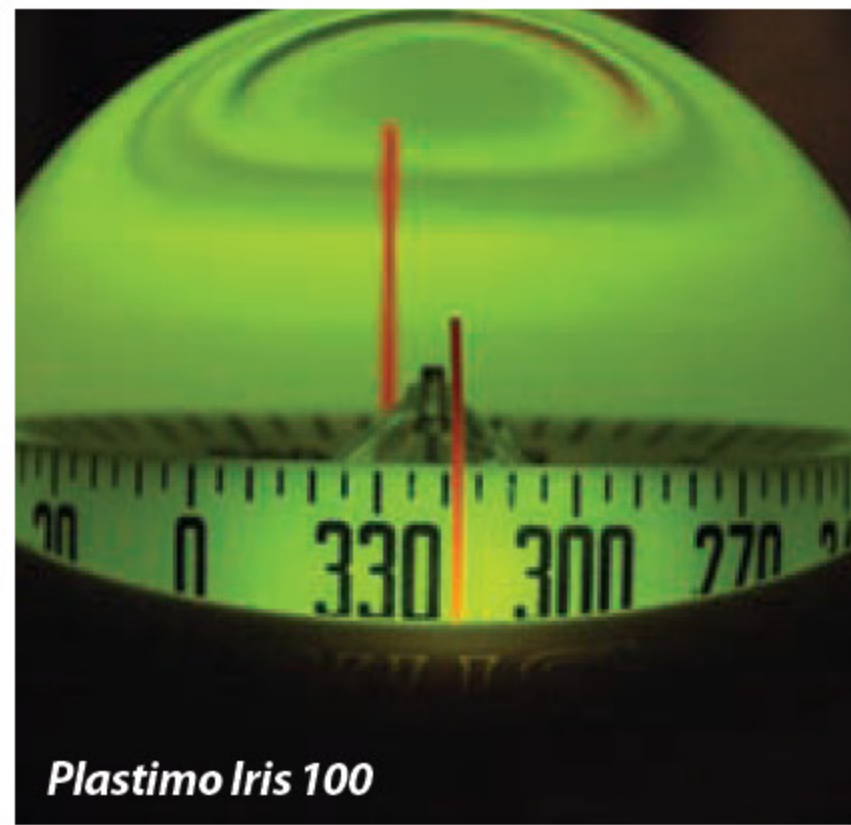
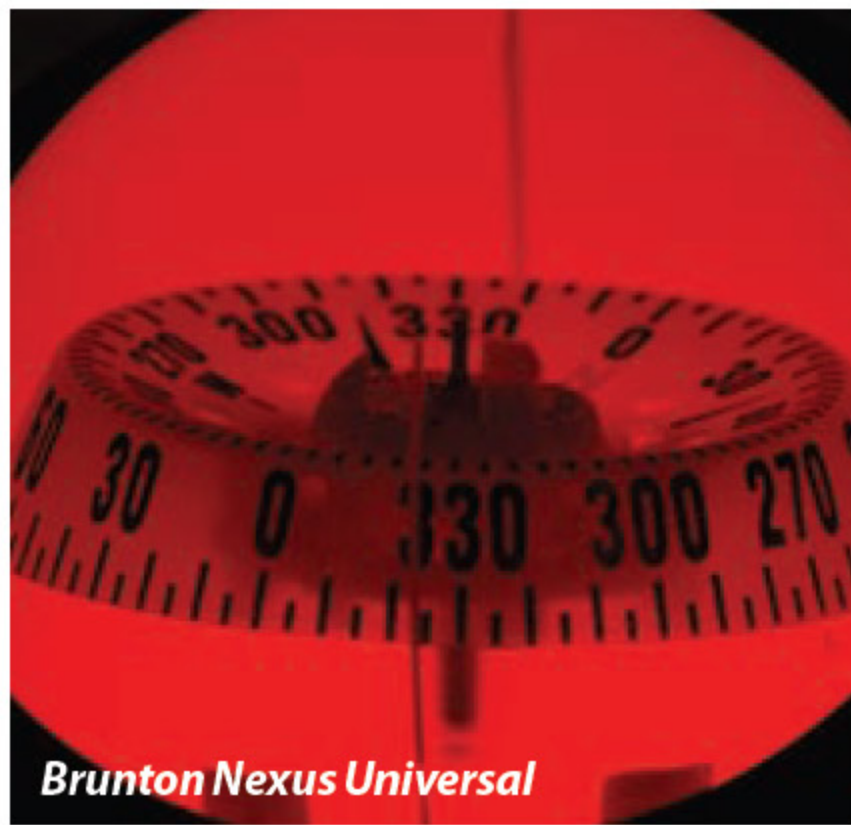


BUYERS' CHECKLIST



Is a lubber line helpful or hindering? That's largely a matter of taste. Our testers had difficulty lining up sighted objects using the Brunton Nexus and the Plastimo 100's lubber lines, but testers found the Ritchie SportAbout, which does not have a lubber line, to be equally difficult as it doesn't have an optical card reader.

Sights Set on a New Compass? Be Sure to Try Before You Buy.

To choose a hand-bearing compass that is right for you, it's best to know what style you prefer—hockey puck, vertical grip, etc.—and how you like to use it—hand to cheek or extended arm. So if you're in the market, be sure to give the compass candidates a whirl before you take one home. Here are some key points to consider when you're selecting a hand-bearing compass.

Accuracy: Obviously, accuracy is the most essential characteristic in a magnetic compass. Away from the effects of ferrous metals and electrical windings, these little devices should yield a reading within a

degree or two of the actual magnetic course on all points of sail. It's easy to check accuracy: Simply line up ranges on a chart and align them in the viewfinder of the hand-bearing compass. With parallel rules or a chart roller plotter, check the bearing on the chart with the magnetic compass rose, and compare it with the hand-bearing compass reading. A deviation card can be constructed, but in most cases, one- or two-degrees of error can be considered within the range of tolerance for accurate bearing taking aboard small craft.

Viewability. This refers to how easily an object can be aligned with the mark-

ings on the hand-bearing compass card and how easily the scale can be read. An important factor in this process is the human eye's ability to focus on one object close at hand and another some distance away. Few people can do both simultaneously. The optical magnifier on most of the hockey-puck compasses is a means of outwitting the human eye's single-focal point behavior. An alternate, more primitive method is to extend one's arm full length and put the numerals of a compass dial in line with a distant object and attempt to align both at the same time. Traditional vertical-grip hand-bear-

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ing compasses use this latter approach, and their compass dials must be marked with a clear and readable scale.

The optical magnifier method places the card scale just beneath the sightline when viewing a distant target. Most hockey-puck style compasses use this approach—all of those we tested had a card reader, except the Ritchie Sport-About—but some are meant to be held closer to the eye than others. This is why it's important to know whether you prefer the cheek touching or extended-arm method.

We found that the Vion Mini-Morin 2000 and Plastimo Iris 50 work best when held close to the eye, and contrary to the user manual, we found that the Weems & Plath and Vion Axium2 units needed to be held a little bit farther away from the eye for best results. "Which is better" is a matter of taste.

Our testers found that limiting the viewfinder scale to 10 or 15 degrees rather than trying to garner a wide-angle view gave more accurate readings, because the space between each degree was actually increased by limiting the range. For the same reason, the 5x30 monocular on the KVH DataScope we tested greatly enhanced the accuracy of bearing taking.

Card damping. The natural motion of a sailboat tends to exacerbate the swing of a compass' card as it hones in on its magneticalignment. Card drag relates

to the angle at which a compass can be held and still swing freely. The units we tested ranged from as little as 9 degrees of angle tilt to the 360 universal gimbal found in spherical bowl compasses like the Brunton Nexus Universal and Plastimo Iris 100. The less damping and more swing a compass has, the more difficult it is to take readings.

Lubber Line. Whether you prefer a compass with or without a lubber line is a matter of taste. The lubber line is a fixed line of the compass that is aligned with the longitudinal axis when sighting. Some of the hockey-puck compasses we tested had a lubber line in the sight path. Vion's Axium2 and Plastimo's Iris 50 featured a red vertical line meant to better specify the number on the card scale that best lined up with the object. However, in rougher sea conditions, testers found this three-part alignment procedure to actually be more difficult than the two-step stacking of a target on the numerical scale. The Morin 2000 and the Weems & Plath hand-bearing compasses use the stacked-number approach.

Vertical-grip compasses. These tend to be larger and more bulky than hockey-puck units, but they are straightforward to use. Their biggest advantage is that small-boat sailors can use them as bulkhead compasses that can be removed to take bearings. Only two of the three vertical-grip compasses we tested can pull



Those who prefer holding a hand-bearing compass close to their cheek will find the Vion Mini-Morin 2000 (above) easy to use.

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double-duty: the Plastimo Iris 100 and the Nexus Universal. And for those who don't like using lubber lines, the issue can be made worse with vertical-grip compasses' spherical bowl shape as the line has to be placed well below the target—not on or directly below the target.

Hockey puck compasses. From a hand-bearing compass point of view, all the testers found the hockey puck design to be preferable when it came to taking bearings. Four of the five hockey-puck compasses delivered more accurate bearings and proved to be more convenient to use than the vertical-grip compasses.