >> 1/4" (6mm) galvanized shackle
- >> Custom Dupont™ Cordura® storage bag



FORTRESS STOWAWAY SYSTEM



1

Having storm anchors aboard can make the difference between safety and disaster. With the Stowaway Bag system, it's "in the bag"!

FORTRESS® STOWAWAY BAG SELECTION GUIDE									
ANCHOR		FX-7	FX-11	FX-16	FX-23	FX-37	FX-55	FX-85	FX-125
STOWAWAY BAG		SFX-7	SFX-11	SFX-16	SFX-23	SFX-37	SFX-55	SFX-85	SFX-125
Overall Length	in cm	25" 64	28" 71	32" 81	37" 94	41" 104	47" 119	52" 132	57" 145
Wrenches (2)		3/8"	7/16"	7/16"	7/16"	1/2"	9/16"	3/4"	15/16"
Spare Clip/ Bolt/Nut		1	1	1	1	1	1	1	1

THE PERFECT STORAGE SOLUTION

- >> The custom designed Stowaway Anchor Bag holds everything you need to quickly deploy your Fortress® or Guardian® anchor.
- >> Securely holds everything: Anchor, chain, shackle, and wrenches
- >> Made from top quality, rugged Cordura®, Stowaway bags are built to last in the rugged marine environment. The bag closure and the straps (which serve as convenient carrying handles) are high-strength, extra wide Velcro™.
- >> Inside each bag are pouches to hold the correct size wrenches (included) and even a spare fluke clip, bolt and nut (also included).
- >> Easy to understand diagrams are sewn into the bag to take you through anchor assembly and bag-packing procedures.

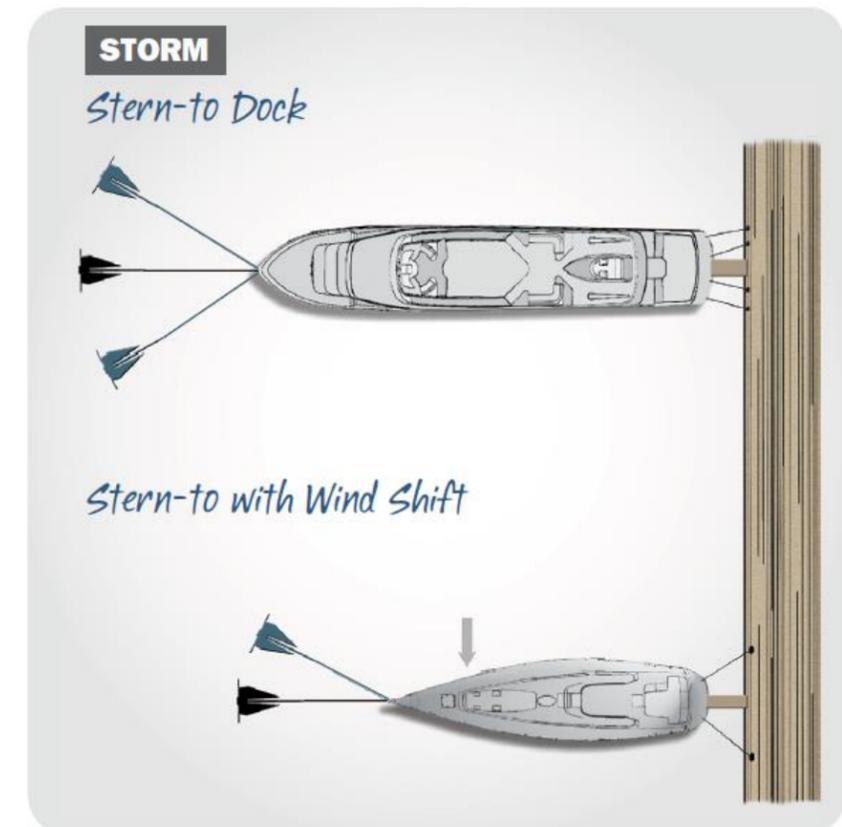
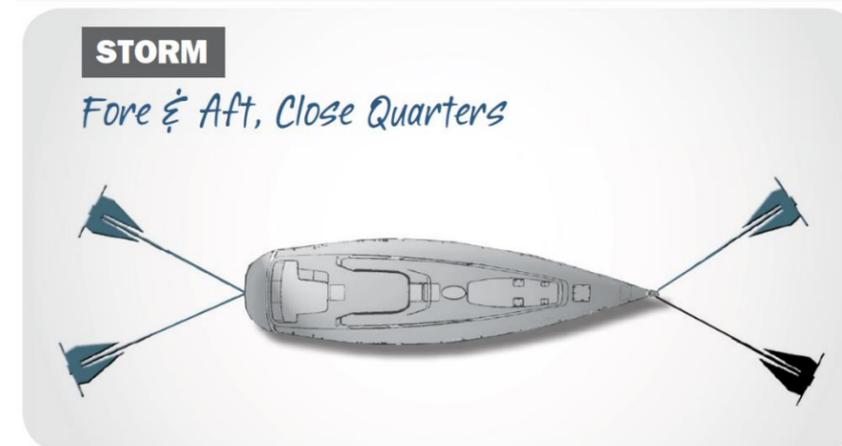
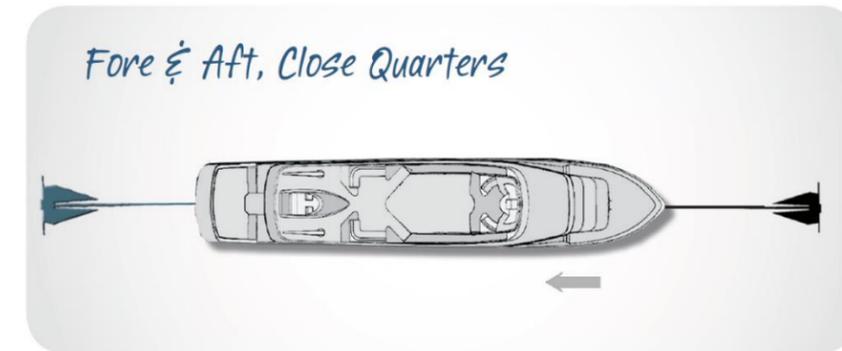
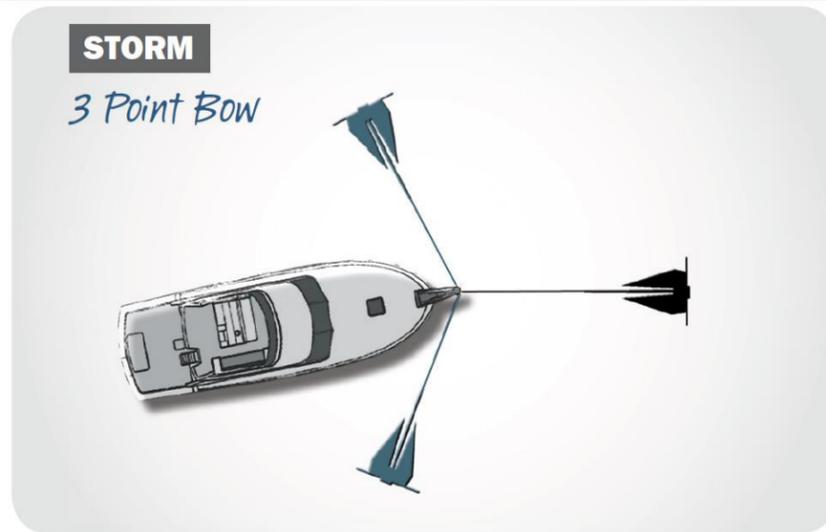
GUARDIAN® STOWAWAY BAG SELECTION GUIDE

ANCHOR		G-7	G-11	G-16	G-23	G-37	G-55	G-85	G-125
STOWAWAY BAG		SG-7	SG-11	SG-16	SG-23	SG-37	SG-55	SG-85	SG-125
Overall Length	in cm	23" 58	26" 66	30" 76	35" 86	39" 99	45" 112	50" 124	54" 137
Wrenches (2)		3/8"	3/8"	7/16"	7/16"	1/2"	9/16"	3/4"	3/4"
Spare Clip/ Bolt/Nut		1	1	1	1	1	1	1	1

DEPLOYMENT | Secondary Anchor Guide

WHEN THE WIND IS UP OR THE ENGINE IS DOWN

Because of their compact storage, easy to manage weight, and high holding power, Fortress® and Guardian® offer your best solution when additional anchors are required for maximum holding power and safety.



SAFE ANCHORING GUIDE

1. DETERMINE YOUR HOLDING POWER REQUIREMENTS

Be sure that your anchor can give the performance you need. A lunch hook should be able to hold your boat in a 15-knot breeze. A main, or working anchor should hold up to 30-knots of wind. A storm anchor is for winds up to 42-knots. Remember that as the wind speed doubles, the holding requirement quadruples!

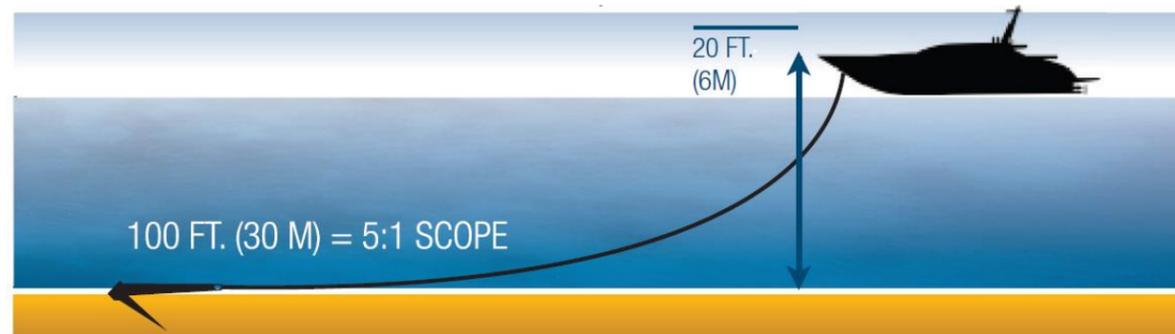
WIND SPEED	20		6		25		8		30		9		35		11		40		12		50		15		60		18		70		21	
	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M		
15 kts	90	41	125	57	175	79	225	102	300	136	400	181	500	227	675	306																
30 kts	360	163	490	222	700	318	900	408	1,200	544	1,600	726	2,000	907	2,700	1,225																
42 kts	720	327	980	445	1,400	635	1,800	816	2,400	1,089	3,200	1,452	4,000	1,814	5,400	2,449																
60 kts	1,440	653	1,960	889	2,800	1,270	3,600	1,633	4,800	2,177	6,400	2,903	8,000	3,629	10,800	4,899																

Use the handy “Horizontal Loads Table” above to determine in pounds your holding power requirements for different wind speeds.

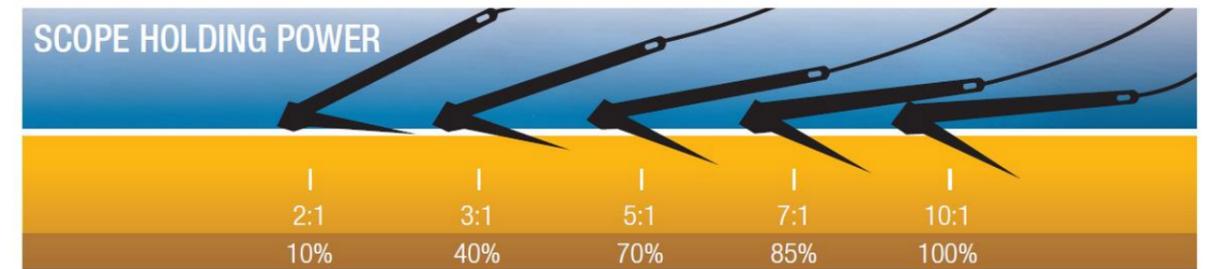
NOTE: This table assumes boats of average beam and windage. If your boat has above-average beam or windage, refer to loads for the next larger size boat. The numbers in columns for feet = lbs., and the numbers in the columns for meters = kg.

2. USE ADEQUATE SCOPE

Scope is the length of anchor line relative to the distance from your boat’s deck to the sea bottom. We recommend at least 5:1 scope.



At 10:1 the holding power will double, and at less than 3:1, you will give up a significant amount of holding power and may experience problems setting the anchor.



In crowded anchorages, “Power Set” your anchor at 5:1 scope, then shorten scope as required. Remember that your depth sounder may be giving you the water depth under your keel rather than from the true waterline, in which case you need to add your draft plus the height of your deck when calculating scope.

3. “POWER SET” YOUR ANCHOR

Know that your anchor is properly set! Back down very, very slowly. Then as the anchor begins to set, very slowly increase the load with your engine. Backing down at a faster speed may not give your anchor a chance to dig in and bury itself.

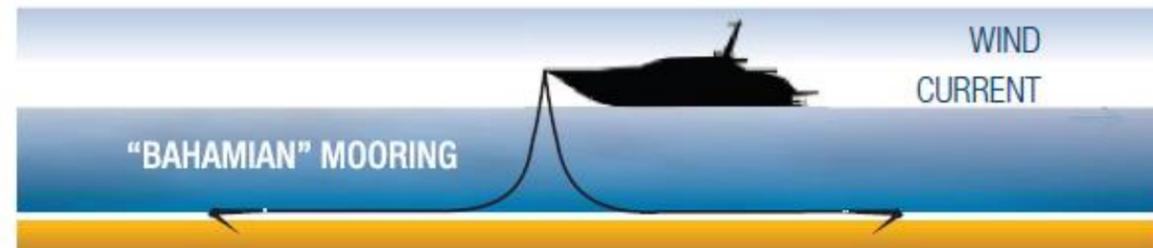
SHAFT HP		25	50	75	100	150	200	300	400	500
TRUE DISPLACEMENT HULLS (SHAFT HP X 20)	lb. kg.	500 225	1,000 450	1,500 675	2,000 900	3,000 1,350	4,000 1,800	6,000 2,700	8,000 3,600	10,000 4,500
SEMI DISPLACEMENT HULLS (SHAFT HP X 15)	lb. kg.	375 169	750 338	1,125 506	1,500 675	2,250 1,013	3,000 1,350	4,500 2,025	6,000 2,700	7,500 3,375
FAST, PLANING HULLS (SHAFT HP X 10)	lb. kg.	250 113	500 225	750 338	1,000 450	1,500 675	2,000 900	3,000 1,350	4,000 1,800	5,000 2,250

You can simulate the force of the wind by using your engine’s thrust to set your anchor to a predetermined load. Match your boat’s total maximum horsepower and hull type in the table above to determine how hard your boat can “Power Set” your anchor.

4. ANCHOR RESETTING

In areas of changing tide or wind, set two anchors off the bow in opposite directions. Any anchor can occasionally fail to reset once it has been pulled out of the bottom.

SAFE ANCHORING GUIDE



Don't be fooled by some manufacturer's claims about any anchor's ability to dependably reset 100% of the time! Set two anchors if you expect a change in wind or current.

5. ANCHOR RETRIEVAL

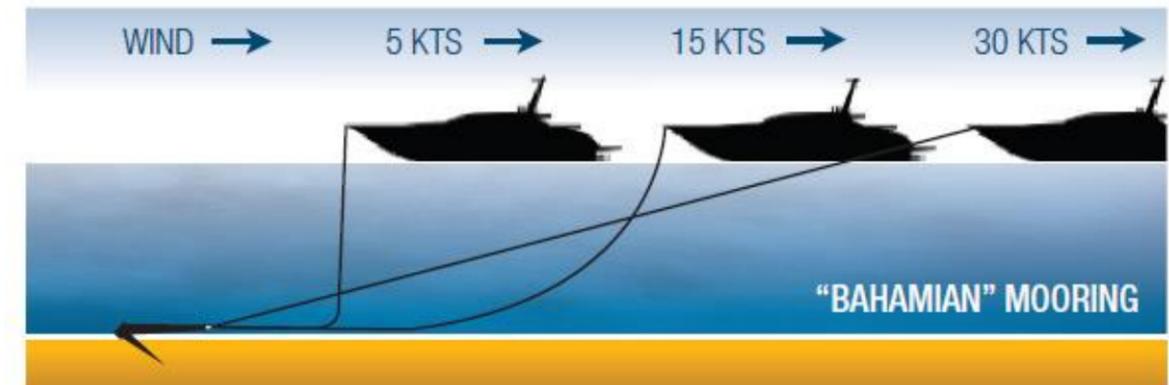
Slowly move the boat to a position directly over the anchor, pulling in the line as you go. Then snub the line on a cleat and power backwards slowly to pull the anchor out of the bottom. Do not power forward because that will require more energy and will put very heavy loads on the anchor and gear.

6. SUPPORT HARDWARE

Remember that your anchor system includes the shackle, rope, chain, and deck cleats. Every item must be able to deliver the strength you need. Refer to the handy guide on the Anchor Selection & Specifications Guide page.

7. ANCHOR RODE

Use a short length of chain and three-strand nylon line. Nylon is very elastic and greatly reduces shock loads on your boat and its anchoring system. The chain protects the line against chafe from the seabed and also helps to provide a horizontal pull on the anchor when it is initially beginning to set. If you regularly anchor in 25 ft (8 m) of water or less, use 6 ft (2 m) of chain. For greater depths, use an additional 6 ft (2 m) for every 25 ft (8 m) of water depth. (i.e. use 24 ft (7 m) of chain if you regularly anchor in 100 ft (30 m) of water).



All chain anchor rodes lack the shock absorbing ability of nylon rope when the windpipes up!

8. SOFT MUD BOTTOMS

All soft mud bottoms offer greatly reduced holding power, so be sure your anchor can provide the holding power you need. Some bottoms offer as little as 15% of the holding available in firmer bottoms!



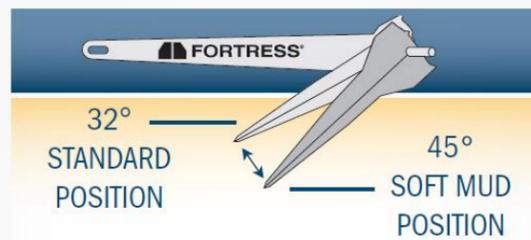
Some soft mud bottoms have a sticky consistency which makes setting any anchor more difficult. If soft mud setting problems occur, try setting the anchor initially at a very short scope, e.g. 2:1. Then increase the scope to at least 5:1 and "Power Set" the anchor. Special Mud Palms are included for both Fortress® and Guardian® anchors to aid setting in very soft, problem mud. We recommend that you permanently install the Mud Palms on your anchor, as they help the anchor set faster in any type of bottom.

SELECTION GUIDE

- >> Boat size recommendations are for boats of average windage and proportions in 30-knots of wind, average bottom conditions, and moderate protection from open seas.
- >> Remember that the loads in 42 knots of wind are twice as much as in 30-knots.
- >> Use three-strand nylon line, 6-12 feet (2-4 m) of chain and a minimum of 5:1 scope.
- >> A minimum of 6 feet (2 m) of chain should be used for every 25 feet (8 m) of water depth.
- >> For storm conditions, we recommend using an anchor one or two sizes larger.

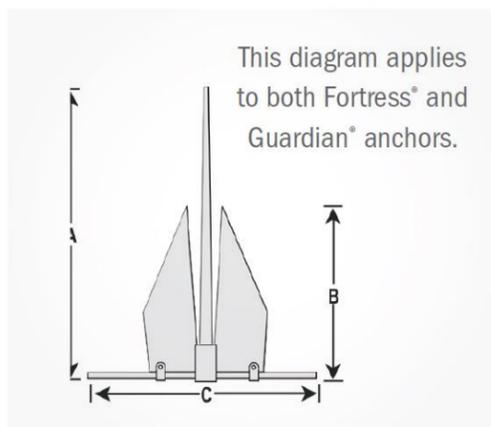


EXCLUSIVELY ON FORTRESS®



The Fortress® flukes can be adjusted from the normal 32° angle to a 45° angle to increase holding power in soft mud bottoms by as much as 400%.

DIMENSIONS*



FORTRESS®

		FORTRESS® SELECTION GUIDE									
MODEL		FX-7	FX-11	FX-16	FX-23	FX-37	FX-55	FX-85	FX-125		
Boat Length	ft	16-27'	28-32'	33-38'	39-45'	46-51'	52-58'	59-68'	69-150'		
	m	5-8	8-10	10-12	12-14	14-15	16-18	18-21	21-46		
Weight	lb	4	7	10	15	21	32	47	69		
	kg	1.8	3.2	4.5	6.8	9.5	14.4	21.2	31.1		
Replaces Steel Anchors	lb	6-9	10-13	14-18	19-28	33-50	50-65	70-90	100-170		
	kg	3-4	5-6	6-8	9-13	15-23	23-29	31-41	45-77		
Holding Power	Working Load	lb	700	900	1,250	2,000	3,000	4,000	5,250	6,750	
		kg	320	410	570	910	1,360	1,810	2,380	3,060	
	32" Hard Sand Holding	lb	2,800	3,600	5,000	8,000	12,000	16,000	21,000	27,000	
		kg	1,270	1,630	2,270	3,630	5,440	7,260	9,530	12,250	
Dimensions*	Shank Length	"A"	in	24"	27"	31"	36"	40"	46"	51"	56"
		cm	61	69	79	91	102	117	130	142	
	Fluke Length	"B"	in	14"	16"	18"	21"	24"	27"	30"	33"
		cm	36	41	46	53	61	69	76	84	
Stock Length	"C"	in	19"	22"	25"	29"	32"	37"	41"	45"	
	cm	48	56	64	74	81	94	104	114		
Hardware	Proof Coil Chain	in	3/16"	1/4"	5/16"	3/8"	3/8"	1/2"	1/2"	1/2"	
		mm	5	6	8	9	9	13	13	13	
	Nylon Rope**	in	3/8"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	
	mm	9	9	12	16	18	22	24	32		
Shackle Size	in	1/4"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	5/8"		
	mm	6	6	8	9	12	13	16	16		

*See Diagram

Guardian®

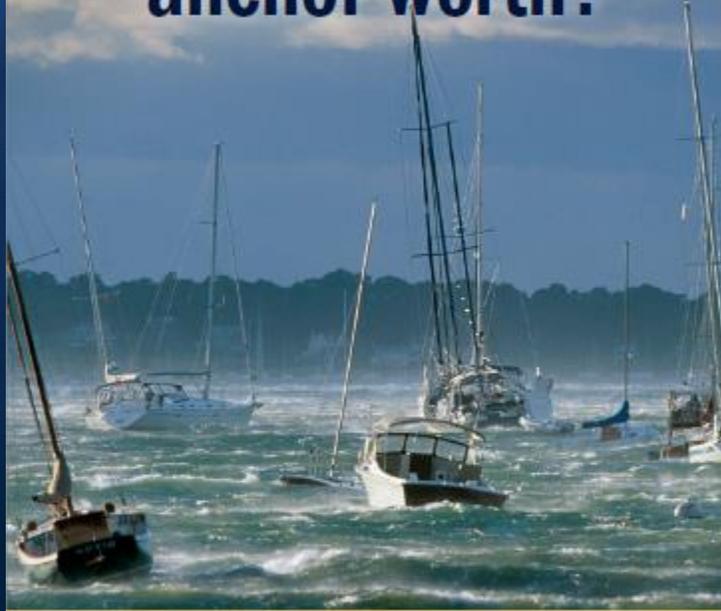
		GUARDIAN® SELECTION GUIDE									
MODEL		G-5	G-7	G-11	G-16	G-23	G-37	G-55	G-85	G-125	
Boat Length	ft	12-16'	17-22'	23-27'	28-33'	34-41'	42-47'	48-53'	54-62'	63-72'	
	m	4-5	5-7	7-8	8-10	10-12	12-14	14-16	16-19	19-22	
Weight	lb	2.5	4	6	7	13	18	29	42	65	
	kg	1.1	1.8	2.7	3.2	5.9	8.2	13.1	19	29.3	
Replaces Steel Anchors	lb	4-6	6-9	10-13	14-18	19-28	33-50	50-65	70-90	100-170	
	kg	2-3	3-4	5-6	6-8	9-13	15-23	23-29	32-41	45-77	
Holding Power	Working Load	lb	350	575	750	1,075	1,625	2,500	3,500	4,625	6,000
		kg	160	260	340	490	740	1,130	1,590	2,100	2,720
	Hard Sand Holding	lb	1,050	1,725	2,250	3,225	4,875	7,500	10,500	13,875	18,000
	kg	480	780	1,020	1,460	2,210	3,400	4,760	6,290	8,170	
Soft Mud Holding	lb	210	345	450	645	975	1,500	2,100	2,775	3,600	
	kg	100	160	200	290	440	680	950	1,260	1,630	
Dimensions*	Shank Length	"A"	in	19"	22"	25"	29"	33"	38"	43"	53"
		cm	48	56	64	74	84	97	109	122	135
	Fluke Length	"B"	in	11"	13"	15"	17"	19"	22"	25"	31"
cm		28	33	38	43	48	56	64	71	79	
Stock Length	"C"	in	16"	18"	20"	23"	27"	31"	35"	39"	43"
	cm	41	46	51	58	69	79	89	99	109	
Hardware	Proof Coil Chain	in	3/16"	3/16"	3/16"	1/4"	5/16"	3/8"	3/8"	1/2"	1/2"
		mm	5	5	5	6	8	9	9	13	13
	Nylon Rope**	in	3/8"	3/8"	3/8"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
	mm	9	9	9	9	12	16	18	22	24	
Shackle Size	in	3/16"	3/16"	1/4"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	
	mm	5	5	6	6	8	9	12	13	16	

*See Diagram

NOTE: Hard sand holding power figures above represent loads actually achieved on production Fortress® and Guardian® anchors under controlled horizontal pull conditions without dragging or resulting in disabling structural

Rope recommendations are based on manufacturer's ratings of 25% of breaking strength. Rope must be in good condition.

*When the sea is up
or the engine is down ...*
**how much is your
anchor worth?**



**SURVIVING A
STORM AT ANCHOR**
Tom Neale Discusses
Equipment and Techniques



MADE IN THE USA

WWW.FORTRESSANCHORS.COM

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Fort Lauderdale, Florida, USA 33309
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e-mail: info@fortressanchors.com