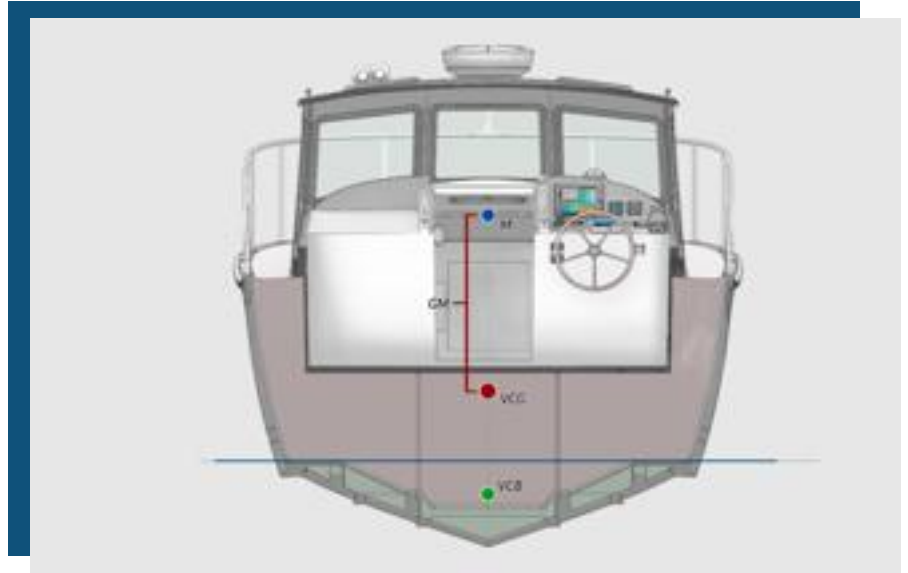


MJM Yachts Stability

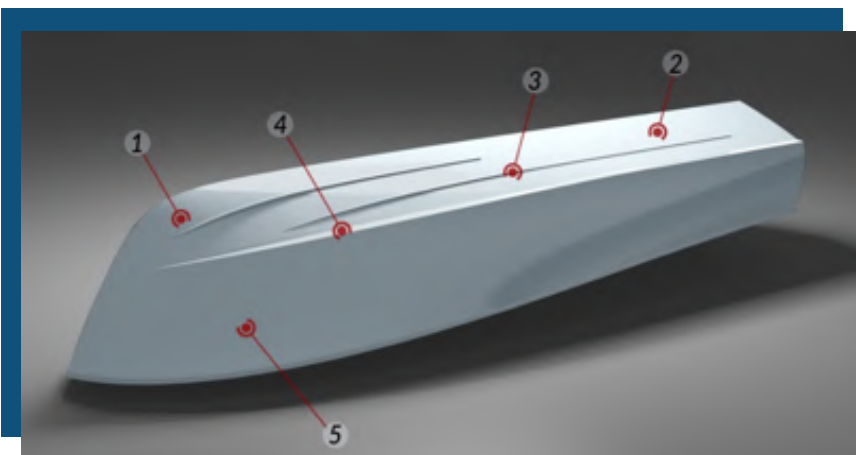
It's All About Design

MJM Yachts have gained a reputation for their exceptional stability, driveability, and sea handling. These qualities result, not by chance, but by design and advanced engineering to become part of the MJM DNA. All MJMs are built to scantlings of the International Marine Certification Institute (IMCI) so as to be certified at the highest possible rating for safety and seaworthiness. The 53z, 50z and 40z are CE Mark Certified Category "A" Ocean. Our other models are certified Category "B" Offshore, the highest possible for a vessel under 40 feet. Let's explore how this level of stability and driving control is achieved.



The most influential factor in a vessel's initial (static) stability is Metacentric Height (GM). This is the distance between Metacenter (M), the location of which is fixed by a vessel's form stability and Vertical Center of Gravity (VCG). VCG is determined by the vessel's shape and quality of construction. The lower the VCG, the more stable the vessel. That's the key to MJMs. By using stronger, lighter epoxy composite laminates, and

narrower waterline beams, VCG is lowered, making the GM greater than is possible on other conventional polyester- and vinylester-built powerboats. MJMs have exceptional at-rest and sea keeping stability characteristics.



Dynamic stability also sets MJMs apart. This comes into play when a boat is at planing speed. MJM hulls are designed to be balanced and easily driven with predictable response to your touch at the wheel, regardless of sea state or wave angle. Here, Longitudinal Center of Gravity (LCG) is important. That's the balance point around which the inertia of the hull in motion pivots, either up and down over waves or when steering from side to side.

The forefoot (see 1 above) of MJMs incorporates rocker into its profile. This is where the keel on centerline curves upward before making its sharp ascent up to the stem. This prevents "bow steer" when driving down into the back of waves. Deadrise angles are approximately 45 degrees in this area of the hull, with sharp entry angles of 50-55 degrees. The combination of these two design elements ensure a very soft ride.



The bottom then transitions smoothly going aft to a moderate 18.5 degree deadrise (location 2 above), then holds constant in the last third of the length to the transom. This aft section of the bottom is the primary running surface and, like training wheels on a bicycle, provides stability and a pivot point for responsive turning at speed.

The combination of bottom design and Longitudinal Center of Gravity (LCG) determine a vessel's dynamic stability. Hard Chines (3) and Lifting Strakes (4) not only aid in this endeavor, but help deflect water away from the forward end of the vessel, along with the Carolina Bow Flair (5) that provides reserve buoyancy up high in the bow to prevent submarining in steep following seas.