



## Superior Hook Design

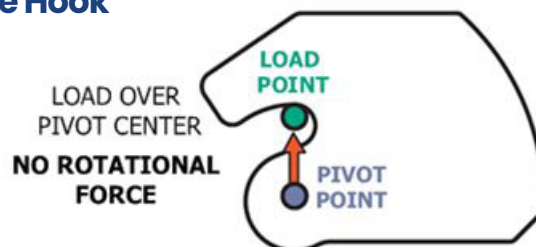
Survival Systems International's hook design has two key advantages over all twin-fall lifeboat hook systems.



### Stable Hook with a Lift Over Center Design

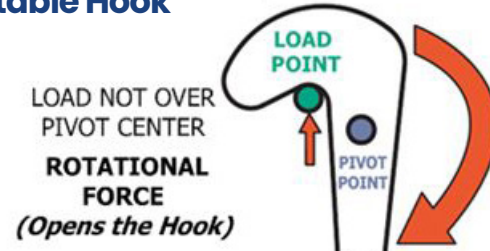
The design of SSI's Capsule hook is conceptually different from other lifeboat hooks. SSI's hook is a stable design where the weight of the boat holds the hook closed when under load. Other lifeboat hooks are an unstable design where the weight of the boat opens the hook, when under load.

#### Stable Hook



The hook on the left above is SSI's stable hook design. It can be seen that the lift point of the hook (represented by the green dot) is directly above the pivot point of the hook (represented by the blue dot) this creates No Rotational Force on the hook when the hook is under load.

#### Unstable Hook

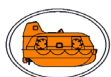


The hook on the right above represents a standard twin-fall lifeboat hook.

It can be seen that the lift point of the hook is not directly above the pivot point of the hook but is offset, this creates Rotational Force on the hook when the hook is under load.

**What does this mean?** When the lifeboat is under load (in the air) the SSI hook inherently wants to stay closed however other hooks inherently want to open under the load of the lifeboat. The SSI hook is a safer solution.

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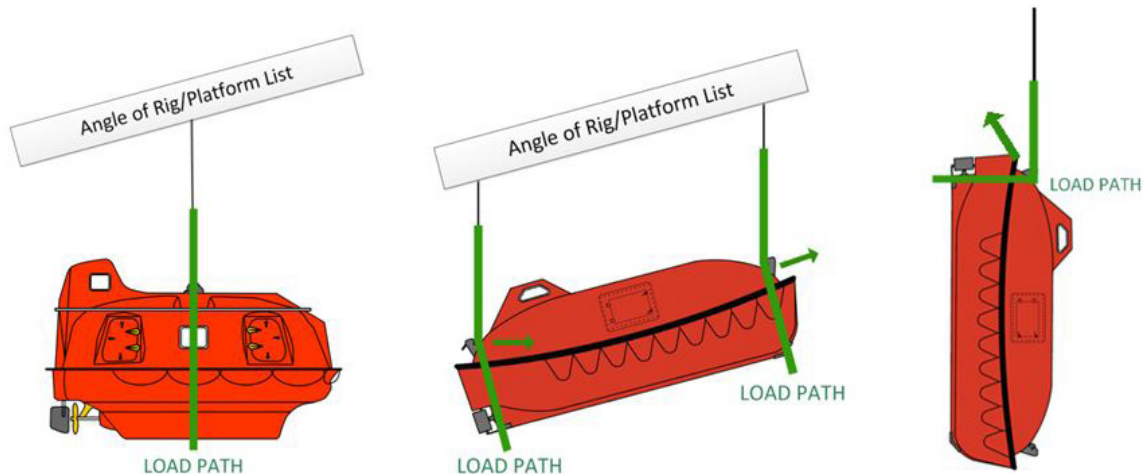
## A True 6:1 Safety Factor

Regulations require that lifeboat hooks have a 6:1 safety factor. Using a single cable lift with a single hook requires the singly hook to have a full 6:1 safety factor.

Twin-fall lifeboats achieve the 6:1 safety factor by each hook having a 3:1 safety factor

- ✓ Twin-Fall: Total Lifeboat Weight x  $\frac{1}{2}$  x 6 Each Hook 3:1
- ✓ Single Cable: Total Lifeboat Weight x 6 Each Hook 6:1

In addition to the above the drawings below show how a single cable systems maintains the 6:1 safety factor with a listing rig or platform. As can be seen on the drawing on the left, when a single cable capsule is launched from a listing rig the load path running through the hook is maintained and so the 6:1 safety factor is maintained. The second drawing shows a twin-fall lifeboat launched in a similar situation. As can be seen the load paths through each hook are not maintained, and as such the 3:1 safety factor for each hook is compromised. The drawing on the right shows how the hook is even further compromised if one hook releases.



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