



Installation & Operation Manual

Overhead Binnacle/160

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The magnetic Overhead Binnacle/160 with 160 mm card diameter (No. 33001) is to be installed on the wheelhouse roof. If the superstructure is made of non magnetic material like light alloy this grants a satisfactory distance to any interfering magnetic source located within the bridge desk.

This compass itself is an A-class steering compass. Although the installation only allows coastal navigation!

Range of Delivery

A small binnacle consisting of hood without aperture and a mounting ring with suspensions for the compass.

Externally gimballed flat top compass with mirror arrangement and lens from below. The mirror is a white mirror from one side and a black mirror for readings at night from the rear.

Electrical Illumination: 24 VDC.

Additional Accessories

- B+C-corrector device (#18100): three wooden magazines (300x215x30 mm) with 4 magnets (at delivery inserted in one magazine).
- D-Mu-correctors (#12200): Centre pivot glued to the cover glass above or below the compass. 2x4 weak iron sheets are at delivery separate attached.
- Illumination dimmer 24 VDC (#203304).

A description how to use these accessories is attached at delivery.

Compass Location, Possible Deflections of Heading Indication

We recommend to choose the compass location in accordance with suggestions of the responsible maritime authority. Generally choose a place to minimize any magnetic interference. Possible sources of disturbing magnetic fields are: iron bulkhead walls, beams, masts and so on or any electric/electronic instruments like: Radar, loudspeakers, electro motors... The disturbing influence of fix installed iron objects can be corrected or adjusted as far as the deflection is not too large. Therefore the maritime authority recommends necessary iron free zones to be understood as radius around the compass. Variable magnetic fields which are caused by electric/electronic devices are impossible to correct. The only way is to keep a suitable distance. For each instrument used for professional navigation the so called magnetic safe distance is measured by the authority. The instrument has to be marked with. Keep this distance.

Although if all these precautions are fulfilled the compass will be practically deflected.

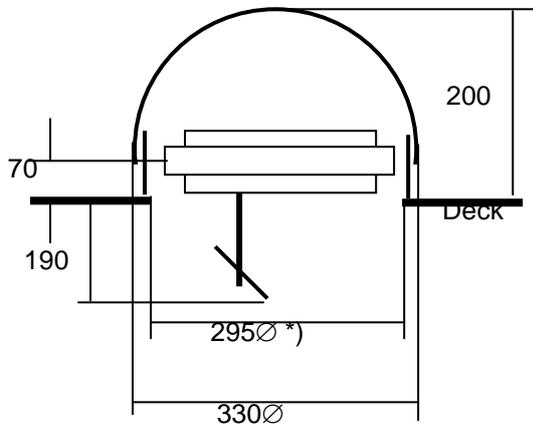
Therefore a correction/adjustment is necessary. The ship owner has to call a professional compass adjuster who is authorized by the maritime authority for this job.

One has to consider the following components of the ship's disturbing field:

1. Longitudinal and cross: corrected by use of the B and C-magnets.
2. Weak iron field: corrected by use of the D-magnets.

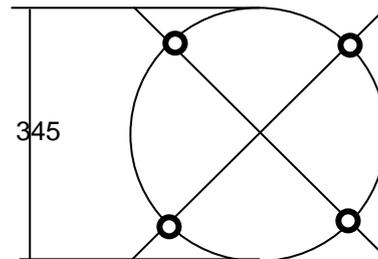
The reading mirror has to be at a maximum distance of 1 m to the helmsman. The illumination dimmer must be comfortably accessible from the steering position.

Installation



*) Cut out
ausschneidenn

Ahead
Voraus



Drilling scheme
Bohrmaße

Cut the hole into the deck for compass swinging.
Fix the ring according to above drilling scheme.

Electrical Wiring

A rheostat illumination dimmer can be connected to the „+“ as well as to the „-“ wire of the illumination element. Values of the dimmer: 100 Ω , 10 VA.

Reading of the Heading

The heading will be read at the ahead lubber mark. Rotate the reflection mirror according to height of eyes. For magnification of the picture an optical lens was interposed. Most comfortable reading will be granted by similar brightness of the compass card and environment. Adjust the illumination dimmer accordingly. At night use the black mirror.

Maintenance, Routine Service

From time to time lens and mirrors have to be cleaned using a non-scratching cloth. The gimbal suspension should easily swing, use non-acid and resin-free oil for the bearings only. Remove the illumination element by unscrewing it from its fixing ring. The directional system of the compass rests on a very sharp tip upon the pivot to minimize friction. Not only in case of strong vibrations this tip works out in a certain time and the pivot has to be replaced by a new one. Therefore some maritime authorities request for routine compass service within certain periods of time to grant reliable function.

Functional Failures

If functional error of the compass are discovered a qualified compass workshop has to be instructed for repair. Failures are: bubble in the liquid, tilted directional system, sluggish movement of the card assembly.....