

# SAFE ANCHORING GUIDE

## 1. DETERMINE YOUR HOLDING POWER REQUIREMENTS

Be certain 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.

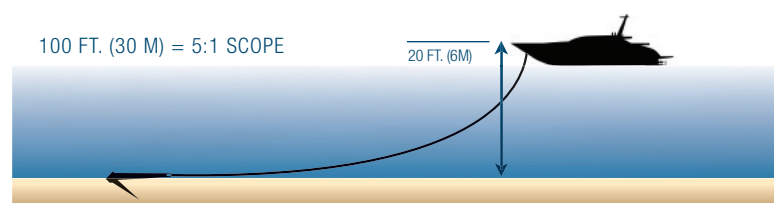
WIND SPEED	BOAT LENGTH		20	6	25	8	30	9	35	11	40	12	50	15	60	18	70	21
	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M
15 kts	90	41	125	57	175	79	225	102	300	136	400	181	500	227	675	306		
30 kts	360	163	490	222	700	318	900	408	1,200	544	1,600	726	2,000	907	2,700	1,225		
42 kts	720	327	980	445	1,400	635	1,800	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.

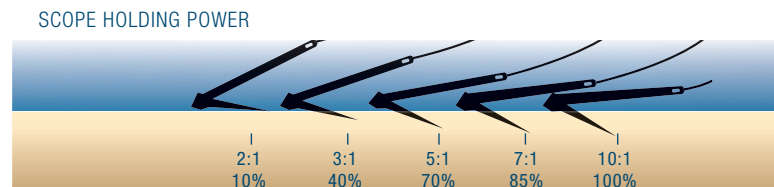
NOTE: This table assumes boats of average beam and windage. If your boat has above-average beam or windage, refer to loads for the next larger size boat. The numbers in columns for feet = lbs. and the numbers in the columns for meters = kg.

## 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

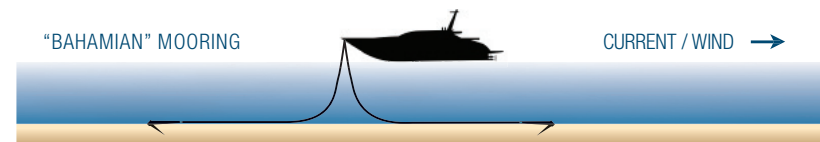
Make sure that your anchor is properly set! Back down very, very slowly. Then as the anchor begins to set, very slowly increase the load with your engine. Backing down at a faster speed may not give your anchor a chance to dig in and bury itself.

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



Don't be fooled by some manufacturers' 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

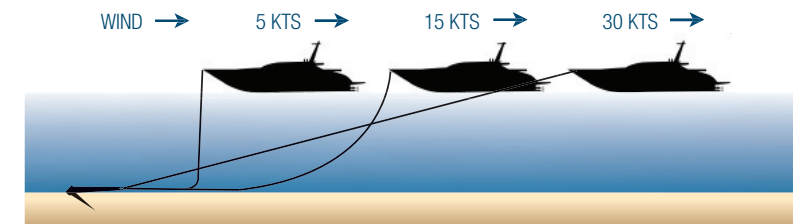
Slowly move the boat to a position directly over the anchor, pulling in the line as you go. Then snub the line on a cleat and power **backwards** slowly to pull the anchor out of the bottom. **Do not power forward** because that will require more energy and will put very heavy loads on the anchor and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

## 6. SUPPORT HARDWARE

Remember that your anchor system also includes the chain, rope, shackle and deck cleats. Every item must be able to deliver the strength you need. Refer to the Selection Guide page on our web site under 'Support Hardware' for our recommended chain, rope and shackle sizes for your Fortress or Guardian anchor.

## 7. ANCHOR RODE

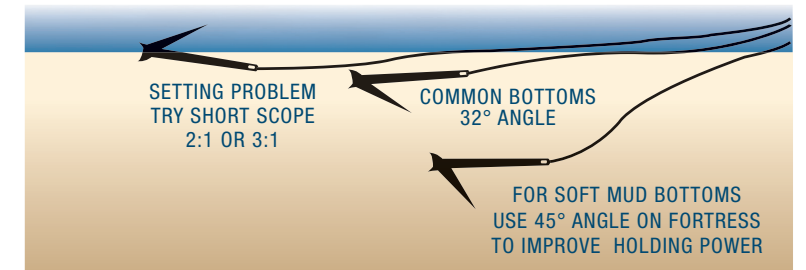
Use a short length of chain and three-strand nylon line. Nylon is very elastic and greatly reduces shock loads on your boat and its anchoring system. The chain protects the line against chafe from the seabed and also helps to provide a horizontal pull on the anchor when it is initially beginning to set. 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, e.g. 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 wind increases.

## 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.



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.

## FORTRESS MARINE ANCHORS

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