



THE EVIDENCE BEHIND SUPERIOR HOLDING POWER

**WHY EXPERIENCED SAILORS, PROFESSIONAL MARINERS, AND
MILITARY ORGANIZATIONS TRUST FORTRESS ANCHORS
WORLDWIDE**



THE MYTH AN ANCHOR NEEDS TO BE HEAVY TO BE EFFECTIVE

THE DATA TELLS A DIFFERENT STORY

WHAT ACTUALLY CREATES HOLDING POWER?

INDEPENDENT TESTING CONSISTENTLY IDENTIFIES:

- FLUKE AREA
- BOTTOM PENETRATION
- ANCHOR GEOMETRY
- SCOPE
- SOIL ENGAGEMENT

ONE FACTOR IS NOTICEABLY MISSING:

ANCHOR WEIGHT

Source: US Navy (1988) *Anchor Test Report for Nine Small Moveable-Fluke Anchors*,

An underwater photograph of an anchor resting on a sandy seabed. The anchor is a small, moveable-fluke anchor, characterized by its long shank and two flukes. The background is a clear, blue-green water column, and the sand is light-colored with some small debris.

WHY FLUKE AREA MATTERS

**LARGER FLUKE AREAS ENGAGE
MORE BOTTOM MATERIAL**

**ENGAGING MORE BOTTOM MATERIAL CREATES MORE RESISTANCE TO
DRAGGING**

Source: US Navy (1988) *Anchor Test Report for
Nine Small Moveable-Fluke Anchors*

An underwater photograph showing a metal anchor resting on a sandy seabed. The anchor is partially buried, with its flukes and shank visible. The water is clear, and the sand is light-colored. The text is overlaid on the image in white, bold, sans-serif font.

WHY PENETRATION MATTERS

**AN ANCHOR CANNOT HOLD WHAT IT
CANNOT REACH**

**ANCHORS THAT PENETRATE DEEPER ENGAGE THE DENSER BOTTOM MATERIAL AND
ARE LESS PRONE TO SURFACE LEVEL FAILURE**

*Source: US Navy (1988) Anchor Test Report
for Nine Small Moveable-Fluke Anchors*



THE BEST ANCHORS ARE DESIGNED TO DIG

**EFFECTIVE GEOMETRY HELPS
ANCHORS TO SET AND STAY BURIED**

Source: US Navy (1988) *Anchor Test Report for Nine Small
Moveable-Fluke Anchors*

The background image shows a close-up view of a ship's deck. A large blue container is visible, along with various metal structures and equipment. The legs of a person wearing dark pants and shoes are seen on the right side of the frame. The overall scene is dimly lit, with a focus on the industrial environment of a vessel.

WHAT INDEPENDENT TESTING FOUND

**FOUR COUNTRIES. FOUR TEST
PROGRAMS. SIMILAR RESULTS.**

UNITED STATES

UNITED KINGDOM

FRANCE

SWEDEN

US NAVY TEST (1989)

THE U.S. NAVY CONDUCTED ONE OF THE MOST COMPREHENSIVE ANCHOR TESTS EVER PERFORMED

Test Scope

- 9 anchor designs
- Multiple bottom types
- Measured holding power
- Measured holding-power-to-weight ratios



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

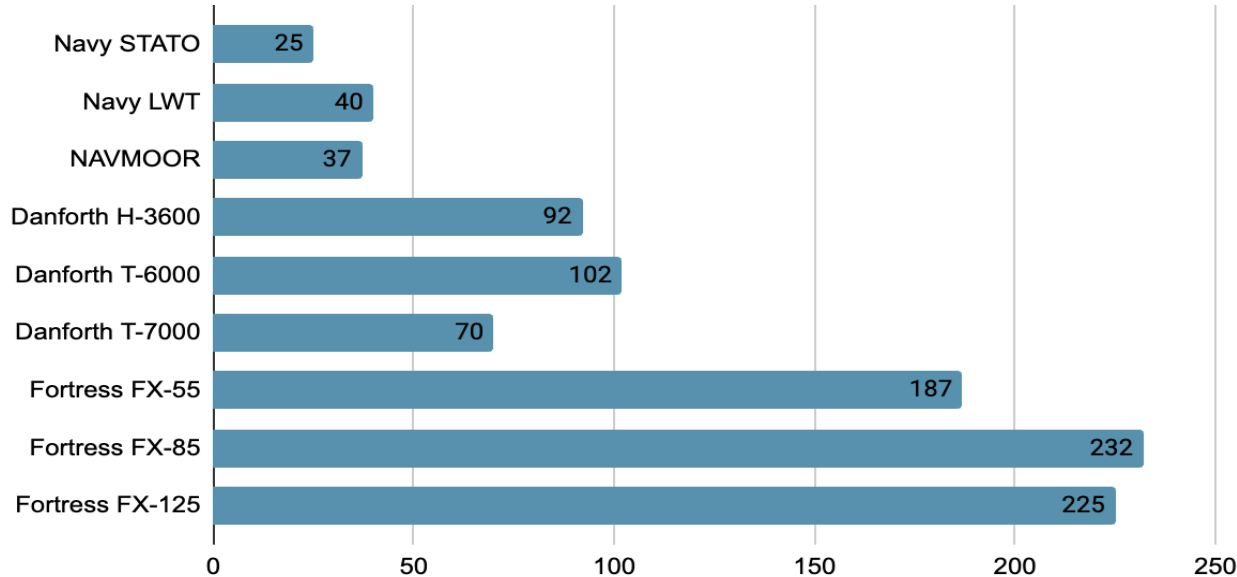
— U.S. Navy Anchor Test Report

US NAVY TEST - 1989

FORTRESS ACHIEVED THE HIGHEST HOLDING-POWER-

ST

Average Holding Power-to-Weight Ratio



KEY FINDING:
The **Fortress FX-85** achieved a holding-power-to-weight ratio of **232:1**, compared to **25:1–40:1** for leading U.S. Navy anchor designs.

UNITED KINGDOM TESTING (2006)

LEADING MARINE PUBLICATIONS TESTED 14 ANCHORS ACROSS MULTIPLE LOCATIONS



Test Scope

- 14 anchor designs tested
- Multiple bottom conditions
- Multiple scopes
- Joint testing by major marine publications

KEY FINDING: Fortress repeatedly reached the test limit of 5,000 lbs.

"The Fortress FX37 was one of several anchors we tested that consistently set quickly and held up to 5,000 pounds of load."

Source:

SAIL Magazine (October 2006)

Yachting Monthly (December 2006)

2268 + KG
(5000 lbs)

HOLDING POWER ACHIEVED BY A 10 KG FORTRESS FX37

**A 10 kg Fortress FX-37 held
more than 2,268 kg before the
test reached its limit.**

THE FORTRESS FX37 RANKED FIRST AGAINST EUROPE'S MOST POPULAR ANCHORS

- 11 anchors tested
- French Riviera
- Hard sand conditions
- Europe's leading anchor designs

Jetez l'ancre!
Ancre, quand tu nous tiens...
Texte Daniel Allisy,
Photos François-Xavier Ricardou,
Photos sous-marines Pierre Martin-Razi.

DE 150 À 890 EUROS,
11 ANCRÉS
AU BANC D'ESSAI

LA NOUVELLE GÉNÉRATION

DELTA KOBRA 2 MANSON SUPRÊME SPADE S 80 XYZ BRAKE 16 BUGEL FORTRESS 10.6 SPADE A 80

FACE AUX VALEURS SÛRES

Depuis quelques années, une nouvelle génération d'ancres essaie de battre en brèche l'omniprésence des légendaires CQR et autres Britany qui équipent la majorité du parc de voiliers français. Un «tiens» vaut mieux que deux «tu tiendras», chacun d'entre nous hésite à faire le saut dans l'inconnu. Et si ces nouvelles ancres étaient beaucoup plus performantes? Pour en avoir le cœur net, nous avons comparé sept ancres nouvelle génération et deux ancres légères, face aux ancestrales valeurs sûres. Les conclusions sont plutôt édifiantes...

CQR
BRITANY

1,5 tonne! C'est l'effort qu'il faut appliquer sur l'excellente table pour l'omber au sable dur. Une simulation qui correspond à la force exercée par 50 nœuds de vent.
-force 101 - sur un 22 mètres...

www.voilesetvoiliers.com
Exclusif: toutes les vidéos sous-marines sur

FORTRESS FX37 ACHIEVED THE HIGHEST AVERAGE HOLDING POWER

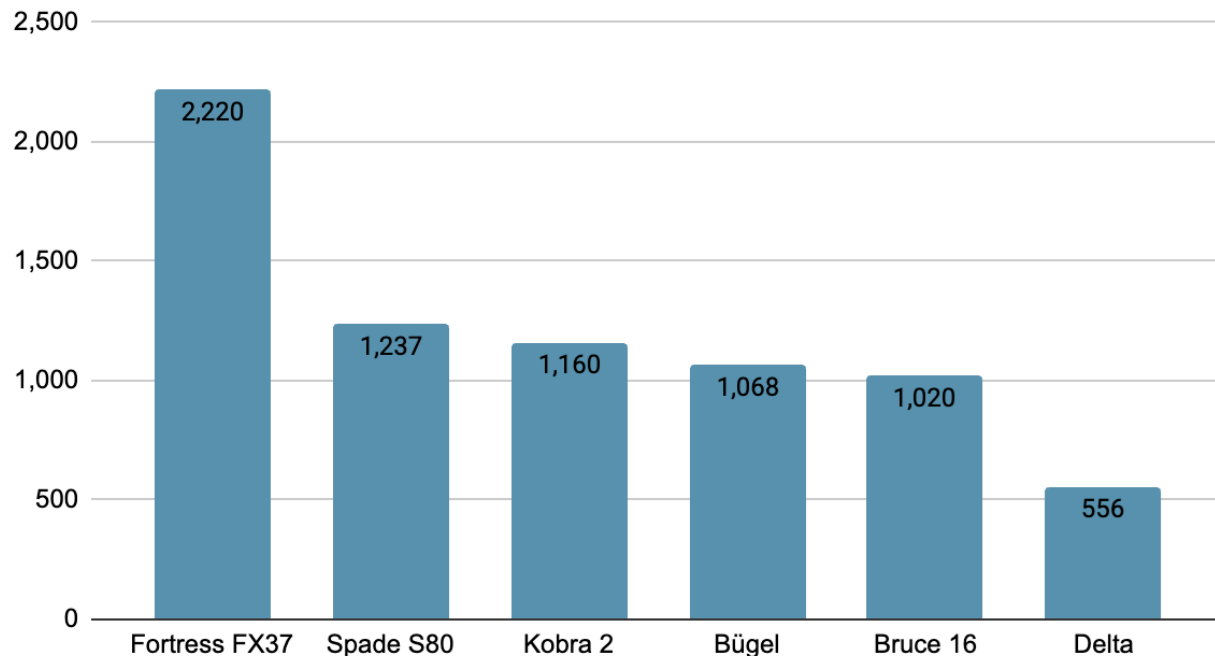
Source: *Voiles et Voiliers* (2009)

IN THE TEST

FRANCE — VOILES ET VOILIERS (2009)

FORTRESS FX37 RANKED #1

AVERAGE HOLDING POWER



ANCHOR IN THE TEST

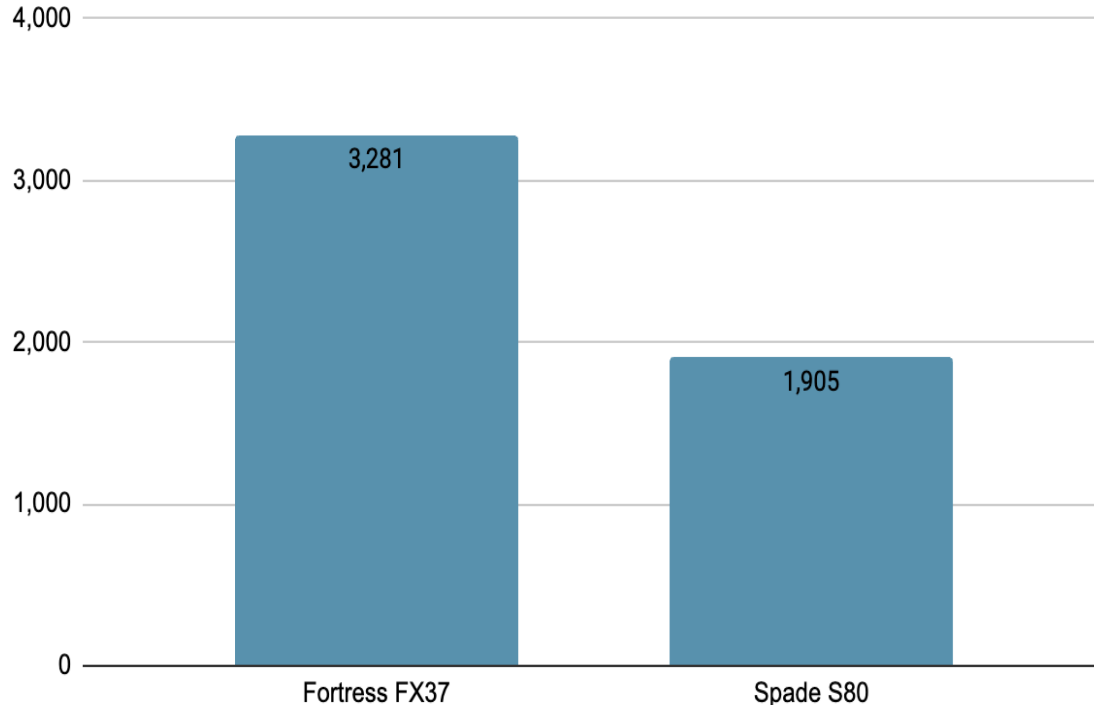
KEY FINDING

Fortress FX-37 generated **79% greater average holding power** than the next-best anchor tested.

Source: *Voiles et Voiliers* (2009)

IN HARD SAND FORTRESS DOMINATED

HOLDING POWER (KG)



Fortress
produced **72%**
**greater holding
power** vs the
best-performing
steel anchor!

Source: *Voiles et Voiliers* (2009)

FRANCE — VOILES ET VOILIERS (2009)

**THE LIGHTEST ANCHOR DELIVERED THE HIGHEST HOLDING
POWER
10 KG FORTRESS FX-37**

VS

18 KG SPADE S80

PERFORMANCE COMES FROM DESIGN NOT MASS

Source: *Voiles et Voiliers (2009)*

SWEDEN — PÅ KRYSS (2010) INDEPENDENT SWEDISH TESTING REACHED THE SAME CONCLUSION



Test Scope

- Bohuslän, Sweden
- Clay-bottom conditions
- 7 anchors tested
- Sweden's leading sailing magazine, *PÅ KRYSS*

"Without question, the best anchor in our test on Bohuslän clay bottoms was the Fortress 37 anchor."

— PÅ KRYSS, August 2010

SWEDEN — PÅ KRYSS (2010)

FORTRESS FX37 RANKED #1 IN SWEDISH TESTING	
RANK	ANCHOR
1	FORTRESS FX-37
2	FORCE 15 (BRUCE COPY)
3	BÜGEL 16
4	DANFORTH 20 LB
5	ULTRA 16
6	ROCNA 15 KG
7	BRUCE 15 ORIGINAL

"Without question, the best anchor in our Bohuslän clay-bottom test was the Fortress 37 anchor." — PÅ KRYSS, August 2010

**“WITHOUT QUESTION, THE
BEST ANCHOR IN OUR
TEST WAS THE FORTRESS
FX-37”**

— *PÅ KRYSS*, August 2010

SWEDEN — PÅ KRYSS (2010)

LIGHTER THAN THE #2 ANCHOR

10 KG FORTRESS FX37

VS

15 KG FORCE 15 (BRUCE COPY)

PERFORMANCE COMES FROM DESIGN, NOT WEIGHT

Source: PÅ KRYSS, August 2010

**FOUR COUNTRIES. FOUR TEST PROGRAMS. THE
SAME RESULT.**

UNITED STATES

U.S. Navy

UNITED KINGDOM

SAIL / Yachting Monthly

FRANCE

Voiles et Voiliers

SWEDEN

PÅ KRYSS

**INDEPENDENT TESTERS REPEATEDLY
REACHED THE SAME CONCLUSION**

***LIGHTWEIGHT
FORTRESS ANCHORS
OUTPERFORM
HEAVIER STEEL
ANCHORS***

**IF LIGHTWEIGHT ANCHORS DON'T WORK, WHY DO THE
U.S. NAVY, U.S. COAST GUARD, NOAA, AND TOWBOATUS
USE THEM?**



**PROFESSIONALS CHOOSE PERFORMANCE —
NOT WEIGHT**

**WHY CARRY A HEAVIER
ANCHOR IF IT DOESN'T
HOLD BETTER?**



FORTRESS

MARINE ANCHORS

**PROVEN BY INDEPENDENT
TESTING**

TRUSTED BY PROFESSIONALS

LIGHTWEIGHT PERFORMANCE SINCE 1986

SOURCES

[U.S. Navy Anchor Test Report \(1989\)](#)

[SAIL Magazine \(October 2006\)](#)

[Yachting Monthly \(December 2006\)](#)

[Voiles et Voiliers \(2009\)](#)

[På Kryss \(August 2010\)](#)

Complete source documents and test reports available at

FORTRESSANCHORS.COM