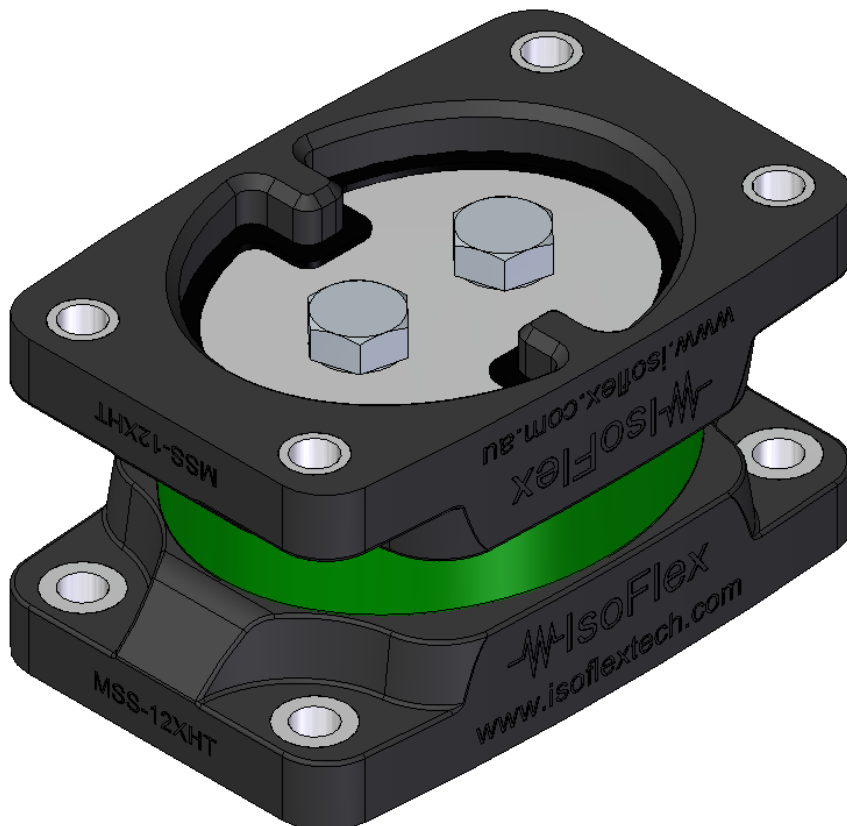




MSS-12XHT SUPERSTRUCTURE MOUNT

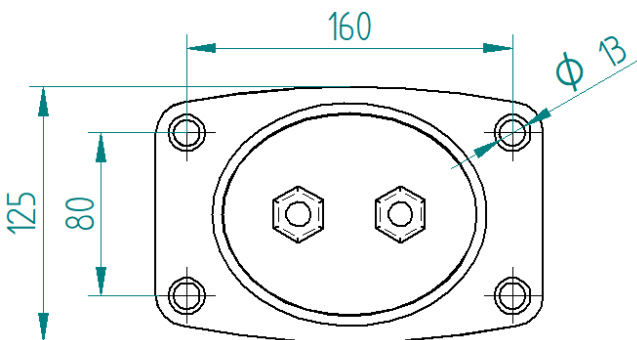
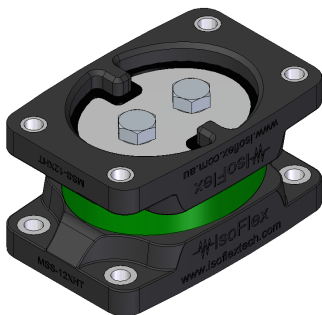
INSTALLATION INSTRUCTIONS



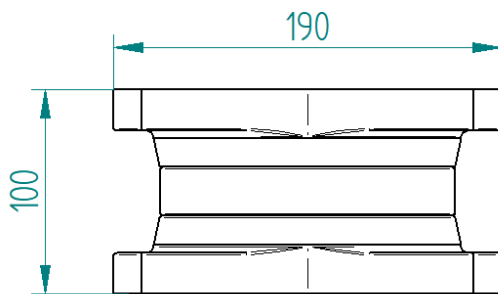
Superstructure Mount Installation Instructions

MSS-12XHT Superstructure Mount

Isoflex superstructure mounts have been designed for the isolation of wheel-house and crew cabins to increase crew comfort



	Metric (mm)	Imperial (in)
Overall height	100	3.94
Overall length	190	7.48
Overall width	125	4.92
Mount spacing length	160	6.30
Mount spacing width	80	3.15



	Metric	Imperial
Base bolt size	M12	1/2"
Specified torque	30 N-m	22 ft-lb

MSS-12XHT Core Configurations



Core Configurations:

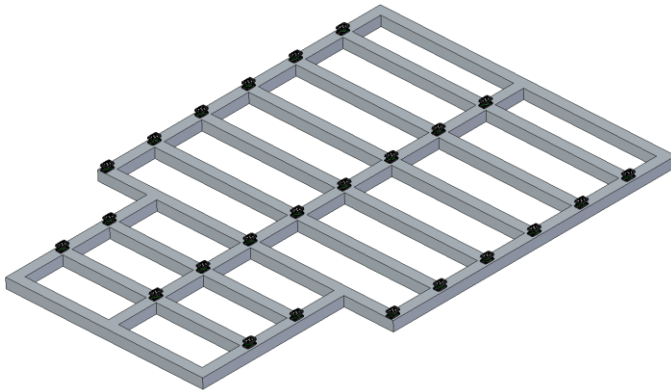
The MSS-12XHT currently comes in 3 configurations, Dark Blue (DBL), Green (GRN) and Grey (GRY). Each colour represents a different durometer internal core which controls the stiffness of the mount.

If more than one mount configuration has been specified for a build it is vital that the correct mounts are used in each location as this will affect the load distribution of the superstructure and isolation performance

Configuration	Axial Spring Rate	
	Metric (kg/mm)	Imperial (lb/in)
Dark Blue	320	1792
Green	420	2352
Grey	720	4032

Superstructure Mount Installation Instructions

Load Distribution and Mount Location



Load Distribution:

Isoflex recommends that all superstructure load distributions be calculated by a qualified marine architect.

Isoflex is not responsible for load distribution calculations.

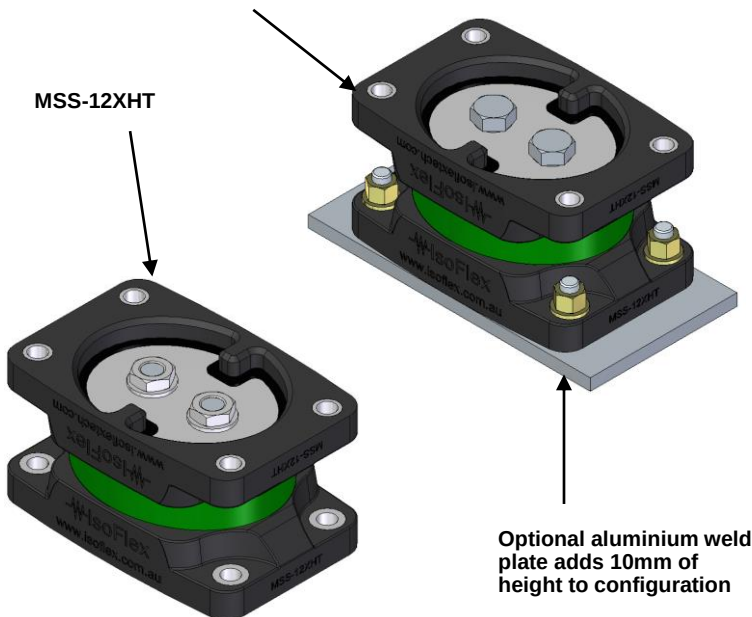
Mount Locations:

Once load distribution calculations have been completed Isoflex can help select the appropriate mount configuration, quantity and locations.

Superstructure mounts are normally located on the frame vertices. In some cases, if the loading at the vertices is large, two mounts or a double mount configuration may be required.

Installation Configurations

MSS-12XHT with optional weld plate



Installation Configurations:

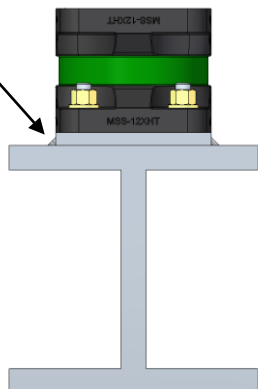
The MSS-12XHT mount can be supplied as standard or with an optional 10mm thick aluminium 5083 weld plate secured to the mount. This allows the mount to be welded directly onto the main deck frame

The standard configuration mount must be secured to the main deck frame with either M12 or 1/2" hardware.

Superstructure Mount Installation Instructions

Installation: Main Deck Frame

Mount with weld plate welded to main deck frame



Main Deck Frame Installation:

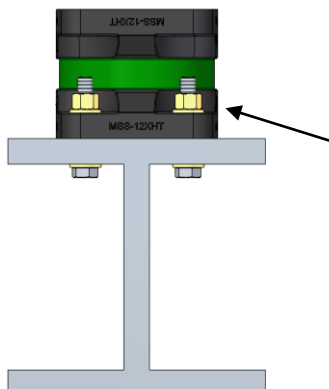
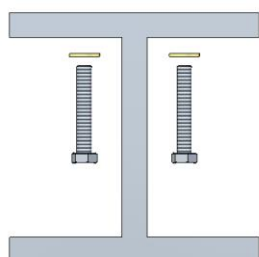
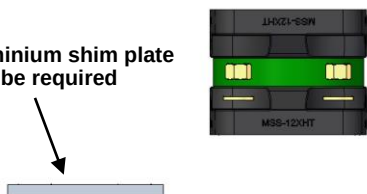
The optional weld plate configuration mount should be welded directly to the main deck frame in the specified locations.

For the standard mount, the marine architect may have specified for an aluminium shim to be placed under the mount. The shim may be painted to prevent corrosion.

Install the mount with or without a shim using appropriate M12 (class 8.8 or above or if using Stainless Steel Class A2-70 - 304 and above) or 1/2" (grade 5 or above) hardware secured to a minimum 30 N-m [22 ft-lb] torque. Use the marine architect's specified torque if applicable as this will be specified for the selected hardware. An insulating compound is recommended to be used to isolate the hardware from the mount aluminium base inserts and main deck frame to prevent corrosion.

Once the mounts are installed onto the main deck frame, they may be spray coated to prevent water engrossment and corrosion. Isoflex mounts are chemically resistant to most oils, fuels and solvents. If there are any concerns about compatibility with spray coatings, please contact Isoflex.

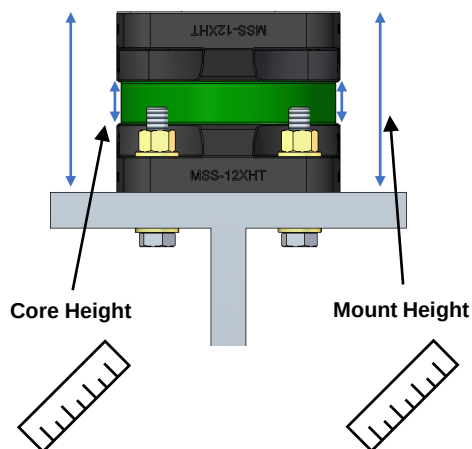
Aluminium shim plate may be required



Standard mount secured with hardware

Installation: Deflection Measurement

Measure mount height on both sides



Deflection Measurement:

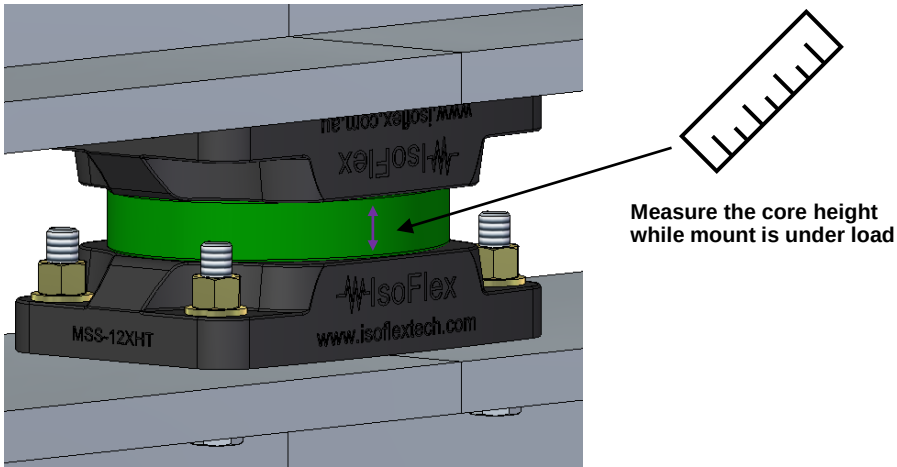
Once all the specified mounts have been secured to the main deck frame in the correct locations, the free height of each mount must be measured to account for manufacturing tolerances when calculating deflection. Measure both sides of the mount and record an average of the two measurements.

The easiest place to measure the deflection is the core height. Measure the distance between the top and bottom base of the mount next to the core.

Alternatively, the entire mount height can be used. Measure from the top of the mount to the main deck frame.

Superstructure Mount Installation Instructions

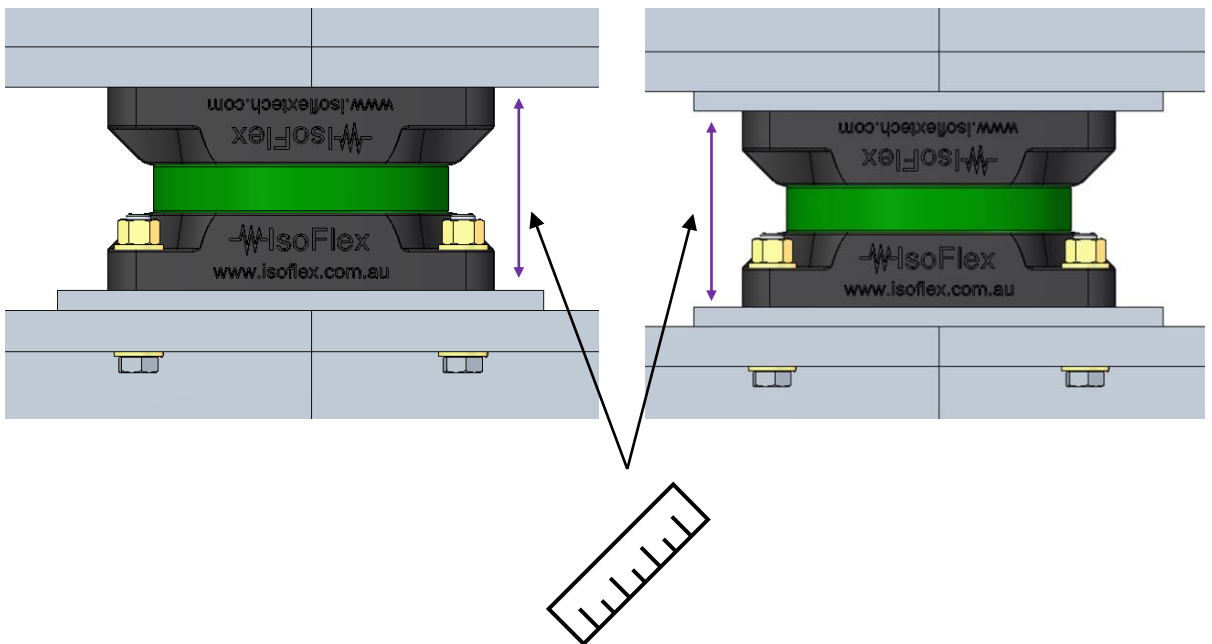
Installation: Deflection Measurement



Deflection Measurement:

Lower the superstructure onto the mounts so that the entire weight is on the mounts and repeat the measurements of mount core height on both sides. Calculate the mount deflection by subtracting the loaded height of the mounts from the unloaded height.

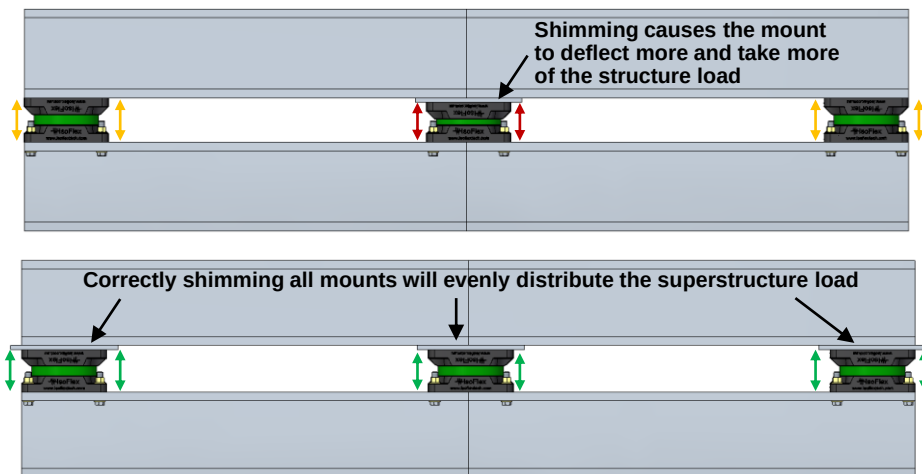
If measuring the mount height and the mount is shimmed, measure from the shimmed surface not the main deck frame or superstructure frame.



If shims are used measure from the shim surface not the main deck frame or superstructure frame

Superstructure Mount Installation Instructions

Installation: Shimming to Distribute Load



Shimming to distribute Load:

Once the deflection without shims has been measured you can tell which mounts are taking the most load of the superstructure because they have deflected the most. If you shim the mounts which had deflected the most more than the other mounts, you will increase the load on that mount, and it will deflect more.

To evenly distribute the load, add thicker shims to the mounts which are not deflecting enough or reduce the thickness of the shims on the mounts that are deflecting too much. Once mounts have been shimmed re check the deflection.

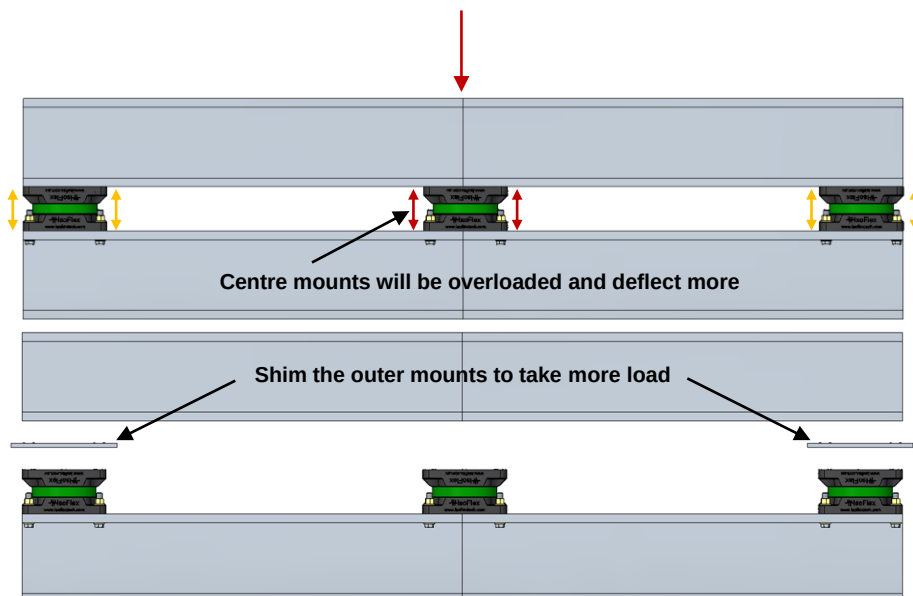
The shims may be painted to prevent corrosion.

No mount should have a deflection of more than 4mm. If a mount is deflecting more than 4mm it is overloaded and may result in early failure of the mount.

For the best performance, all mounts should have less than $\pm 1\text{mm}$ variation in deflection.

Installation: Shimming Example 1

LARGE LOAD ON CENTRE

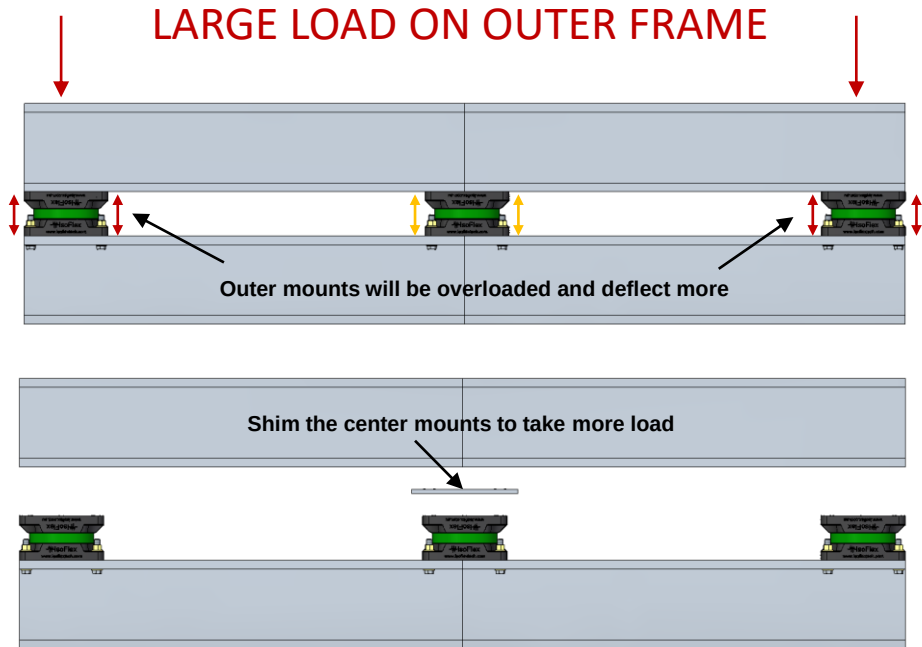


Shimming to distribute Load:

If most of the load is located on the center mounts, they will deflect more than the outer mounts. The outer mounts must be shimmed to take more load.

Superstructure Mount Installation Instructions

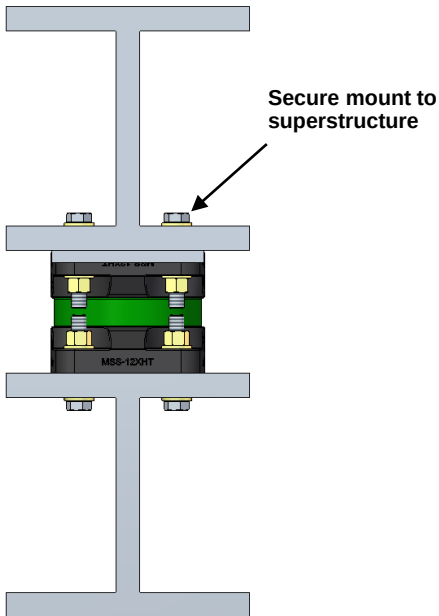
Installation: Shimming Example 2



Shimming to distribute Load:

If most of the load is located on the outer mounts, they will deflect more than the center mounts. The center mounts must be shimmed to take more load.

Installation: Superstructure Frame



Main Deck Frame Installation:

Install the mount with or without a shim using appropriate M12 (class 8.8 or above or if using Stainless Steel Class A2-70 - 304 and above) or 1/2" (grade 5 or above) hardware secured to a minimum 30 N-m [22 ft-lb] torque.

Use the marine architect's specified torque if applicable as this will be specified for the selected hardware. An insulating compound is recommended to be used to isolate the hardware from the mount aluminium base inserts, shims and main deck frame to prevent corrosion.

Superstructure Mount Installation Instructions

Inspection and Maintenance

All mount assemblies should be regularly inspected annually (or after a significant incident such as collision).

Visually inspect for any sign of damage, deterioration, corrosion or degradation.

Check the deflections of all mounts.

Check the condition of all fastening hardware and that it is still secure.

The mount should be replaced if there is any doubt in the integrity of the mount.

Installation Notes

DO NOT attempt to modify the assembled mount in any way. The warranty is deemed null and void if the mount or any component is tampered with in any way.

The supported structure should be aligned parallel to the supporting structure in the for, aft and lateral directions.

Isoflex mounts electrically isolate the supported structure from the supporting structure.