Holding Power, Friction, User-friendliness

Ratchet blocks need to have several sterling attributes: good holding power to take the strain off your hand and arm; low friction so that energy isn't wasted and lines run out freely and quickly when released; easy operation; and quality materials and workmanship. We examined each block according to these criteria; the results of our holding power and friction tests are listed in the table on page 14.

To test holding power, we suspended each block from a strong point overhead in our shop and then reeved a length of New England Ropes Sta-Set of the specified diameter through the sheave. To one end, a 5- or 10-pound weight was attached (for 3/8-inch and 1/2-inch line, respectively). These weights represented the pull on the line, enough so that the line seated well into the sheave. To the other end of the line, we tied a large bucket that we could fill with weights until the line slipped in the sheave. The results appear in the table. Two of the blocks—the Wichard and Holt Allen—state that maximum line size is 12 millimeters (15/32 inches), so we tested them with both the 3/8- and 1/2-inch line. The numbers for the 3/8-inch line were better and comparable to the others in the test, so we used those.

Each block was tested twice, and numbers did not vary by more than a couple of pounds, giving us confidence in the results.

Friction was tested in a head-to-head competition in which two blocks of the same brand and model were shackled to articulating metal plates, one at each end of the table. Next to them were shackled blocks of another brand. One metal plate was anchored to the bench; the opposing plate was attached to a turnbuckle that in turn was anchored. Endless line was reeved through each set of blocks and made tight. Then the turnbuckle was tightened until one set of blocks would no longer turn. The winner was then paired with another set, until, by process of elimination, we were able to rank the five brands.

We're not certain that minor differences in friction are all that critical to on-the-water performance, but it is measurable and therefore, useful to report.

Note that only the blocks with an on/off switch were tested for friction. The reason: autoratchets cannot be prevented from engaging under load, thereby causing the sheave to stop turning and preventing an evaluation of its ability to freely turn under load.

The holding power test (right) was repeated twice for each block.