

There are no arbitrary **vessel size or weight limits for the MoorControl system** or associated lines. The manufacturer rated breaking load for the lightest of the lines (the white moving line) is 2200kg, reduced 10% for splice and eye it remains at 2000kg. These values are approximately the same as 18mm Polyethylene 'silver' rope. Theoretically, to break this with a steady pull would require a 200 shaft horsepower engine at maximum power, but a dynamic or moving force hitting with a shock on the line would require considerably less power, this is why safe working load ratings are much lower about 1/6<sup>th</sup>. So in the case of this line around 330 kg could be 'safely' lifted using this line, and would allow for the shock loads involved with the lifted weight 'bouncing' etc. So if you think that 16 x 20kg bags of cement would hold your boat alongside your berth if suspended over a pulley, then you are working within the 'safe working load' of the lines. Could you imagine your boat lifting 16 bags of cement over a pulley to drift away from the berth?

The primary purpose of the MoorControl System is to provide a rope "rail" to guide your boat into and out of your berth, and while doing this the force required (even for a very large boat) would probably be achieved by one 20kg bag of cement suspended over a pulley.

In fact we know of one vessel of around 50' and 20+ tonnes which was easily held suspended away from a wharf by less than that weight running over a pulley. So used for our purpose our lines possibly have a safety factor of up to 200.

Throughout these instructions you will see references to vessels up to or > 40' / 12 tonnes. This is by no means a maximum size / weight of vessel for the system. However, in addition to the primary use as a 'guide rail' the MoorControl system and lines can (as a convenience), be set up to act as a forward 'spring' either stopping at a berth cleat, or using one of our 'stopper buckles', and depending on boat cleat spacing relative to boat shape, the boat can 'hang' pulling against the MoorControl lines while pivoting on a fender, while other lines are put on or let go, such as would be the case for someone operating single handed. When used single handed there will be times when there is no one at the helm to control the boat and prevent increased stresses on the lines. The size of 40' / 12 tonnes has been chosen as it equates to the limit of 12 metres for which, under the National Standards for Commercial Vessels (NSCV), the minimum crewing requirement is 1 person. Under these standards this person is required to hold a minimum of a Coxswain Certificate of Competency, and therefore it is inferred, and MoorControl Pty Ltd assumes, that any person operating a vessel single handed would at least be competent to do so.

**Therefore:**

**Use Care < (40' / 12 tonnes) < Use Greater Care**

As is the case with fenders, the MoorControl is designed made and intended to be used in conjunction with vessel control from the helm and will control drift, and although made from high strength to diameter Polyester rope just as a fender can be burst by a hard impact, sudden heavy strains could overstress the lines particularly if the boat places leverage on one single line. Control of the motion of the boat from the helm will prevent this