



PELORUSES

INSTRUCTION

CASSENS & PLATH GMBH

Manufacturers of Nautical Instruments

Am Lunedeich 131,

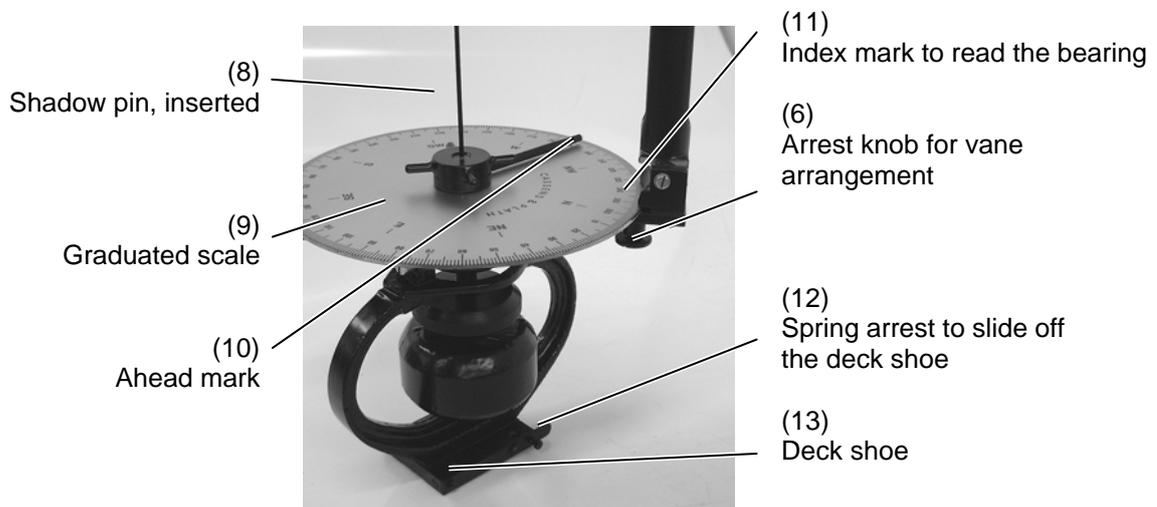
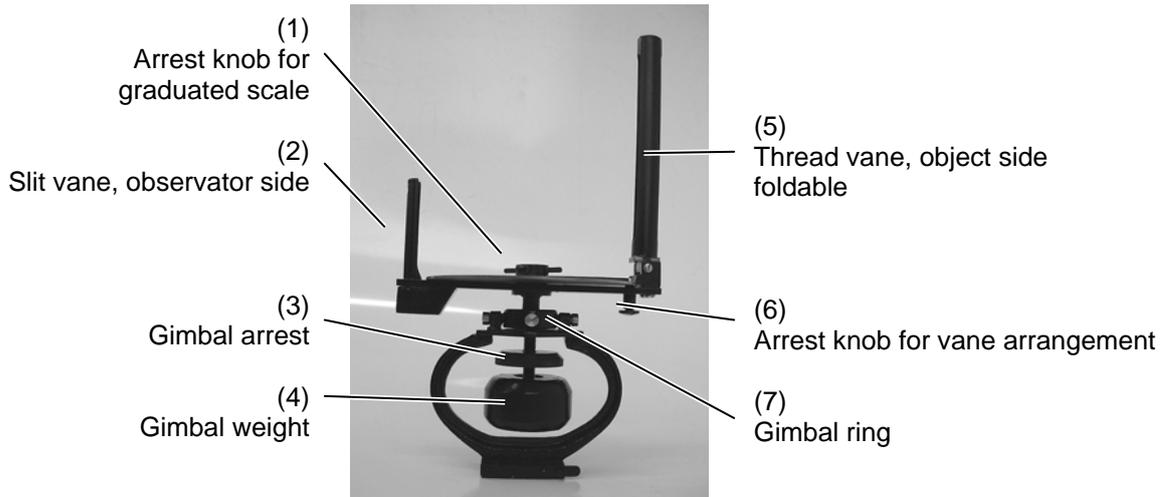
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The pelorus “Sea” (#14300) can be used for coastal navigation, astronomical bearings, for taking the compass azimuth and for compass deviation control. The gimbal suspension consists of the gimbal ring (7), weight (4) and arrest (3).

With this pelorus relative bearings (measured against ship’s ahead) and compass bearings (measured against compass heading) can be carried out.

Included in the range of delivery are two deck shoes (13), one separate and one fixed at the pelorus), and a shadow pin (8). The thread vane (5) can be folded for transportation.

Place of Installation

The place of installation should allow all-round view. Therefore the compass bridge on merchant vessels is a suitable location. If such a place cannot be found choose two different places of supplementary view. This is for example the star and port bridge wing. Install one each deck shoe on both wings.

Installation

Lift the spring arrest (12) and slide off the deck shoe (13) from the pelorus. It is important to watch carefully that ahead mark (10) points exactly to ship’s ahead direction! Any misalignment will cause an error in bearings!

Proceed as follows for alignment: Rotate the graduated scale (9) with north mark to ahead mark (10) and fix it by using the arrest knob (1). Observe a landmark in at least 3 nm distance by bearing over mast and stay until you have an exact ahead direction landmark. With the pelorus prepared as above take a bearing of this landmark and mark the position of the deck shoe. Fix it by screws and the alignment procedure is finished.

Relative Bearings

Clear the gimbal suspension by loosening the gimbal arrest (3) and turn the north mark of the graduated scale (9) to the ahead mark (10). Clear the vane arrangement by loosening the arrest knob (6), set up the movable thread vane (5) and remove shadow pin (8) if inserted. Now peer through the circular hole of the slit vane (2) with eye approximately 5 cm away from it. Roughly catch the object with view through the thread vane. To take the exact bearing lower your eye so that you can look through the slit of the slit vane and coincide with the thread of the thread vane and with the object. The reading of the bearing can be made at the index mark (11) of the inner side of the thread vane.

The graduated scale of this pelorus is all-round marked: north=360°, east=90°, south=180° ... If semicircular bearings are required subtract this value from 360° in case of port bearings.

The thread vane is higher than the slit vane to make possible bearings of ascending sight up to 50°. This allows to choose astronomical objects as well as landmarks on hilly coastal shapes.

Compass or Magnetic Bearings

Loosen the arrest knob (1) to rotate the graduated scale (9) so that the actual compass heading is indicated by the ahead mark (10). Now proceed same as in case of relative bearings. The result is the compass bearing (direction measured starting from compass north). The true bearing (direction measured starting from geographic north) can be calculated by adding/subtracting the value of the local variation to be found in the sea chart of the region (The compass has to be adjusted before). Compass bearings are usually circular (0° ... 360°). It is not necessary to transform into semicircular .

Shadow Pin (8)

Insert it into the central hole. The deviation can be determined by comparing of the calculated sun's azimuth with the counter direction of the sun's shade on the graduated scale. Turn the graduated scale so that the compass heading including the local variation (found in the sea chart) can be read at the ahead mark. Now calculate the sun's azimuth (ref. to a relevant compendium in astronavigation). In case of no deviation the calculated azimuth is same to the counter direction of the shadow. Any difference shows the deviation. For a detailed description refer to astronavigation literature.

Maintenance

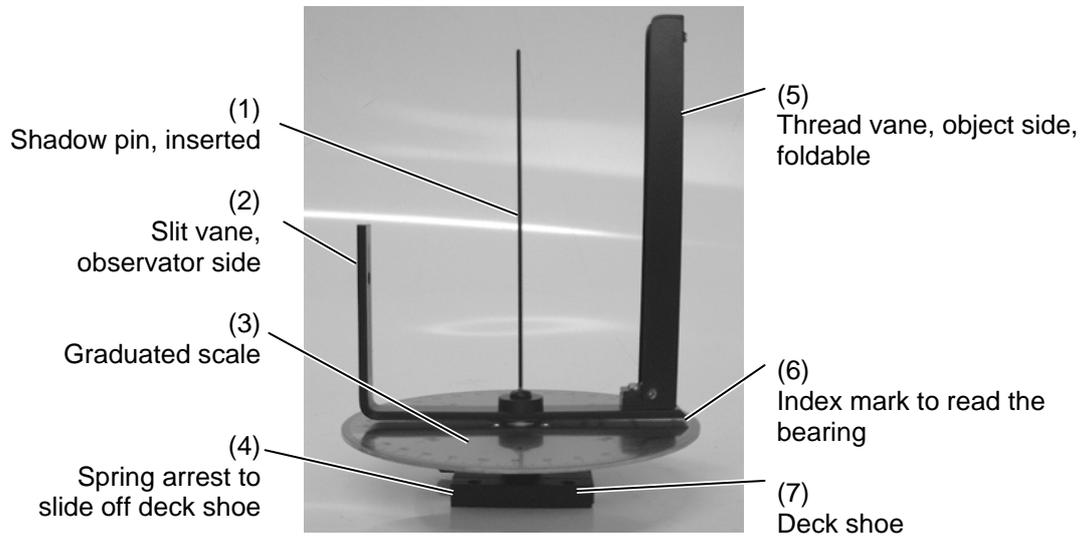
Clean the graduated scale if wet using a soft dry cloth. From time to time clean and lubricate the hinge of the thread vane, the axle of the vane arrangement and the guideway of the deckshoe.

Accessories

Storage box with slide cover. Order No. 20834.

Certificates

This pelorus „Sea“ is type approved according to ISO25862 Annex C



The pelorus “COAST” (#14301) can be used for coastal navigation, astronomical bearings and for compass deviation control. Relative bearings (measured against ship’s ahead) can be carried out directly and compass bearings (measured against compass heading) can be calculated by adding the actual compass heading.

Included in the range of delivery are two deck shoes (7), (one separate and one fixed to the pelorus), and a shadow pin (1). The thread vane (5) can be folded for transportation.

Place of Installation

The place of installation should allow all-round view. Therefore the compass bridge on merchant vessels is a suitable location. If such a place cannot be found choose two different places of supplementary view. This is for example the star and port bridge wing. Install one each deck shoe on both wings.

Installation

Lift the spring arrest (4) and slide off the deck shoe (7) from the pelorus. It is important to watch carefully that the north mark of the graduated scale points exactly to ship’s ahead direction! Any misalignment will cause an error in bearings!

Proceed as follows for alignment: Rotate the vane arrangement so that the index mark (6) at the thread vane (5) shows to north (360°) of the graduated scale. Observe a landmark in at least 3 nm distance by bearing over mast and stay until you have an exact ahead direction landmark. Steady the ship in this direction. Now use the pelorus, take a bearing of this landmark and mark the position of the deck shoe. Fix it by screws and the alignment procedure is finished.

Relative Bearings

Set up the movable thread vane (5) and remove shadow pin (1) if inserted. Now peer through the circular hole of the slit vane (2) with eye approximately 5 cm away from it. Roughly catch the object with view through the thread vane. To take the exact bearing lower your eye so that you can look through the slit of the slit vane and coincide with the thread of the thread vane and with the object. The reading of the bearing can be made at the index mark (6) outside of the thread vane.

The graduated scale of this pelorus is all-round marked: north=360°, east=90°, south=180° ... If semicircular bearings are required subtract this value from 360° in case of port bearings.

The thread vane is higher than the slit vane to make possible bearings of ascending sight up to 50°. This allows to choose astronomical objects as well as landmarks on hilly coastal shapes.

Magnetic or Compass Bearings

Proceed same as in case of relative bearings but add the compass heading to the found value of bearing. The result is the compass bearing (direction measured against compass north). The true bearing (direction measured against geographic north) can be calculated by adding/subtracting the value of the local variation to be found in the sea chart of the region (The compass has to be adjusted before). Compass bearings are usually circular (0° ... 360°). It is not necessary to transform into semicircular .

Shadow Pin (1)

Insert it into the central hole. The deviation can be determined by comparing the calculated sun's azimuth with the counter direction of the sun's shade on the graduated scale. For a detailed description refer to the relevant literature in astronavigation.

Maintenance

Clean the graduated scale if wet using a soft dry cloth. From time to time clean and lubricate the hinge of the thread vane, the axle of the vane arrangement and the guideway of the deckshoe.

Accessories

Storage box with slide cover. Order No. 20835.



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