



BROWNELL[®]
Boat Stands & Equipment
MADE IN THE USA 

Blocking & Storage Safety Manual





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This manual is only recommended for general use by qualified personal based on the use of only Brownell Boat Stands true and tested equipment. Using these methods with any other manufacturers' products is not recommended.

Inspect all lifting equipment prior to use, and never work under a hanging load.

SAFELY STORING BOATS WITH THE BROWNELL SYSTEM

Whatever the method of storing a boat, the boat should be level athwartships, and trimmed fore and aft so that the cockpit and deck will drain without leaving standing water. Periodic inspection may be necessary to avoid buildup of excess water in the boat. When a boat is in storage outside, sails, canvas, biminis, etc., as well as dinghies, windsurfers, and other miscellaneous gear should be secured or removed to prevent compromised storage stability or damage due to a weather related event.

BLOCKING

Boat keels should be blocked as close to the ground as practical. Keel blocking should be used to support the weight of the boat, unless otherwise specified by the boat manufacturer. Keel blocking should be distributed to prevent high local loading. The blocking should be adequate to support the boat, taking the condition and slope of the ground, and the size, shape, weight, and condition of the boat into account. Use a minimum of two sets of keel blocking per boat. The blocking should be as large as practicable and appropriately sized for the boat. The minimum dimension measured fore and aft along the keel should be four inches nominal per block. If the blocking is over two tiers high, it should be cribbed. Cribbing height should not exceed 1 1/2 times the minimum base footprint dimension. As an alternative to conventional wood blocking, Brownell Boat Stands offers a range of keel stands. These keel stands have a non-swivel top and are designed to support the weight of the vessel. They are quicker to install, thus saving labor and increasing profitability. When utilizing keel stands, always follow the boat manufacturers' guidelines for placement, and follow the same precautions as when utilizing wood blocking. Barrels, foam blocks, cinder blocks, and other masonry products not intended to bear weight should not be used for blocking. See TABLE 1 for minimum block dimensions. 12 inch X 12 inch (30.5cm X 30.5cm) blocks are usable in all cases.

TABLE 1 – MINIMUM BLOCK DIMENSIONS

BOAT LENGTH	MINIMUM BLOCK WIDTH	MINIMUM BLOCK LENGTH
less than 30 feet (9m)	6 inches (15.5cm)	18 inches (46cm)
31-40 feet (9.45-12m)	8 inches (20.5cm)	18 inches (46cm)
41 feet (12.5m) or over	12 inches (30.48cm)	18 inches (46cm)

BROWNELL BOAT STANDS INSPECTION & MAINTENANCE

Brownell Boat Stands should be installed and adjusted by qualified, experienced, and authorized persons. Do not use any boat stand that is damaged or structurally deteriorated. Maintain equipment as required by the manufacturer.

- A. Keep moving parts lubricated.
- B. Make sure plywood is in good condition.
- C. Make sure acme threads are in good working order to allow necessary adjustment and tightening against the hull.
- D. Touch up using rust preventative paint when necessary to prevent damage.

DO'S & DON'TS

The following list of actions you should and should not take while using your Brownell Boat Stands System. This list will help ensure that safety is never compromised. This list should not be construed as universal to all users of Brownell Boat Stands, due to the infinite variables in application. Rather, it should be used in addition to safety precautions already taken.

Please realize the Brownell Boat Stands are to stabilize the boat and the keel blocking supports the boat's weight.

DO:

- Ensure that qualified personnel oversee placement and use of keel support and boat stands.
- Use blocking or Brownell Keel Stands along centerline of boat to rest weight on; always check blocks for rotting or splitting
- Use safety chains on all sides of Brownell Sailboat Stands, chaining pairs together from port to starboard
- Use pairs of Brownell Boat Stands, one placed to port and one to starboard B
- Use a minimum of four Brownell Boat Stands for powerboat storage and 5 Brownell Boat Stands for sailboat storage plus an additional set every 8-10 feet for longer vessels
- Use a v-stand under the bow of all fin keel or bow-heavy sailboats

- Use a v-stand under stern of fin keel or stern-heavy sailboats
- Use Brownell Boat Stands on firm, stable ground or place plywood under stands if ground is soft
- In windy areas, remove masts when boats are on Brownell Boat Stands; if mast must be left in, use additional stands
- Replace any damaged or badly rusted stands
- Keep screws greased regularly
- If a Brownell Boat Stand must be removed from under a boat, place another Brownell Boat Stand beside it first for support
- If boats are left on stands for long periods of time, they should be frequently tightened and checked for safety and security
- Additional attention to stands may be required during freeze/thaw cycles, before, during, and after storms, and on soft ground. On soft ground, extra, rigid pads, such as plywood, may be required under the stand(s) to prevent them from sinking into the ground.
- Check stands routinely during storage season. After a period of storage, a hull may begin to flex in the way of the stand pad. If this occurs, add a stand, or move stands, to bear directly under a bulkhead, stringer, or other structural member that can sustain and distribute the load. If it is necessary to move an installed boat stand, position another stand next to the stand to be moved, and chain the new stand securely in position before moving the first stand.

DO NOT:

- Allow anyone other than qualified, experienced, or authorized persons to move or adjust Brownell Boat Stands when in use
- Use Brownell Boat Stands to suspend a boat in mid-air.
- Allow anything (such as canvas) to be tied to Brownell Boat Stands
- Weld or modify Brownell Boat Stands or tops
- Use Brownell Boat Stands to perform jobs for which they are not intended
- Place blocks on top of Brownell Boat Stands or underneath legs of boat stands to increase their reach

CHOOSING THE CORRECT NUMBER & SIZE OF BROWNELL BOAT STANDS

SAILBOATS

Use a minimum of 5 Brownell Boat Stands on a sailboat. The recommended number of stands is based on the length of the boat. For sailboats with the rigging in, we recommend one extra pair of Brownell Boat Stands. If the boat is heavy in the bow or stern, we recommend using one extra stand for support to ensure the boat cannot pitch forward or backward.

V top stands are available for use at the bow.

RECOMMENDED NUMBER OF STANDS

<30 feet	5 Stands
30-40 feet	7-9 Stands
40-55 feet	9-11 Stands
>55 feet	13 or more stands

PROPER PLACEMENT OF BROWNELL SAILBOAT STANDS

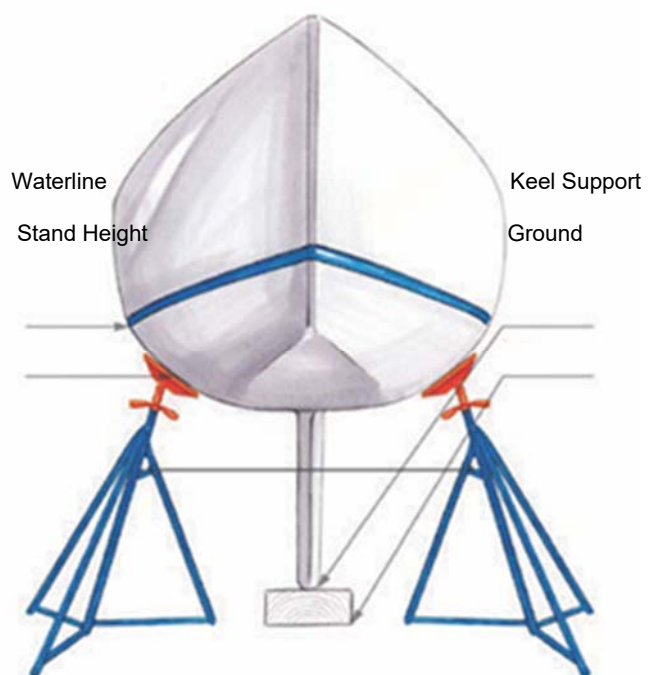


Fig 1

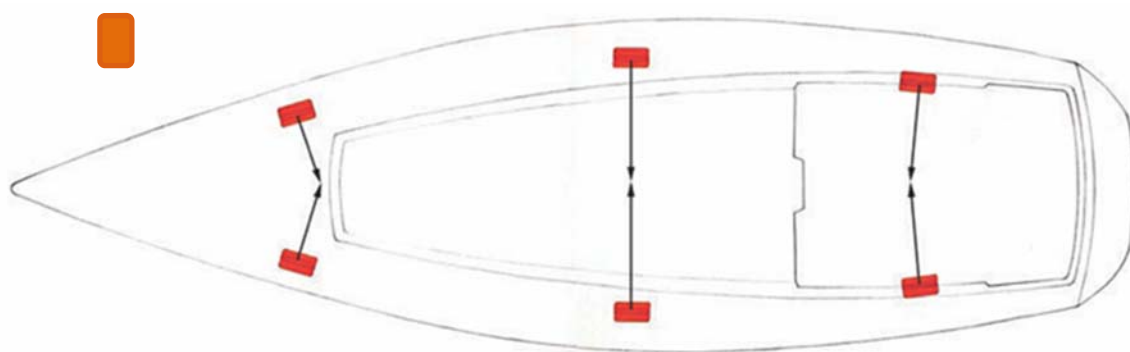
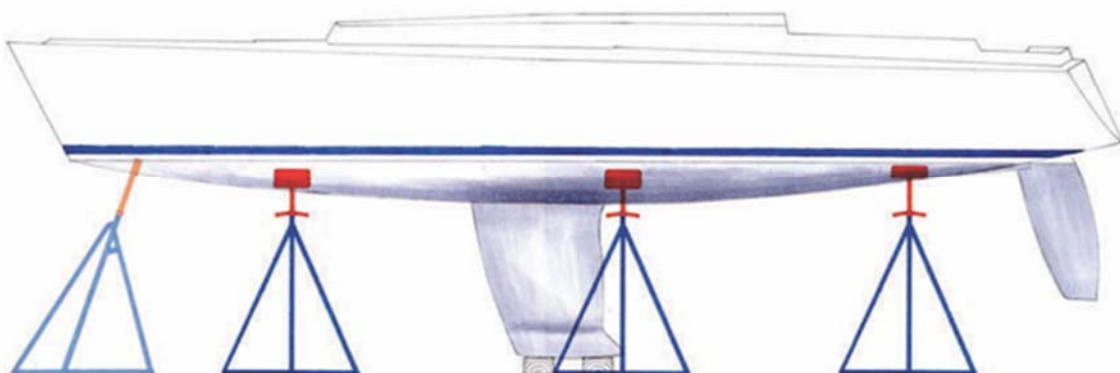


Fig 2

Fig 1 & 2
- We
recommend

using 5 or more Brownell Boat Stands.

- Place the stands an even distance from each other along the boat, but no more than 10 feet apart.
- If the boat has the rigging on, add at least one extra set of Brownell Boat Stands to make sure the boat is safe in heavy winds.
- Use a large size wooden keel support (block) below the front and back of the keel to make sure the base is stable for the boat.
- If the ground is loose where the stands are placed, we recommend using a small piece of $\frac{3}{4}$ " pressure treated plywood below each leg to prevent the leg from sinking down in the ground.
- Turn the stand until it points against the boat's center line (fig. 2).

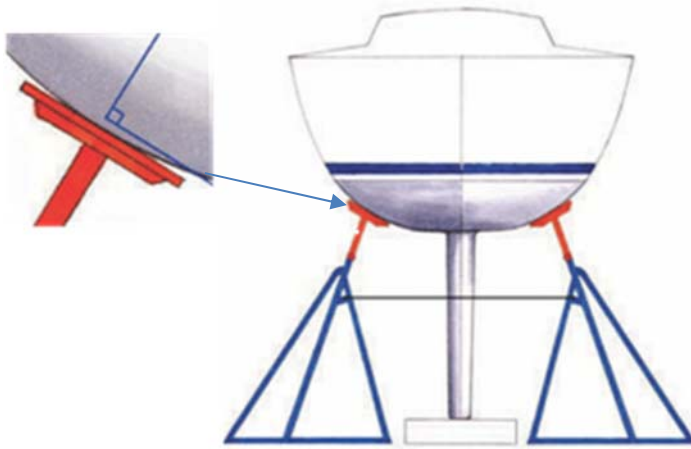


Fig 3

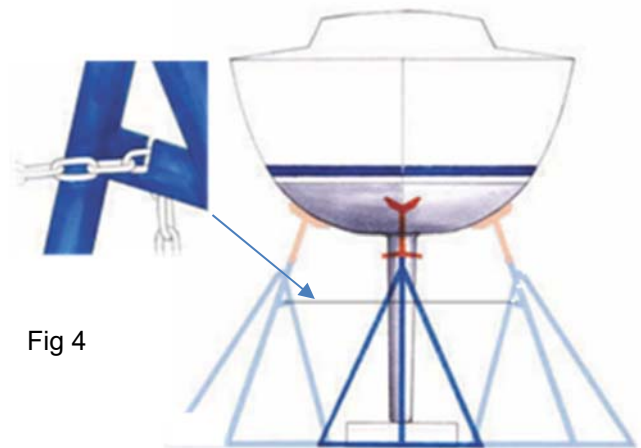


Fig 4

Fig 3 & 4

- Place the Stand with the adjustment screw in straight 90° angle to the hull.
- Put the required security chain in the small groove, and tighten up by gently pulling the stand backwards.
- If one pair of stands are placed facing the keel or if the boat has a longer keel, pull the security chain below the keel and up on the other side.
- For added stability at the bow use a stand with a V-top.

Note! Never tie your cover on the stand since it might pull them away in heavy wind.

STANDS FOR SAILBOATS

LENGTH		DRAFT		STANDS NEEDED		STANDS NEEDED		STANDS NEEDED		STANDS NEEDED		STANDS NEEDED		STANDS NEEDED	
US	METRIC	US	METRIC	TOTAL STANDS NEEDED	STANDS NEEDED	STANDS NEEDED	STANDS NEEDED	STANDS NEEDED	STANDS NEEDED	STANDS NEEDED	STANDS NEEDED	STANDS NEEDED	STANDS NEEDED	STANDS NEEDED	STANDS NEEDED
16' - 30'	4.9m - 9.1m	1' 0" - 2' 5"	0.30m - 0.74m	5	4 - SB4's + 1 - SB4V	4 - SB3's + 1 - SB3V	4 - SB2's + 1 - SB2V	4 - SB1's + 1 - SB1V	4 - SB0's + 1 - SB0V	4 - SB8's + 1 - SB8V	4 - SB9's + 1 - SB9V	4 - SB10.5's + 1 - SB10.5V	4 - SB10.5's + 1 - SB10.5V	4 - SB10.5's + 1 - SB10.5V	4 - SB10.5's + 1 - SB10.5V
31' - 38'	9.2m - 11.6m	2' 6" - 3' 5"	0.76m - 1.04m	7	6 - SB4's + 1 - SB4V	6 - SB3's + 1 - SB3V	6 - SB2's + 1 - SB2V	6 - SB1's + 1 - SB1V	6 - SB0's + 1 - SB0V	6 - SB8's + 1 - SB8V	6 - SB9's + 1 - SB9V	6 - SB10.5's + 1 - SB10.5V	6 - SB10.5's + 1 - SB10.5V	6 - SB10.5's + 1 - SB10.5V	6 - SB10.5's + 1 - SB10.5V
39' - 49'	11.7m - 14.9m	3' 6" - 4' 5"	1.06m - 1.35m	9	8 - SB4's + 1 - SB4V	8 - SB3's + 1 - SB3V	8 - SB2's + 1 - SB2V	8 - SB1's + 1 - SB1V	8 - SB0's + 1 - SB0V	8 - SB8's + 1 - SB8V	8 - SB9's + 1 - SB9V	8 - SB10.5's + 1 - SB10.5V	8 - SB10.5's + 1 - SB10.5V	8 - SB10.5's + 1 - SB10.5V	8 - SB10.5's + 1 - SB10.5V
50' - 55'	15m - 16.8m	4' 6" - 5' 9"	1.37m - 1.75m	11	10 - SB4's + 1 - SB4V	10 - SB3's + 1 - SB3V	10 - SB2's + 1 - SB2V	10 - SB1's + 1 - SB1V	10 - SB0's + 1 - SB0V	10 - SB8's + 1 - SB8V	10 - SB9's + 1 - SB9V	10 - SB10.5's + 1 - SB10.5V	10 - SB10.5's + 1 - SB10.5V	10 - SB10.5's + 1 - SB10.5V	10 - SB10.5's + 1 - SB10.5V
56' - 65'	17m - 19.8m	5' 10" - 7' 0"	1.77m - 2.14m	13	12 - SB4's + 1 - SB4V	12 - SB3's + 1 - SB3V	12 - SB2's + 1 - SB2V	12 - SB1's + 1 - SB1V	12 - SB0's + 1 - SB0V	12 - SB8's + 1 - SB8V	12 - SB9's + 1 - SB9V	12 - SB10.5's + 1 - SB10.5V	12 - SB10.5's + 1 - SB10.5V	12 - SB10.5's + 1 - SB10.5V	12 - SB10.5's + 1 - SB10.5V
66' - 75'	20m - 22.9m	7' 1" - 8' 5"	2.16m - 2.57m	15	14 - SB4's + 1 - SB4V	14 - SB3's + 1 - SB3V	14 - SB2's + 1 - SB2V	14 - SB1's + 1 - SB1V	14 - SB0's + 1 - SB0V	14 - SB8's + 1 - SB8V	14 - SB9's + 1 - SB9V	14 - SB10.5's + 1 - SB10.5V	14 - SB10.5's + 1 - SB10.5V	14 - SB10.5's + 1 - SB10.5V	14 - SB10.5's + 1 - SB10.5V

Stands are calculated using 16" of Brownell blocking or keel stands



**THESE GUIDELINES COVER
THE MAJORITY OF BOATS**

Tel: +1.508.758.3671
 Fax: +1.508.758.3574
 1.800.533.8433 USA and CAN
 EMAIL: INFO@BOATSTANDS.COM
 WWW.BOATSTANDS.COM

MOTORBOATS

Always use a minimum of 4 boat stands on a motorboat. The recommended number of stands is based on the length of the boat. Generally, for V-hulled motor

RECOMMENDATION

<30 feet	4-6 Stands
30-45 feet	6-8 Stands
45-60 feet	8-12 Stands
>60 feet	12 or more stands

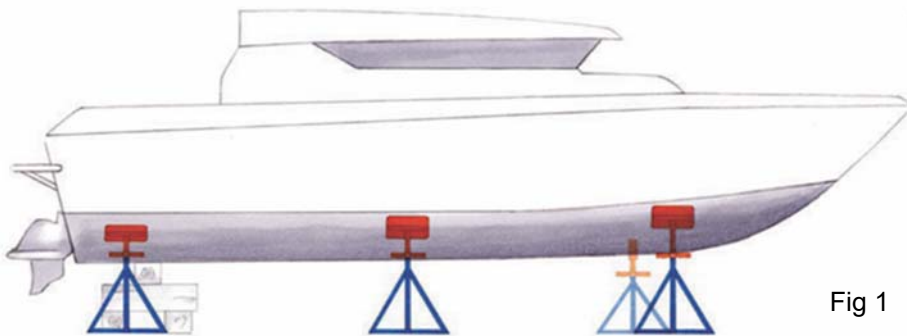
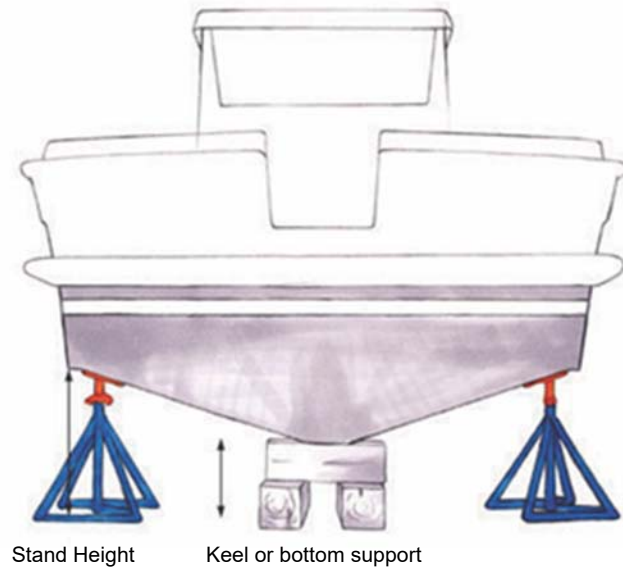


Fig 1

Fig 1 & 2

- We recommend using one set of stands every 8 to 10 feet.
- Always use 2 or more sets wooden blocks or keel stands for support below the boat's center-line.
- Place the stern wooden block or keel stand below where the engine is to make sure it has good support and to avoid pressure on the hull.
- If the ground is loose where the stands are placed, we recommend using a small piece of $\frac{3}{4}$ " pressure treated plywood below each leg to prevent the leg from sinking down in the ground.

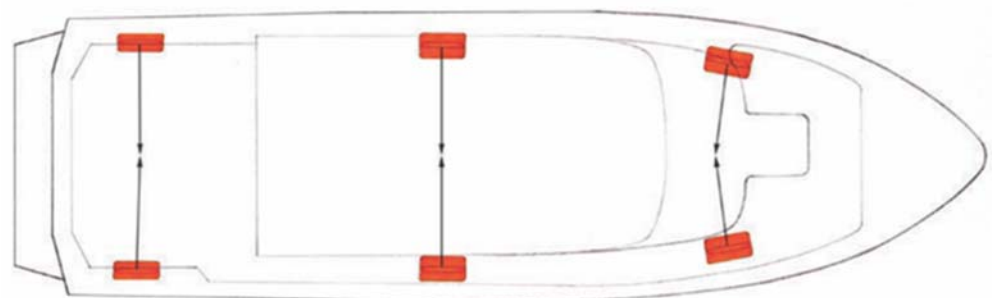


Fig 2

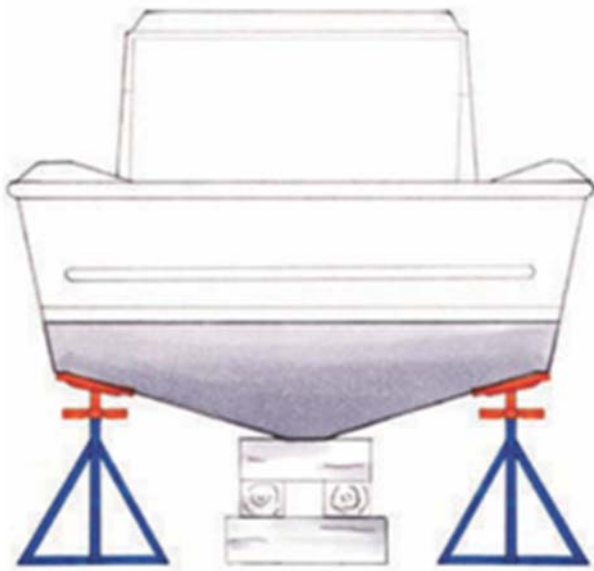


Fig 3

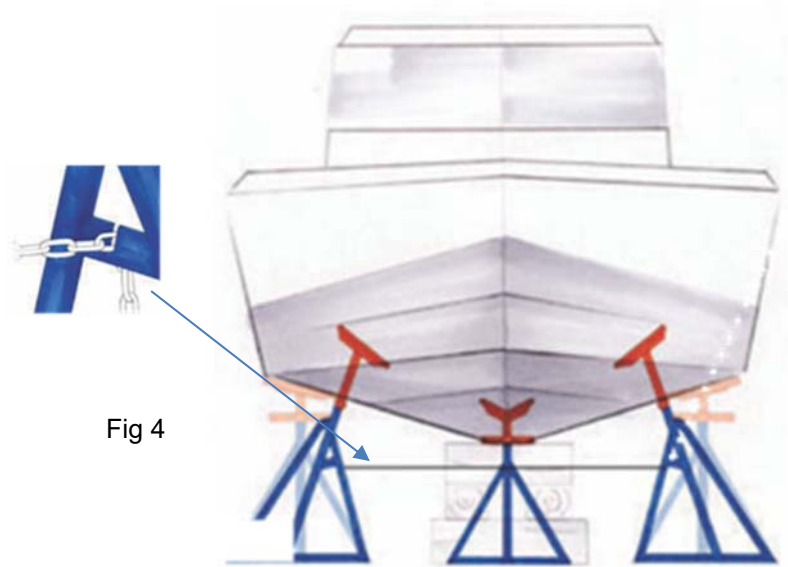


Fig 4

Fig 3 & 4

- Place the stands as wide as possible for best stability
- For power boats with a deep V bow construction, it is recommended to use sail boat stands (SB) at the bow. Chain must be used.
- Put the security chain in the small groove, and tighten up by gently pulling the stand backwards.

Note! Do not tie your cover on the stand since it might pull them away in heavy wind, tie the cover independent.

STANDS FOR MOTORBOATS

LENGTH		DRAFT	US METRIC	STANDS NEEDED										STANDS NEEDED			
US	METRIC			1' 0" - 1' 6"	1' 7" - 2' 0"	2' 1" - 3' 0"	3' 1" - 3' 6"	3' 7" - 4' 0"	4' 1" - 5' 0"	5' 1" - 6' 0"							
16' - 30'	4.9m - 9.1m	4	0.30m - 0.46m	0.48m - 0.61m	0.63m - 0.91m	0.93m - 1.07m	1.09m - 1.22m	1.24m - 1.52m	1.54m - 1.83m	2 - MB4's + 2 - SB4's	2 - MB3's + 2 - SB4's	2 - MB2's + 2 - SB3's	2 - MB1's + 2 - SB3's	2 - MB0's + 2 - SB2's	2 - MBOX's + 2 - SB2's	2 - MBOX's + 2 - SB1's	2 - MBOX's + 2 - SB1's
31' - 38'	9.2m - 11.6m	6								4 - MB4's + 2 - SB4's	4 - MB3's + 2 - SB4's	4 - MB2's + 2 - SB3's	4 - MB1's + 2 - SB3's	4 - MB0's + 2 - SB2's	4 - MBOX's + 2 - SB2's	4 - MBOX's + 2 - SB1's	4 - MBOX's + 2 - SB1's
39' - 49'	11.7m - 14.9m	8								6 - MB4's + 2 - SB4's	6 - MB3's + 2 - SB4's	6 - MB2's + 2 - SB3's	6 - MB1's + 2 - SB3's	6 - MB0's + 2 - SB2's	6 - MBOX's + 2 - SB2's	6 - MBOX's + 2 - SB1's	6 - MBOX's + 2 - SB1's
50' - 55'	15m - 16.8m	10								8 - MB4's + 2 - SB4's	8 - MB3's + 2 - SB4's	8 - MB2's + 2 - SB3's	8 - MB1's + 2 - SB3's	8 - MB0's + 2 - SB2's	8 - MBOX's + 2 - SB2's	8 - MBOX's + 2 - SB1's	8 - MBOX's + 2 - SB1's
56' - 65'	17m - 19.8m	12								10 - MB4's + 2 - SB4's	10 - MB3's + 2 - SB4's	10 - MB2's + 2 - SB3's	10 - MB1's + 2 - SB3's	10 - MB0's + 2 - SB2's	10 - MBOX's + 2 - SB2's	10 - MBOX's + 2 - SB1's	10 - MBOX's + 2 - SB1's
66' - 75'	20m - 22.9m	14								12 - MB4's + 2 - SB4's	12 - MB3's + 2 - SB4's	12 - MB2's + 2 - SB3's	12 - MB1's + 2 - SB3's	12 - MB0's + 2 - SB2's	12 - MBOX's + 2 - SB2's	12 - MBOX's + 2 - SB1's	12 - MBOX's + 2 - SB1's

Stands are calculated using 16" of Brownell blocking or keel stands

Sailboat stands (SB) are used at the bow where the angle of the hull is steep



Tel: +1.508.758.3671
 Fax: +1.508.758.3574
 1.800.533.8433 USA and CAN
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Blocking & Storage Quiz

1. How many boat stands are recommended for a 35' sailboat?
 - a. 4 – 6
 - b. 5 – 7
 - c. 7 – 9
 - d. 13 or more

2. What should you check before using a boat stand?
 - a. All moving parts are lubricated
 - b. Stand is not structurally damaged
 - c. Plywood is in good condition
 - d. All of the above

3. All sailboat stands should be held together side to side with:
 - a. Rope
 - b. Chain
 - c. Ratchet straps
 - d. None of the above

4. What is the minimum recommended block width for a boat over 41'?
 - a. 12 inches
 - b. 4 inches
 - c. 8 inches
 - d. 6 inches

5. Where should a stand with a V top be used?
 - a. Under the bow of a sailboat
 - b. Under the bow of a powerboat
 - c. Under the bow and stern of a heavy sailboat
 - d. None of the above
 - e. All of the above

6. The minimum number of stands recommended for a 28' powerboat would be:
 - a. 6
 - b. 10
 - c. 4
 - d. 8

7. What is the maximum distance recommended between stands on either side of the boat?
 - a. 8 – 10 feet
 - b. 4 – 8 feet
 - c. 10 – 20 feet
 - d. As far apart as you feel necessary

8. A canvas top can be tied down to the boat stands.
 - a. True
 - b. False

9. If a sailboat has to be stored with the mast up you should do the following:
 - a. Use motorboat stands
 - b. Use at least one extra set of stands
 - c. Use the normal amount of stands
 - d. Use less stands

10. If the keel is blocking the chain from going across to the other side to chain the sailboat stands together; you should:
 - a. Run the chain under the keel
 - b. Not chain the stands together
 - c. Run the chain in front of the keel
 - d. Run the chain aft of the keel